

**ICT access and use in the remote rural town of
Hatherleigh (Devon, UK): towards citizen
engagement?**

By

Afraa Jalal Sallowm

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Abstract

Afraa Sallowm

ICT access and use in the remote rural town of Hatherleigh (Devon, UK): towards citizen engagement?

Information communication technologies (ICTs) have reached into everyday life. This emphasises the increasing importance of understanding the relationship between ICTs and society (Giddens 1994; Castells 1996; Walsham 2001). Over the last few decades, ICTs have shaped many aspects of society, and the specific role that ICTs have played in influencing government and governance structures has received particular attention. Today, the term 'governance' is widely used and accepted amongst a variety of academics and practitioners. However, in recent years the processes by which rural areas are governed have changed remarkably. Many scholars accept the conceptual and theoretical debate concerning the actual and potential impact of ICTs as a powerful force shaping governance (Goodwin 1998; Mackinnon 2002), but few have attempted to support their argument by conducting detailed empirical analyses of the role and influence of ICTs for e-governance processes in rural communities.

This thesis addresses this gap by analysing the linkages between ICT access and use in a remote rural area of the UK. The thesis presents an in-depth case study analysis of a rural market town (Hatherleigh) located in west Devon. It examines ICT access and use in Hatherleigh considering that individual levels of ICT adoption are uneven, depending on factors such as age, gender, employment and family composition (Ofcom 2006; Selg and Svensson 2008). It follows a wider call in the area of rural and ICT studies that many remote rural areas face serious challenges in their efforts to benefit from the opportunities offered by ICTs (Woods 2005; Moseley and Owen 2008). The thesis particularly builds on Okot-Uma's (2001), Millard's (2003) and Odendaal's (2003) work on the impact of ICT on governance and potential changes in service delivery to rural areas. To understand the impact of ICTs on e-governance in rural areas more fully, specific emphasis is placed on how Hatherleigh residents use the internet for accessing on-line information and services and how they use the internet to engage with policy stakeholders within and beyond Hatherleigh. A specific focus is placed on analysing barriers affecting e-governance processes ranging from the local to the national scale.

The methodology used to collect empirical data is based on a multi-method approach, including questionnaires, interviews and participant observation to explore interactions between Hatherleigh residents and ICTs. The results suggest that ICT has changed the social landscape of rural communities such as Hatherleigh in terms of communication and job opportunities, and that it plays a key role in reducing feelings of distance and isolation. A key result is that the internet plays an important role for e-governance interactions at the regional/national level, but that it only plays a minor role at the local level. A key explanation for these different 'geographies of ICT use' is that remote rural locations such as Hatherleigh are (still) characterized by relatively close-knit communities where physical face-to-face interaction still plays an important role, thereby reducing the need for internet use to access local information. The study also suggests a typology of non-users in Hatherleigh, suggesting that non-users are a highly differentiated group in which some segments are relatively keen to use ICT in the future, while others continue to staunchly resist using ICTs. The latter are a particularly problematic group as they may be 'doubly' excluded by both living in a remote rural area that has lost some of its services (to some extent because of ICT availability) and by not being interested in using ICTs to overcome such disadvantages.

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List of Acronyms

BBC	<i>British Broadcasting Corporation</i>
BT	<i>British Telecom</i>
CCD	<i>Community Council of Devon</i>
DCC	<i>Devon County Council</i>
DEFRA	<i>Department for Environment, Food and Rural Affairs</i>
EU	<i>European Union</i>
HABF	<i>Hatherleigh Area Business Forum</i>
HAP	<i>Hatherleigh Area Project</i>
HCW	<i>Hatherleigh Community Website</i>
HPC	<i>Hatherleigh Parish Council</i>
ICTs	<i>Information Communication Technologies</i>
NAO	<i>National Audit Office</i>
NHS	<i>National Health Service</i>
NGOs	<i>Non Governmental Organisations</i>
OECD	<i>Organisation for Economic Co-operation and Development</i>
Ofcom	<i>Office of Communication</i>
OxIS	<i>Oxford Internet Survey</i>
PC	<i>Personal Computer</i>
SWGS	<i>South West Government Services</i>
SWRDA	<i>South West Regional Development Agency</i>
UK	<i>United Kingdom</i>
USA	<i>United States of America</i>

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At no time during the registration for the degree of Doctor of Philosophy has the author been registered for any other University award without prior agreement of the Graduate Committee.

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Poster presented at the 'Plymouth Postgraduate Symposium: Building Bridges in Social Science Research'. University of Plymouth, United Kingdom, 2nd May 2008.

I attended the Plymouth Postgraduate Symposium: Building Bridges in Social Science, the University of Plymouth, United Kingdom, 15th May 2009.

I attended a Social Research Mini Methods Festival and Launch of Methodological Innovations, The University of Plymouth, United Kingdom. 26-27 April 2006.

I attended and presented a paper in the Wessex Postgraduate Consortium meeting, Cumberland Lodge, Windsor Park, 11-13 April 2006.

Graduated school skills development courses attended

- Project management for researchers.
- Introduction to electronic resources.
- Endnote bibliographic referencing.
- An introduction to SPSS, part 1.
- An introduction to SPSS, part 2.
- Writing up and completing the PhD.
- Visio – working with shapes.
- Preparing effective poster presentation.

- An introduction to career planning.
- An introduction to qualitative research method.
- Writing and developing cv's and personal statements for academic applications.
- Preparing for the viva.

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Chapter 1: Introduction

1.1 Information and communication technologies in a globalising world

At a time when Information Communication Technologies (ICTs) diffusion is accelerating rapidly around the globe, the British Broadcasting Corporation (BBC) reported on the 3rd of June 2008 that:

"The residents of Arnisdale, a remote village in the North West of Scotland still cannot get broadband at all by conventional means. But if you want to know just how important a service broadband has become, this is a great place to come. The people here have been making an ever louder clamour about their desperate need for a faster connection. People like Rick Rohde, Anna MacKenzie and Jenny Munro. They all work from their homes in this remote community, where a trip to the supermarket means a two hour round trip. Rick, an American who settled here as a crofter thirty years ago, is now an academic working with colleagues in South Africa. Jenny is a graphics designer who needs to send and receive large files. And Jenny, who trains health workers, needs to keep in constant touch with colleagues across Scotland. They have all gone to extraordinary lengths to get connected, Rick sailing across the loch just to pick up his e-mail, Jenny driving nine miles along a steep and narrow road to her mother-in-law's house just to send e-mails, Anna having to make a similar journey with her graphics files". (BBC, 3rd June, 2008)

I have chosen to begin this thesis by highlighting this recent news item which describes the life of people who live in a remote rural area in the 'information age'. This reflects the importance of internet availability in rural areas in which technology is seen to heal the wounds of society's blemishes. The world entered the 20th century without planes, radios or televisions. It enters the 21st century with nuclear power, space travel, computers, cell phones and the wireless internet. Within the span of a hundred years, entirely new fields of science and technology have come into existence and the fundamental political and economic structure of the world changed not once, but several times (Castells 1996, 2004).

Some of the most dramatic technological changes have occurred with regard to ICTs – especially over the past few decades. As a result, interest in the emergence of ICTs has rapidly grown in recent years, as a number of analysts and academics have sought to understand and explain the actual and potential impacts of ICT-based applications on societal development. Debates about the impacts of ICTs are on-going and have assumed increasing urgency, especially as many analysts see the recent ICT revolution as a potential driver for key changes in society, economy, globalisation processes, governance structures and in issues surrounding social exclusion (Giddens 1994).

In seeking to understand and explain the relationship between ICTs and economic systems, analysts have, over the years, adopted a variety of conceptual approaches to understand the ICT implementation and diffusion process. In particular, researchers have identified a plethora of potential wide-ranging changes with regard to how ICT may affect processes of governance around the world. It is generally accepted among policy analysts and academics that ICT diffusion is a significant factor that may greatly influence processes of change in different societies during the next decades (Masuda 1982; Dover 1982; Castells 1996; 2003). Contrasting social theories have been used in attempting to understand various questions related to ICT emergence and diffusion, with increasing attention paid to the global dimension of ICTs. In this context, Walsham (2001), Slevin (2000) and Giddens (1994) are some of the many scholars who claim that ICTs have had a significant influence in the development of the 'global village'. Referring to the positive role that ICTs have played in space-time compression in rural areas, Robertson (1992) and Walsham (2001) argued that ICTs have already had a substantial impact on global space-time compression

and, in particular, on increased awareness of various societies about global issues. Scholars have particularly asserted that problems faced by people in remote areas could be solved thanks to new technological transformations linked to ICTs (Graham 1994; Castells 1996; Moseley 2003; Woods 2005, Moseley and Owen 2008), whereby 'good' ICT implementation would be based on increasing awareness, access and skills of remote and marginal communities. Community participation has, therefore, been given particular attention by many scholars in relation to the potential role of ICTs in empowering people (Gillespie 1991; Gibbs 1993; Wilcox 1996; Castells 1996; Dabinett 2000).

1.2 Information communication technologies and changing governance structures: the conceptual context

Governance structures are affected by ICTs (Giddens 1994), suggesting that it is important to understand what governance means in the context of ICT-society interrelationships. Although there is no single definition for the concept of governance, it was adopted by academic literatures in a variety of ways and has a variety of meanings (e.g. Hewitt de Alcantara 1998, Stoker 1995, 1998; Riley 2003). Based on Stoker (1998: 17), governance will be referred to in this study as the "*development of governing styles in which boundaries between and within public and private sectors have become blurred*". This is intricately linked to the rise of a range of sectors and issues variously labelled as voluntary organisations, community enterprise and citizen participation. This participation ranges over a wide variety of social and economic issues and operates in the context of what has been understood as the interaction between power and responsibility of different interplaying actors and functions (Stoker 1998; Rhodes 1996; Kooiman 1993;

Miller and Dickson 1996). In this context, governance is seen as an interactive process because no single actor, public or private, has the knowledge and resource capacity to tackle problems unilaterally (Kooiman 1993).

Governance, therefore, involves working across boundaries within the public sector or between the public sector and private or voluntary sectors (Hewitt de Alcantara 1998; Stoker 1998; Riley 2003). Rhodes (1996) suggested that governance focuses attention on a set of actors that are drawn from both within and beyond the formal institutions of government. Governance, thus, rests on a full and round vision of interaction and co-operation between different actors – local, regional or national organisations, social groups, communities and citizens – to enhance public participation (Kooiman 1993; Stoker 1998; Rhodes 1996; Miller and Dickson 1996; Le Galés 1998; Kahila and Lakso 2004). As Lagendijk (1999) and Kahila and Lakso (2004) argued, this means that frequent and deep engagement of citizens may contribute towards moving governance beyond hierarchical structures, possibly with the capacity to organise collective actions and abilities and to build coalitions and partnerships towards targeted aims.

This discussion highlights that the blurring of boundaries of responsibility and power between the public and state organisations involved in collective action is one of the most important components of governance (Goodwin 1998; Stoker 1998). This, in turn, suggests that individuals, citizens, governmental and non-governmental stakeholders work together and interact (Goodwin 1998; Stoker 1998). In a nutshell, as Stoker (1995) argued, the value of the governance concept lies in its capacity to provide a framework in which all actors can work together and take part in the management of societal processes, achieve greater efficiency in production of public services, and have a say in decision-making processes.

In light of this discussion, ICTs are not only part of the ongoing process of the transformation of society, economy, and communities, but ICT diffusion is now also challenging traditional ways of providing services to the public. Indeed, ICTs offer opportunities for various actors and stakeholders (including governments) to improve efficiency in delivering information and services and to interact with citizens, businesses, organisations and with each other. This suggests that there is a close interconnection between ICTs and governance processes and structures. As a result, this study will need to pay particular attention to what has been termed 'electronic governance' or 'e-governance' (see Section 2.3.2 in Chapter 2 for a detailed discussion). There is some agreement about the meaning of 'e-governance' (Okot-Uma 2001; Millard 2003). Odendaal (2003: 586), for example, argued that e-governance refers "to the ability of government or non-government agencies to interact with the public on-line in the delivery of services and in fulfilling their pre-designated mandates". As a result, this study will refer to e-governance as governance processes in which ICT plays a significant role, and where ICT is used to both for improvement of information and service delivery and for improving the interaction between citizens and stakeholders.

Okot-Uma (2001) particularly highlighted how the deployment of ICTs by government actors enables what has been termed 'e-government' (i.e. by putting government services on-line) and 'e-democracy' (i.e. voting on-line), while business actors can engage in 'e-business' through on-line transactions between and within clients and markets. Millard (2003), thus, pointed out that ICTs change the broader interaction between citizens, government and other actors. Further, ICT can improve current services provided to the public, can provide new services,

may encourage public participation in the provision of services, and may help excluded people to be involved in wider social processes.

In addition, ICTs can facilitate interaction between citizens, stakeholders and governmental and non-governmental actors and institutions and may, therefore, improve two-way relationships between stakeholder groups. Authors such as Gore (1993), Markoff (2000), Raney (2000) and Odendaal (2003) further argued that ICTs can help improve service delivery and responsiveness of organisations to citizens. Other researchers go even further by arguing that ICTs can contribute greatly towards political change, economic development, community activism, and alleviating social pressure (Thompson 1995, 1999, 2005; Rakodi 2001; Cloete 2002; Odendaal 2003). Thompson (1995, 1999) particularly argued that new opportunities may be given to people, irrespective of their geographical location, to voice opinions and exchange ideas. This may all determine the capacity of ICTs to improve governance structures, to increase the effectiveness of community organisation and interaction, and to address issues such as empowerment and disempowerment (MacKinnon and Phelps 2001; Odendaal 2003). Staeheli (1994: 388), thus, argued that *"the ability to press claims at a larger scale can be critical to success of local grassroots movements, while blocking access to arenas at larger scales can be a strategy to opposing groups"*.

An important arena of interest relates to debates about how democratic participation may be enhanced through new ICTs, and many researchers have consequently analysed the democratic responsiveness and effectiveness of ICTs (e.g. Fountain 2001; Okot Uma 2001; Millard 2003; Clift 2004; West 2004). A key question in the debates has been whether ICTs have the ability to promote what has been called 'democratic e-governance'. There are several critics of these

concepts, including, for example, Davis (1999), Margolis and Resnick (2000) and Chadwick (2003), who argued that various agencies and governmental organisation will be hesitant to use ICTs, with the result that ICTs will not necessarily achieve democratic governance. This raises the question whether ICTs can provide an ideal platform for effective governance.

Various studies have also argued that the relationship between ICTs and governance is strongly influenced by technological, social, and economic factors (Borja and Castells 1997; Fountain 2001; Rakodi 2001; Cloete 2002; Odendaal 2003; West 2004; see also Chapter 2, Table 2.2). For example, Odendaal (2003) highlighted that economic development, policy priorities and technological development will, in combination, most certainly determine the capacity of ICTs to enhance governance processes. Fountain (2001) and West (2004) further argued that institutional arrangements, patterns of social behaviour, and group conflict can also affect e-governance. Similarly, in a recent study in Germany Becker *et al.* (2008) suggested that factors such as infrastructure and accessibility, security, trust, service complexity, marketing and marketability of products, personal contacts and cost were all crucial for using on-line services provided by government. This suggests the importance of investigating barriers that may negatively influence e-governance processes in the context of this study.

In light of this discussion, this study needs to provide an appropriate framework to analyse and discuss the interlinkage between e-governance and ICTs. Inspired by previous studies on e-governance, and based on the above-mentioned conceptual understanding of e-governance developed by Okot-Uma (2001), Millard (2003), and Odendaal (2003), the framework of e-governance used in this thesis is shown

in Figure 1.1. The figure takes into account two major dimensions: improved information delivery and improved interaction between citizens and stakeholders.

This offers a framework for both assessing dimensions of e-governance, as well as investigating barriers preventing successful implementation of e-governance processes. The figure also highlights the importance of stakeholders working across boundaries within the public sector or between the public sector and private or voluntary sectors (Hewitt de Alcantara 1998; Stoker 1998; Riley 2003). In this view, actors (citizens, public, private, and voluntary sectors) interact and cooperate together in complex ways and take part in management of societal processes, achieve greater efficiency in production of public services through ICTs, and take part in societal decision-making processes.

Figure 1.1 also illustrates that ICTs offer opportunities for citizens to access information, knowledge, and services about social and political processes (e.g. access to information in village websites, council websites, etc.) (Odendaal 2003; Riley 2003). Efficiency may also be enhanced by improving information delivery by overcoming geographical distance, in particular by reducing the need to travel to obtain specific services (Thompson 1999; Millard 2003). Improved information delivery, thus, may develop new information and service options (e.g. easier to obtain information from different sources) (Okot-Uma 2001; Millard 2003). Figure 1.1 also highlights the most important use of ICTs through e-mail. Indeed, e-mail availability can improve interaction between citizens and stakeholders by enabling direct exchange between individuals and policy stakeholders (Rakodi 2001; Okot-Uma 2001; Odendaal 2003).

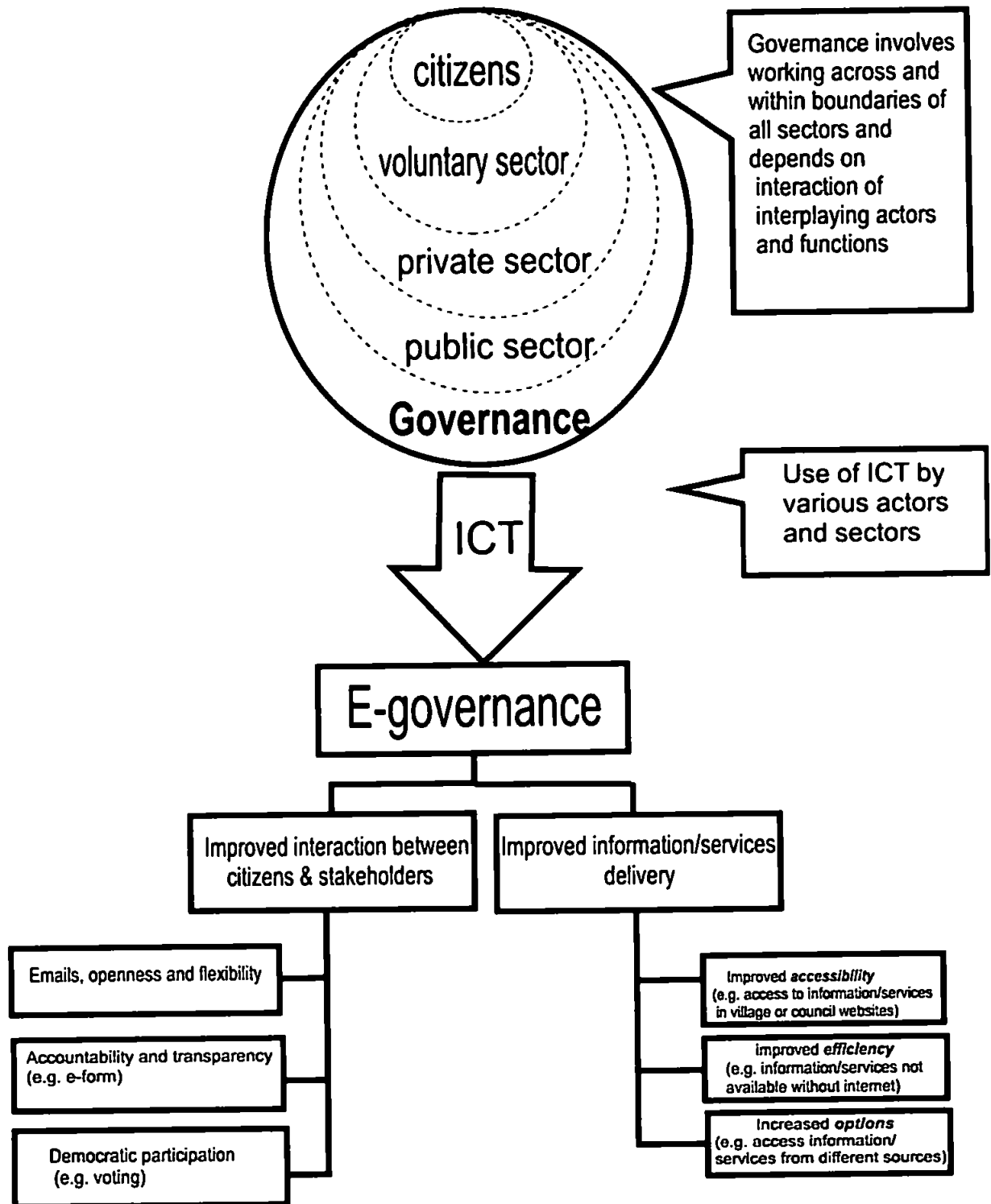


Figure 1.1: An overview of the e-governance framework

(Source: Author; after Okot-Uma, 2001, Odendaal, 2003, Millard, 2003)

ICT may, therefore, provide the opportunity to make both governmental and non-governmental organisations more accountable and transparent (Okot-Uma 2001; Millard 2003). ICTs may, thus, enable citizens to take part in democratic engagement, and to participate in policy decision-making through on-line voting, discussion fora, or through internet-based questionnaire surveys and referenda (Thomposn 1999; Okot-Uma 2001; Odendaal 2003).

Along with assessing the notion of e-governance, it is important to investigate the barriers preventing the implementation of e-governance processes. Yet, although previous research has identified a range of factors influencing implementation of e-governance processes (e.g. budget scarcity, institutional barriers, etc.), there is no unifying conceptual understanding that highlights *all* possible barriers relevant to e-governance. What is evident from the literature is that barriers to e-governance are largely linked to factors related to both individual and institutional standpoints (Okot-Uma 2001; Millard 2003). Therefore, through a case study in the United Kingdom (UK), the present study will, first, investigate the types of factors affecting e-governance in general and, second, analyse the importance of individual and institutional drivers in e-governance processes (Rokodi 2001; Cloete 2002; Odendaal 2003). Barriers linked to individual citizens will be associated with peoples' individual perceptions and use of ICTs, and will be mainly concerned with barriers that prevent people from using ICTs to access information from government and non-government websites (e.g. council websites, community websites, on-line shopping, etc.). Barriers resulting from institutional standpoints, on the other hand, will reflect institutions' problems to improve governance processes (e.g. lack of information provision, poor service delivery, poor interaction with citizens, etc.) (Fountain 2001; Odendaal 2003; West 2004).

1.3 Rural areas and ICTs: framing the rationale for this study

ICTs have reached into everyday life and have shaped the social landscape of people's lives (Castells 1996; Graham and Marvin 1996). Manuel Castells' description of the information age forms the theoretical background of this thesis (see Chapter 2). His focus on technological change and society offers a general understanding of the relationship between information technology and society. For many commentators, information technology provides opportunities for compression of the world, referring to the positive role of ICTs in space-time compression (Graham 1994; Castells 1996; Robertson 1992, 2003; Giddens and Griffiths 2006). However, the advent of ICTs has added a different dimension to the debate, namely that of the 'digital divide' or 'ICT exclusion'. The OECD (2001a: 5) suggested that the digital divide can be understood as the "*the gap between individuals, households, businesses and geographic areas at different socio-economic levels with regard both to their opportunities to access ICTs and their use of the internet for a variety of wide activities*".

This study will focus on ICT provision and access within a rural area of the UK. Why this focus on the rural? Millard (2003) suggested that many remote rural areas face serious challenges in their efforts to benefit from the opportunities offered by ICTs (internet in particular), while urban areas, and particularly large cities, have built-in infrastructural advantages related to the digital economy. Similarly, Warren (2007), in his study of ICT exclusion in rural areas of the UK, argued that while the benefits of ICT in rural areas can be more noticeable than in large cities, the provision of ICT infrastructure is often weaker in rural than in urban areas (see also Hindman 2000; Strover 2001; Skerratt and Warren 2003).

Beyond this potential urban/rural digital exclusion, the digital divide has also been associated with individuals in terms of technological 'haves' and 'have-nots' (Howland 1998). Commentators have suggested that individual levels of ICT adoption are uneven, depending on factors such as age, gender, employment and family composition (Rogers 1995; Castells 2004; So *et al.* 2005; Ofcom 2006; Selg and Svensson 2008). Further, dimensions related to the nature of ICT technology itself have been found to influence ICT adoption decisions. These can involve issues such as cost, complexity and accessibility (Rogers 1995; Lenhart *et al.* 2003; Anderson *et al.* 1995, 2003; Choudrie *et al.* 2005). This is particularly important in light of debates about the potentially positive role of ICTs in space-time compression in rural areas, as many studies suggest that without adequate connections to advanced ICT infrastructure and services, rural communities may not be able to fully participate in the emerging information economy (Huggins and Izushi 2002; Strover 2001, 2003; Woods 2005). Thus, if the technology is available to potentially achieve wider ICT dissemination across society, the use of such technology remains nonetheless subject to significant constraints that might give advantage to some people in rural areas (the 'haves') and exclude those rural residents who have no access to ICT technology and infrastructure (the 'have-nots') (Hindman 2000; Castells 2003; Selwyn 2006; Rao 2005; Warren 2007). Warren (2007) referred to these processes as a new 'mutating divide', which does not only highlight potential urban/rural differences in ICT access and use, but also suggests emergent divides relating specifically to technological infrastructure associated with ICTs (e.g. differing broadband width in rural areas; withdrawal of non-ICT services). Rural 'have-nots' and ICT non-users, therefore, may suffer from particularly pronounced inequalities and new social exclusion by not being able to participate "*in new, additional services open to users...and facilities and services*

which were previously available by conventional means are withdrawn in favour of on-line provision" (Warren, 2007: 385).

This suggests that a particularly fruitful field of investigation concerns ICT diffusion and the impact of these new technologies in *rural* areas (see aims and objectives below). Examining ICT adoption (especially internet use and adoption) in a rural area will, therefore, be a key concern for this study. This thesis will be particularly concerned with understanding specific factors (e.g. age, gender, employment, household type, etc.) associated with use and non-use of ICTs in a rural area of the UK. Questions will be raised about the purposes and motivation underling individuals' use of ICT (e.g. e-mail, on-line shopping, chatting, etc.) with a specific emphasis on rural residents in a 'remote rural' area that is some distance away from major services and markets (see below). Rural people who are non-ICT users will also be analysed, focusing in particular on the rationales for individuals' non-use of the internet. Considering that rural ICT non-users might be subject to more pronounced exclusion than their urban counterparts (who may be geographically closer to non-ICT services), a new typology of internet non-users will be suggested.

Previous studies on rural communities have particularly argued that ICTs hold the promise of offsetting the social and economic disadvantages of rurality by reducing the barriers of time and distance from major cities (Clark 2000; Strover 2001; Hollifield and Donnermeyer 2003; Woods 2005; Moseley and Owen 2008). In this context, Woods (2005: 300) argued that ICTs have "*raised the quality of life in rural areas, making them more desirable places to live*". In response to this understanding, many writers argue that the new technology provides potential solutions for problems faced by people living particularly in rural areas (Graham

1994; Castells 1996; Woods 2005; Moseley and Owen 2008). These authors point towards the specific role played by ICTs in rural areas such as defeating rural isolation (Strover 2001), providing means of communication for rural young people (Sibley 1995; Valentine and Holloway 2001), improved services (Moseley and Owen 2008), or new job opportunities offered by ICTs through the ability to work from home even in remote locations (Clark 2000; McQuaid and Lendsay 2003, 2005). Research has also emphasised the key role played by ICTs in introducing rural areas to the world by developing village/community websites (Hampton 2007; Warren 2007), while McDonald and Malina (1997) argued that ICTs provide a tool for rural community information sharing, problem solving and local economic development. Consequently, questions have been raised about the use of ICTs in rural areas (use of internet in particular) and in turn, how rural citizens construct their technological use and knowledge within a changing world.

This discussion has highlighted that ICTs can help overcome or reduce barriers associated with distances and isolation in rural areas. It is, therefore, particularly important to analyse the impacts of ICTs in a rural community of the UK, and to investigate rural people's perceptions and experiences with ICTs. To this end, the small rural town of Hatherleigh (Devon) will be selected as a case study. Five key hypotheses will particularly guide this research:

1. ICT helps rural people feel less isolated (Cross and Nutley 1999; Strover 2001; Woods 2005; Tookey *et al.* 2006).
2. ICT helps young rural people to communicate (Sibley 1995; Valentine and Holloway 2001; Lægran 2002; Schäfer 2008).
3. ICT improves services in rural areas (Clark 2000; Schmied 2005; Moseley and Owen 2008).

4. ICT helps rural people to remain in their towns or villages (reduce out-migration) (Boyle and Halfacree 1998; Cloke *et al.* 1998; Hugo and Bell 1998; Millard 2005; Schmied 2005).
5. ICT raises the quality of life in rural areas (Clark 2000; Malecki 2003; Woods 2005; Tookey *et al.* 2006; Schwanen and Kwan 2008; Moseley and Owen 2008).

Debates have also emerged with regard to new forms of *rural governance*, leading to a wider scrutiny of how decisions are made about rural development. In this study, 'rural governance' refers to the transformation of the institutional map of rural local government into a system of governance which involves a range of agencies, organisations and institutions drawn from public, private, and voluntary sectors (Marsden and Murdoch 1998; Little 2001; Welch 2002; MacKinnon 2002). Such forms of governance encourage communities to take responsibility for their own development (Murdoch 2000). This, in turn, emphasises the notion of 'governing through community' and 'bottom-up' models of economic and social development (Murdoch 1997; Ward and McNicolas 1998; MacKinnon 2002; Woods and Goodwin 2003; Woods 2005). A key concern of this study will, therefore, be to assess how forms of rural governance may be shaped and re-shaped by ICT access of rural residents.

1.4 The research gap

As discussed above, the emergence of ICT gives birth to new discourses of e-governance, and ICT inclusion and exclusion (e.g. digital divide). Many researchers have argued that ICTs help governance processes by improving

service delivery to citizens and by improving the interaction between citizens and policy stakeholders (Okot-Um 2001; Millard 2003; Odendaal 2003). Above discussion has also highlighted that rural scholars have also recognised the importance of ICTs for rural areas and the ability of ICTs to overcome problems associated with the geographical remoteness of rural areas (e.g. communication problems, isolation, poor services and lack of jobs) (Graham 1994; Sibey 1995; Castells 1996; McQuaid and Lendsay 2003; Moseley and Owen 2008).

However, to date little attempt has been made by contemporary analysts to analyse in detail the level of ICT access and use in rural communities of the UK. This research gap is compounded by the fact that rural researchers were slow to engage with recent theoretical work on governance (Little 2001), although recently debates in rural research have begun to incorporate direct and indirect reference to some of the ideas encapsulated in the broader remit of rural governance (Goodwin 1998; Little 2001; Murdoch and Marsden 1998; Wilson 2004). Studies that have analysed rural governance have tended to concentrate on *policy issues*, such as the emergence of new policy initiatives or the role played by communities in empowerment of specific stakeholder groups (e.g. Murdoch 2000; Mackinnon 2002; Herbert-Cheshire 2000), while few attempts have been made by academics to analyse the impact of ICTs toward e-governance in rural areas. Although many scholars acknowledge the importance of conceptual and theoretical debates on actual and potential impacts of ICTs as a potentially powerful influence on governance structures, few have attempted to support their arguments by conducting detailed *empirical analyses* of the impact of ICTs on e-governance in rural areas.

One of the key objectives of this thesis will, therefore, be to assess the potential contribution of ICTs to e-governance in the rural town of Hatherleigh. Figure 1.1 (see above) will be used as the conceptual framework of analysis. Specific focus will be placed on the following questions: does ICT improve information delivery to rural citizens in the town of Hatherleigh? Does ICT improve interaction between Hatherleigh residents and stakeholders? This discussion will focus on different methods (e.g. newspaper, Parish Pump and internet) that rural people use to get information and services about their community, councils, politics, news events, etc, which will help understand the relative role that ICTs play in improving services in the town. Further, does the internet improve Hatherleigh residents' chances to get hold of policy stakeholders (in particular those stakeholders such as councillors, politicians or organisation who were not easy to contact before the internet)? Rural people's experiences and perceptions of using the internet to make their voices heard will also be analysed, for example by investigating on-line voting behaviour which may also influence people's perceptions of democratic processes. Finally, barriers preventing e-governance processes will also be analysed in detail. All these research steps will help understand the nature and processes of e-governance in the study area, and may provide an opportunity for future research to develop strategies in which rural people in towns such as Hatherleigh can be increasingly included in the governance sphere.

1.5 Aim and objectives

In an attempt to address this gap in current research, the aim of this thesis is to analyse the impacts of ICT availability and use for e-governance processes in rural

areas in the UK. The 'remote rural' town of Hatherleigh (West Devon) will be used as a case study.

To achieve this aim, the study will have three specific objectives:

a) To examine patterns of ICT adoption in Hatherleigh, and to assess the purposes and motivations underlying individual use/non-use of the internet.

b) To investigate patterns of ICT inclusion/exclusion in Hatherleigh, and to identify reasons for exclusion linked to factors such as age, gender, employment and family type, etc.

c) To assess the potential contribution of ICTs to e-governance processes in Hatherleigh. Specific emphasis will be placed on how residents use the internet for accessing on-line information and services and how they use the internet to engage with policy stakeholders within and beyond Hatherleigh.

Building on the abovementioned aim and objectives of this research, and on the call by previous studies of the need for more research on access and use of ICT in remote rural communities, this study will, therefore, add additional insight into the potential of ICT to transform rural society and to better understand patterns and processes associated with internet provision and use in rural areas. Previous studies have argued that access to ICT (especially the internet) is assuming ever greater significance for social and economic reasons (Clark 2000; Malecki 2003; Woods 2005; Tookey *et al.* 2006; Schwanen and Kwan 2008; Moseley and Owen 2008). As internet access and connectivity bring e-services (shopping, e-mail, chatting, banking, information, etc.) into rural areas and become accessible for geographically remote citizens, improved internet access and use may, therefore, have important consequences for rural community well-being in general. In this

context, a main contribution of this study will be to contribute to current debates about how important ICT access is for citizen *exclusion/ inclusion* in rural areas.

Furthermore, it has been argued that ICT creates new deliberative spaces for citizen engagement, as most citizens now have *direct* access to various government and non-government agencies and policy stakeholders at different spatial scales (Staeheli 1994; Thompson 1995; Le Galés 1998; Dabinett 2000; MacKinnon and Phelps' 2001; Howitt 1998, 2002; Bulkeley 2005). This study will, therefore, also investigate in detail how ICT can be utilized to both broaden *rural* citizens' engagement with government and non-government agencies and to what extent ICT helps in the process of devolving decision-making to local communities. These findings will further contribute towards additional understanding of how well ICT facilitates processes necessary for democratic and inclusive e-governance in rural areas. Encouraging rural people to do things for themselves through the internet can be seen as a 'good' thing, but this study will also investigate whether such 'electronic participation' can be achieved at different local, regional and national scales. Collectively, the research findings from this study will contribute to a new understanding of the new dynamic that is developing with the help of ICT between rural citizens and government, non-government agencies and policy stakeholders.

1.6 Outline of the thesis

Chapter 2 provides a literature review which discusses theories on ICTs, the concept of governance, and conceptualisations of the e-governance process. In accordance with Castells (1996), the emergence of ICTs has considerable

influence on many economic and social systems such as globalisation, society and governance. Chapter 2 will engage with these debates by discussing how ICT adoption and use has the potential to enhance community empowerment and to address social exclusion. Further, the meaning of rural governance will be discussed to understand rural community development and 'governing through community'. Chapter 2 will also discuss in detail the research gap, and outline that very little information is available about possible interlinkages between ICTs and e-governance processes in rural areas.

Chapter 3 will review the geography of internet diffusion in the UK where the case study area is based (Hatherleigh). This chapter will give wider insight about the current status of UK internet access and use, and will compare the UK internet status globally and within the European Union (EU). The chapter will conclude by exploring the geography of the UK digital divide and UK policies aimed at getting rural people more included in the digital age.

Chapter 4 will discuss the methodology and techniques used in this study. This will include the justification for using the case study approach, and for using multiple methods including questionnaires, participant observation, and interviews with local people and policy stakeholders in the study area. Specific emphasis will be placed on discussing how I, as a researcher from Syria, embedded myself in the community of Hatherleigh, and how a snowballing technique was used to facilitate residents' participation in this study.

Chapters 5, 6, 7, and 8 will form the analytical section of this study. Chapter 5 will provide an in-depth analysis of ICT adoption in the case study area. How Hatherleigh first became connected to the internet will be assessed and what

social and economic factors are correlated with internet use/non-use will be analysed. Individual reasons and motivations for internet use will also be discussed, and where internet use occurs (home vs other places), as well as Hatherleigh internet user satisfaction with the internet.

It became clear in the questionnaire data that internet participants in the case study area were concerned about issues of rurality and their spatial disadvantages of remoteness. Building on the result from Chapter 5, Chapter 6 will focus on ICT exclusion in the study area, as well as on the effect of internet use on Hatherleigh residents. Chapter 6 will investigate people's reasons for not using the internet, and will analyse internet users' views about the internet. It will be shown that using the internet provides opportunities to overcome disadvantages associated with rural isolation. It also became clear that non-users in the study area may face further ICT exclusion in the future. Finally, Chapter 6 will discuss a typology of internet non-users in the study area, which will offer insight into future policy options for rural people to overcome the digital divide.

Chapters 7 and 8 will focus on e-governance and aim to assess the degree to which the potential contribution of ICT to e-governance is limited by current patterns of access to ICTs in rural areas. Building on interview discussions and questionnaire data, Chapter 7 will particularly focus on the local level of e-governance. It will discuss whether the internet improves information/services delivery in Hatherleigh, whether it improves local engagement, and what the underlying principles are that influence these aspects. It will be shown that the internet has been less effective for obtaining information and services and for engagement at the local level.

Chapter 8 will scale up the discussion and will focus on how residents obtain on-line information and services and how they engage with government and agencies based at the regional and national levels. It will analyse if the internet improves information/services delivery at a larger scale of e-governance. The chapter will analyse whether the internet improves interaction between Hatherleigh residents and different agencies (government and non-governmental), what the barriers are preventing implementation of e-governance (individual and institutional standpoints) beyond the locality.

Chapter 9 will conclude the study by discussing the research findings in the wider context of debates on e-governance in rural areas. It will reflect on rural people's perceptions and experiences of technology (e.g. internet) and the ways it impacts on their lives, and will point towards future avenues for research.

Chapter 2: Information communication technologies and e-governance: towards a more inclusive society

2.1 Introduction

The late 1800s and the 1900s brought remarkable achievements in communications. The telegraph, the telephone and radio were all developed within a span of sixty years. Each of these communication technologies provided opportunity for reflective changes on society, just as the internet has today (Castells 2007). Most commentators argue that the internet is a large scale network of millions of computers that allows continuous communication across the global sphere, and the diffusion of internet innovations is a topic of great importance (Robinson *et al.* 2000; Castells 2004, Castells *et al.* 2007). For largely historical reasons, information communication technologies (ICTs) have reached into everyday life of individuals and organisations. This emphasises the increasing importance of understanding the relationship between ICTs and society. As Chapter 1 discussed, over the last few decades ICTs have shaped many aspects of society, and the specific role that ICTs have played in influencing government and governance structures has received particular attention.

This chapter seeks to explore conceptual and theoretical debates surrounding the development of ICTs and their potential consequences for society. In particular, attention is paid to Manuel Castells's concepts to analyse aspects of current modern society that may facilitate new implementations of ICTs. Moreover, this chapter seeks to show how ICTs have interacted with patterns of globalisation, as

well as discussing the emergence of the new concept of 'information society'. The chapter will argue that many of the problems which are experienced by different stakeholders in different societies are often linked to accessibility to, and changes in, new ICTs.

In seeking to address the main aim of this thesis, specific emphasis will be placed on discussing theoretical and conceptual debates surrounding the term of 'governance' and 'e-governance'. In this context, the difference between 'governance' and 'government' will be examined. This chapter, thus, discusses the concept of governance by examining the relationship of governance with ICTs. Further, the potential of ICTs to improve current governance structures will be discussed. Finally, in light of the objectives of this thesis outlined in Chapter 1, the last section of the chapter explores the emergence of rural governance, highlighting a diverse range of perspectives on rural community empowerment and different government strategies (and strategies used by other stakeholders) to empower rural people through the use of ICTs.

2.2 Information communication technologies: issues and debates

2.2.1 Changing technologies and societies

Most economists argue that ICT has become one of the principal forces in the global economy (Melody 1985; Castells 2004). ICT is today recognised as a form of technological development that is transforming the economies of the Western world. Most studies agree that the term 'ICT' is used to refer to a wide range of technologies which re-structure and re-organise the spheres of production,

distribution and circulation (Dabinett 2000; Castells 1996, 2003). Indeed, breakthroughs in ICT, telecommunication technologies and computing are transforming a whole series of products and processes (Slevin 2000; Walsham 2001; Castells 1996, 2003; Castells *et al.* 2007). In a single generation, a transformation in the way people work can be seen. Before 1980, few people in the UK, for example, had used a personal computer, the fax machine only became commonplace in the late 1980s, and e-mail and the internet were confined to academics and a handful of computer specialists until about 1995 (Gillett 2004). Voice recognition, digital processing, video conferencing, and artificial intelligence, currently in the nascent stage, look set to further revolutionise life in the near future (Gillett 2004). The history of technological change shows the world that the potential for wide-ranging change in the nature of daily life is thus apparent from the scope of applications of these new technologies (Bannon *et al.* 1982; Kambayashi 2003; Castells 1996, 2004). The pervasive nature of information technology has led some commentators to argue that our society is undergoing a change as profound as that of the industrial revolution (Appadurai 2001; Castells 2004).

Yet, some sociologists argue that information technology is only one factor amongst a number of others influencing the nature of societal change (Masuda 1982; Beck 2000; Giddens and Griffiths 2006). Other factors such as population change, economic status, and political attitudes also have a key role in determining the future. Nonetheless, within the technological environment, the new information technologies are recognised as the most significant technological element which will contribute to the process of change during the next few decades. Some authors even consider new ICTs as being of paramount

importance, arguing a position of 'technological determinism'. The best example is Masuda (1982: 55) who claimed that *"societal technology has become the axial force that has brought about the transformation of human society... it is a technology that has spread throughout society and from it a new type of productivity has rapidly expanded, with a deep social impact... the basic framework of new human society should be moulded by the fundamental characteristics of the new societal technology"*. In this perspective, each period of history over the past two centuries has been characterised by technological developments, such as steam power, electrical power and the computer revolution. Technological changes or developments are thus seen as the catalysts of change.

A contrasting view is offered by other writers (see Dover 1982; Roger 1995; Goldsmith and Wu 2006). Dover (1982: 249), for example, argued that *"another difficulty which arises when attempting to forecast the effects of new technology on society is that society is subject to change from other sources. It will not be a static society; many social forces are at work concurrently with technology to bring about change. Rising population and other demographic changes, changing expectation levels, changing sectoral configurations in employment or unemployment, land use change, the distribution of wealth, resource depletion, political stability and many more, will all work through to alter society"*.

Similarly, Rogers' (1995: 5) technology diffusion theory defines diffusion as *"an innovation that is communicated through certain channels over time to a receiving society"*. Implicit in this definition are variables such as the nature of the innovation and the characteristics of the receiving society that either aid or hinder the

diffusion of the innovation. Diffusion theory suggests that adoption of technological innovations is a function of one's innovativeness, or willingness to try new products (Atkin *et al.* 1998; Neuendorf *et al.* 1998; Rogers 1995).

In order to highlight current issues and debates on ICT, I shall follow Castells's (1996) arguments in a study of the information age by focusing on economy, society and culture. In his analysis of the complexity of the new economy, society and culture in the making, Castells argues that new social forms and processes do not emerge as consequences of technological change. He demonstrates that *"technology does not determine society"* (Castells 1996: 5). Castells's approach, therefore, conflicts with Dover's (1982) argument that society is determined by many forces including technology. Castells (1996: 5) illustrated the relationship between technological change and society as *"technology is society, and society cannot be understood or represented without its technological tools"*. Thus, Castells proceeded to argue that technological change is dominated by culture in society. He gives the example of the United States of America (USA) where *"for instance, in spite of the decisive role of military funding and market in fostering early stages of the electronics industry during the 1940s-1960s, the technological blossoming that took place in the early 1970s can be somehow related to the culture of freedom, individual innovation, and entrepreneurialism that grew out from the 1960s culture of American campuses"* (Castells 1996: 5). Further, in Castells's view, and that of other writers (see also Roger 1995; Giddens and Griffiths 2006), information technology diffuses through different cultures of our societies, yet in various cultures and diverse societies different types of technological applications and uses are apparent that feed back into technological change.

Castells's (1996) theory of historical change of technology attempts to redress the concept of technological determinism. Thus, he argued that *"if society does not determine technology, it can, mainly through the state, suffocate its development. Or, alternatively again mainly by state intervention, it can embark on an accelerated process of technological modernisation able to change the fate of economies, military power, and social well-being in a few years"* (Castells 1996: 7). This later perspective can be found in Castells's ideas in which society has a central place, illustrating further the capability of society to master technology. However, at the same time, technology embodies the capacity of societies to transform themselves. To a large extent, Castells's theory is informed by ideas drawn critically from the history of different societies (United State, China, Japan, European Renaissance), and this demonstrates how technology expresses the ability of society to drive itself into technological 'mastery'. This occurs through the institutions of society, including the state, and the historical process through which such development of productive forces takes place, highlighting the characteristics of technology and its interweaving in social relationships.

These patterns may not be different in the case of the current ICT revolution. Society originated and diffused in the historical period of global restructuring. Thus, the new society emerging from such a process of change is technological and informational. The relationship between ICT and society, therefore, is characterised by considerable historical variation in different societies according to their history, culture, institutions and to their specific relationship to globalisation and information technology. This clearly highlights that patterns of globalisation are crucial to any analysis of ICT impacts – an issue we turn to in the following section.

2.2.2 Globalisation and ICTs

According to commentators, globalisation can be considered as part of a historical process through which ICTs help us to increase our powers of perception and heighten our awareness of the consequences of our actions (Robertson 2003; Castells 1996, 2002, 2004; Giddens and Griffiths 2006; Edwards and Usher 2007). This may help shed light on the specific role played by ICTs in enabling new forms of globalisation. Under the 'new' historical conditions, a new economy has emerged, and competition is played out in a global network of interaction (Castells 1996). This new economy took place in the last decades of the twentieth century, particularly because ICTs provided the material basis for such a new environment. As argued in the previous section, the emergence of this new society may have happened through historical changes linked to ICTs. Thus, the revolution of ICTs gives birth to a new distinctive economic system of 'globalisation', in which "we all live in one world, so that individuals, groups and nations become interdependent" (Giddens and Griffiths 2006: 50). Globalisation is intimately linked with the intensification and speeding up of time-space compression in economic and social life (Harvey 1989; Giddens 1991; Robertson 1992, 2003; Massey 2005; Inda and Rosaldo 2008).

Research conducted at the global level has shown that globalisation has become a buzzword of the 1990s (Giddens 1994; Beck 2000). New technology has had a significant influence in the development of the 'global village', allowing fast communication of information around the world (Walsham 2001). Some commentators such as Slevin (2000) and Giddens (1994) have argued that globalisation has inherent features of the modern world, and Slevin (2000:198)

claimed that *"under conditions of simple modernisation, globalizing processes were limited ... however, these processes have intensified and accelerated significantly"*. Other studies suggest that activities surrounding ICT and its application at the global level have become the principal source of globalisation. As Thompson (1995: 150) argued, globalisation arises when: *"(a) activities take place in an arena which is global or nearly so...;(b) activities are organized, planned or coordinated on a global scale; and (c) activities involve some degree of reciprocity and interdependency, such that localized activities situated in different parts of the world are shaped by one another"*.

In response to the increased importance of ICTs to community, society and the world, authors such as Robertson (1992, 2003) referred in their definitions of globalisation to a time-space compression which is mediated by ICT relating to the world as a whole. Robertson (1992: 8) argued that *"globalisation as a concept refers both to the compression of the world and the intensification of consciousness of the world as a whole"*. In a similar way, Walsham (2001) noted that the widespread accessibility of information communication media such as television, even in remote rural areas in the third world or poor urban communities anywhere, means that news happening in the world as a whole is available to the majority of the world's population. Some go further and argue that the globalisation phenomenon as outlined above, such as time-space compression and an increased awareness of the world as a whole, has led to a decrease of cultural difference among nations, companies, and/or individuals (e.g. Turkle 1995; Porter 1997; Hakken 1999; Jordan 1999; Giddens and Griffiths 2006). This challenge to the concept of 'cultural differences' leads on to the issue of global homogenisation.

The new ICTs and their different tools have played a great role in controlling different aspects of many cultures.

A contrasting view is put forward by Appadurai (1996) who argued against the homogenisation thesis. He highlighted that societies have different cultural histories and will appropriate global trends in a local way: *“globalisation is itself a deeply historical, uneven, localizing process. Globalisation does not necessarily or even frequently imply homogenisation or Americanization, and to the extent that different societies appropriate the materials of modernity differently, there is still ample room for the deep study of specific geographies, histories, and languages”* (Appadurai 1996: 17). However, ICTs facilitate action at distance and are deeply bound up with the intensification of globalisation (Sliven 2000; Appadurai 2001). The instantaneous global electronic communication has altered the relationships of culture and society. Indeed, people now live in a 'global society' in which they can no longer avoid other individuals and alternatives of life (Thompson 1995; Slevin 2000). New ICTs increase the possibility of global interaction, individuals no longer merely exist “side by side” with other cultures, but they interact with them in many different and ever changing way. In this way, any analysis of ICTs is closely related to issues surrounding the modern 'information society'. The following section will explore in more detail the interlinkages between the notion of information society and ICTs.

2.2.3 Information society and ICTs

The discussion in the previous section leads on to one of the most controversial issues in the globalisation debate, namely that of the information economy. Castells (1996, 2002, 2004) suggested that many of the problems which are faced by people and communities living in marginal areas are linked to technological transformations and, in particular, to changes that arise out of the influence which the emerging 'information economy' is having on the economic and social welfare of rural and urban areas. From this perspective, Graham (1994) argued that in the UK the community-based responses to technological change are well established and are usually based on increasing individuals' awareness, access and skills, and that this recent technology is more significant because it offers opportunities for many different and new patterns of spatial and social behaviour. Other researchers such as Popham (1996) and Schuftan (1996) have claimed that community economic development in relation to ICTs is rather dependent on successful regeneration, which empowers local communities. Similarly, Wilcox (1996) argued that responses at local level to the information society also emphasise the desirability of engaging users, and the need to utilize the emerging technologies to empower people.

Research that has examined the enabling access and meaningful use of ICT in India supports the previous idea, and highlights that community participation to bring the benefit of these new technologies is an evident success (Bhatnagar 2000). Thus, the potential for wider benefits to the community appear to be reasonably clear. However, Dabinett (2000) looked more closely at the notion of 'information society' and claims that the economic development of communities

also has to operate within a context of global competitiveness, and that emerging ICTs are implemented within a policy framework which predominantly supports deregulation and the delivery of benefits through liberalized markets. Thus, the scope and scale of community empowerment becomes conditioned by achieving a successful resolution of this conflict within the prevailing local-global nexus (Borja and Castells 1997).

Whilst explanations of the adoption and impacts of these technologies are still emerging, scholars such as Graham (1994), Gibbs and Tanner (1997), Gibbs *et al.* (2001) and Southern (1997) argued that regeneration policy discourses and practice have begun to incorporate consideration of these technologies within their strategies based on a belief that to do so secures some form of competitive advantage, a sense of modernisation or a 'plugged-in locality'. One formulation of a coherent policy response to this 'revolution' emanated from the European Commission (1994a, 1994b, 2000) which claimed that "*the information society is on its way. A digital revolution is triggering structural changes comparable to last century's industrial revolution with the corresponding high economic stakes. The process cannot be stopped and will lead eventually to a knowledge-based economy*" (European Commission 1994a: 10). Further, regarding the widespread impacts of ICT on local communities, Gibbs and Tanner (1997) claimed that the local level is the place where the potential of ICTs for regeneration is mainly being explored. According to Wilcox (1996), community networks which provide access to network systems, local information services and interactive communication, are now over twenty years old in North America, and Williams (1997: 64) claimed that "*through my own work ... I have become aware of at least twenty UK community networks all aiming precisely to impact on regeneration objectives*".

The latter point highlights that debates on ICTs have to be embedded within wider discussions of social exclusion, empowerment and the digital divide, precisely because ICTs have been described as a possible vehicle to allow improved participation of the socially and economically excluded. The next section will, therefore, investigate the link between ICTs, social exclusion, empowerment and the digital divide.

2.2.4 ICTs, social exclusion, empowerment and the digital divide

The previous section has shown that ICTs are of growing importance, and emerging information society policies and practices have begun to address social exclusion, empowerment and the digital divide in a wide range of projects. This section will attempt to provide a critical review of the nature of ICT and its potential to address issues associated with social exclusion, empowerment and the digital divide.

Research conducted at community level has shown that ICTs have contributed to positive growth in productivity, with the greatest benefits accrued by firms that have used information technologies (Brynjolfsson and Hitt 2000). McDonald and Malina (1997) put forward a similar argument by drawing attention to the potential that ICTs offer. For example, ICTs provide information at low cost and are a tool for community information sharing, problem solving and local economic development. Similarly, some studies suggest that stakeholders are better enabled to participate in democracy by using ICTs, with empirical results ranging from the

UK (Dabinett 2000) to India (Bhatnagar 2000). However, others are far more critical, and Wilcox (1996: 5), for example, argued that:

“whatever benefits may be found in the information society, revival of ‘community’ is not one of them. At least not community as the traditional nostalgic, and incontrovertibly good product of our imaginations... Fundamentally the information society is about privatisation, individualism, fragmentation, and a culture without history that recognises no values or truth beyond money... In contrast religion, community work and politics is about building a common life, about integrating people into a body, about collaboration and concern between neighbours and about enduring values of justice and truth”.

Graham (1994) put forward a similar view by drawing attention to the danger that socially-oriented projects will simply develop to provide another layer of social inclusion and exclusion and may exacerbate the effects of private markets. From this perspective, Dabinett (2000) claimed that successful initiatives are unlikely to have more than marginal effects, although for those in positions to enjoy the effects the benefits could be substantial. Meanwhile, Castells (1996) argued that the information society is potentially seen as a new route to social exclusion, with the processes of change creating the ‘ICT exclusion, or ‘digital divide’. Thus, Southern (1997) claimed that the concept of the world of work shifting towards an era of telecommunity has been vastly overstated.

The ‘digital divide’ or ‘ICT exclusion’ became recently a political and academic hot topic. The OECD (2001a: 5) argued that the digital divide refers to the *“the gap between individuals, households, businesses and geographic areas at different socio economic levels with regard both to their opportunities to access ICTs and their use of the internet for variety of wide activities”*. Similarly, much of the existing literature refers to the digital divide as the differences between ‘haves’ and ‘have-nots’ regarding access to and use of the internet (Castells 1996; Howland 1998; Norris 2001; Servon 2002; Warren 2002). A person’s, group’s, community’s, or country’s use or non-use of internet locates them on one side or the other of a

wide participation spectrum (Warren 2007; Kenny 2006). A series of research in the UK, USA and Europe has identified a picture of inequalities in the use of ICT – in particular with regard to the internet (see Warren 2007 for the UK; Lenhart 2003, and Selwyn 2006 for the USA). These study identify emerging trends that even in countries with relatively high levels of ICT use, specific social groups are significantly less likely to be engaging with new technologies (NTIA 1995, 1999, 2000, 2002; Norris 2001; Anderson and Tracey 2002; Kenny 2006). However, as general levels of access to ICT have continually risen (Internet World Stats 2007; Dutton and Helsper 2007; Office of National Statistic 2007a), some academics, organisations and politicians are beginning to dismiss notions of a digital divide (see Compaine 2001; Strover 2003; Ofcom 2008). For example, the UK Ofcom's report (2007) claimed that the digital divide in the UK is 'diminishing'.

However, for rural areas, much of the current debate about the digital divide between rural and urban areas is centred on the idea that rural areas do not have the necessary infrastructure for internet access (Hindman 2000; Strover 2003; Skerratt and Warren 2003; Warren 2007). In line with this, Strover (2003) argued that there are tendencies of increased concentration flow to urban and central areas, and rural areas tend to fall further behind in human development as well as in economic progress and political participation. However, in the UK, according to Ofcom (2008), rapid growth has taken place in rural internet access and the rural-urban divide has seemingly narrowed (see Chapter 3). Ofcom (2008) also claimed that rural areas are now better connected to broadband than urban areas. In this context, Williams (2008) claimed that Ofcom's (2008) report did not reflect the reality of the digital divide in the UK. Williams (2008) highlights that many places in rural Scotland do not yet have broadband access (see introductory quote in

Chapter 1) and emphasises social and demographic factors associated with the ICT divide. On the other hand, Williams (2008) along with the Commission for Rural Communities (2009a) argues that broadband speed plays a role in creating new digital divide between rural and urban areas, as urban internet users' connections are on average 15 per cent faster than those of internet users in rural areas in the UK.

This focus on rural ICT exclusion or 'digital divide' is further discussed by Warren (2007) who argued there are tendencies of increased concentration of ICT infrastructure on urban and central areas, while other areas (mainly rural) have little access. Previous studies on the diffusion of ICT have also suggested that ICT implementation in rural areas is particularly related to private services providers, mainly because of low level of demand for new technologies and associated low population densities (Malecki 2001; Strover 2001; Grimes 2000, 2003; Hollifield and Donnermeyer 2003; Nicholas 2003). These studies suggest that for advanced technology infrastructure investment to be economically viable in low population density area, it is important to create the maximum possible level of demand among the population of potential customers (Malecki 2001). This, however, is tempered by the realisation that ICT infrastructure availability in rural areas is often far from ideal, and that rural people without technology will be excluded (Castells 1996; Southern 1997; Norris 2001; Warren 2002). However, Warren (2007) also suggested that while the provision of ICT infrastructure can be weaker in rural than in urban areas, the benefits of new technology in the countryside may be somewhat greater than in the big cities.

There is nonetheless widespread concern that non-use of ICT creates a new source of marginality and exclusion from 21st century society – a marginality that could be even more pronounced in remote rural areas (Servon 2002; Castells 2003; Mossberger *et al.* 2003; Rao 2005; Selwyn 2006; Warren 2007). Warren (2007: 385) referred to this as a 'mutating divide', i.e. where "*social exclusion leads to digital exclusion, which in turn leads to deeper inequalities, new social exclusion and the vicious digital exclusion*". The disbenefits for ICT non-users in rural areas might increase further as they are neither able to participate in new on-line services, nor in previously available facilities and services that have been gradually withdrawn from rural areas in favour of on-line provision (Woods 2005). This leads to ICT inclusion between individuals within one community. In short, lack of access to ICT is seen to prevent individuals from living a fulfilling and active life in society (Haddon 2003). In the next section, I will focus in greater detail on the factors associated with such ICT exclusion.

2.2.5 Factors affecting use /non-use of ICT

Existing studies of differential ICT access and use have documented inequalities among various segments of the population. A number of studies and surveys have shown that specific social groups remain significantly less likely to engage with new technologies (e.g. Rogers 1995; Anderson *et al.* 1995, 2002, 2003; Bromley 2004; Roe and Broos 2005; Dutton 2005). Furthermore, previous research on the adoption of ICTs has shown that, at the individual level, technology adoptions are related to a number of socio-economic characteristics such as age (Carveth and Kretchmer 2002; Venkatesh *et al.* 2003; Anderson *et al.* 1995, 2003; So *et al.*

2005), Gender (Choudrie and Lee 2004; Leonard and Cronan 2005; Haines and Leonard 2007; Wajcman 2004, 2009), employment (Rogers 1995; Gilligan and Wilson 2003; Venkatesh *et al.* 2000, 2003; Choudrie and Dwivedi 2005; Selg and Svensson 2008) and family composition (Lenhart *et al.* 2003; Warren 2004; Savage and Waldman 2005; Ofcom 2006; Dwivedi and Lal 2007). Also influencing the adoption of new technologies is the nature of the technology itself. Barriers to using ICT (internet in particular) reported by Office of National Statistics (2007a) study respondents in the UK included lack of time, no interest, lack of skills or knowledge, cost, security concerns, and various other factors (see also Chapter 3). This is supported by other studies (e.g. Rogers 1995; Strover 2001, 2003; Bauer *et al.* 2005) that also identified 'motivation' and 'interest' as key factors (e.g. Punie 1997; Bonisteel 2000; Rice and Katz 2003; Lenhart *et al.* 2003; OxIS 2007), as well as lack of knowledge (Rogers 1995; Anderson *et al.* 1995; 2003; Lenhart *et al.* 2003; Selg and Svensson 2008) which all have been found to influence adoption decisions

Similarly, studies have suggested that an individual's personal communication network plays a role in decisions to adopt or not adopt new ICTs. In particular, people who are highly interconnected with others are more likely than less well connected people to adopt ICTs (Rogers 1995; Anderson *et al.* 1995; Robinson *et al.* 2000; Lenhart 2003; Kraut *et al.* 2002; Nie and Hillygus 2002; Kiesler *et al.* 2002). Moreover, most people are more likely to adopt technology (e.g. internet) if others in their networks have also adopted these. Thus, those with strong interpersonal ties have been found to be more enthusiastic to adopt new technologies than those with weak ties, whereby 'weak ties' are defined as

relationships with more distant acquaintances as compared to relationships with close friends, colleagues, and family members (Kiesler *et al.* 2002).

Some recent studies have begun to add empirical weight to these contentions. For example, the Pew survey of USA internet use has identified clusters of 'evaders', 'dropouts', 'intermittent users' and the 'truly unconnected' (Lenhart *et al.* 2003). Similarly, Wyatt *et al.*'s (2002) work made the new distinction between 'resisters', 'rejecters', the 'excluded' and the 'expelled'. Other studies have also highlighted that different groups of internet 'non-users' exist – from people who have never used a computer during their life to apparent 'users' who actually make minimum use of computer and internet (see the UK government's 'digital engagement framework', Digital Inclusion Panel 2004). These hierarchies of computer non-use have been shown to be further complicated by the fact that patterns of non-engagement vary between technologies (Rice and Katz 2003; Anderson 2004). As a result, this thesis will be particularly concerned with understanding factors that lead to use and non-use of ICTs (see aim and objectives in Chapter 1).

This thesis can, therefore, be situated in the context of Castells' (1996) theory of the 'information age' and the interlinkage between ICT and society. This thesis will be particularly interested to investigate how the rural study area (Hatherleigh) became connected to ICT (the internet in particular). Further, what factors are correlated with ICT adoption (e.g. internet) (i.e. age, gender, employment, and household type) in the study area, and what the purposes and motivation are underlying individuals' use of ICT will be investigated. This might contribute towards understanding Castells' (1996) assertion that the nature of ICT and its application has great potential in social change and provides opportunities for time-space

compression in rural areas. Finally, studies have also focused on non-use of digital information, giving advantage to the 'haves' and excluding the 'have-nots' (Hindman 2000; Castells 2003; Servon 2002; Mossberger *et al.* 2003; Selwyn 2006; Rao 2005; Warren 2007). This leads this thesis to give non-users of technologies particular attention, and, consequently, the rationale for individuals' non-use of the internet will be investigated. Inspired by Wyatt *et al.* (2002), the study will also attempt to develop a typology of internet 'non-users' in the study area of Hatherleigh.

2.2.6 ICTs and rural areas

Without adequate connections to advanced information technology infrastructure and services rural communities may not be able to fully participate in the emerging information economy (Huggins and Izushi 2002; Strover 2001, 2003; Millard 2005; Woods 2005). In this context, it has been argued that information technologies hold the promise of offsetting the social and economic disadvantages of rurality by reducing the barriers of time and distance from major cities (Clark 2000; Strover 2001; Hollifield and Donnermeyer 2003; Moseley and Owen 2008). Millard (2005) further argued that ICTs became an important platform of support for local communities, enterprises, and local individuals, thereby enhancing employment potential as well as the quality of local life.

Woods (2005), among others (see Boyle and Halfacree 1998; Strover 2001; Millard 2005; Moseley and Owen 2008), further argued that because of new ICTs, rural areas are no longer disadvantaged, highlighting that ICT "*raised the quality*

of life in rural areas, making them more desirable places to live" (Woods 2005: 300). Similarly, studies have suggested that new technologies can improve the quality of life of rural individuals by providing 'easy' access to a wealth of information, goods and services (Clark 2000; Moseley and Owen 2008). From this perspective, Moseley and Owen (2008) claim that ICT in UK rural areas enhances residents' ability to consume services provided afar, and enables the consumer to shop around to exercise greater choice. Clark (2000) put forward a similar view and argued that the emergence of ICTs in rural communities has positively affected the rural economy by providing new opportunities for rural people to work from home, and by exploiting the new technology to communicate with their clients, partners or employers.

Thus, with the internet being universally available across rural areas, residents working in knowledge or information-based occupations are thereby able to work for at least part of the week from home (Clark 2000; McQuaid and Lendsy 2003; Woods 2005). According to Moseley and Owen (2008), whether rural people will do so is dependent on social and economic factors, but they also suggest that significant growth in ICT use will also occur. This understanding is shared by Malecki (2003) in America, Hoorik and Mweetwa (2007) in Zambia, and Millard (2005) for the UK. In addition, McQuaid and Lendsy (2003) argued that, in Scotland, ICT may allow rural job seekers to access both formal services and informal networks that remain crucial for the job search process in remote rural areas (but see initial quote in Chapter 1 and discussion above). Accordingly, Schmied (2005: 145) argued that the ability of ICT to expand the choice of location for work and living in rural areas "*paved the way for a general opening up of the countryside*". Similarly, other geographical studies have suggested that the

development of new technology in rural areas is one key factor among many (e.g. economic development) which has aided the mobilisation of rural in-migrants (Cloke *et al.* 1998; Hugo and Bell 1998; Boyle and Halfacree 1998; Millard 2005).

Meanwhile, some writers have argued that ICT offers opportunities for rural people to overcome rural isolation through increasing communication and commuting possibilities with the world (Cross and Nutley 1999; Strover 2001; Woods 2005; Tookey *et al.* 2006). In this context, some geographical studies have turned their attention to internet use by young people in rural areas (Sibley 1995; Valentine and Holloway 2001; Schäfer 2008). According to Sibley (1995), for example, young people are excluded from most activities in rural areas which seem to be mainly for adults (e.g. pubs), and when meeting together in one place they seemed to be unwelcomed. Similarly, Glendinning *et al.*'s (2003) study in a rural area of Northern Scotland found that young people were less likely to like living in rural areas and found that nothing would interest them in the rural community (see also Schäfer, 2008, for similar findings for rural areas in former East Germany).

With regard to the potential of ICTs in rural areas, Lægran (2002: 157), whose work was based in Norway, has argued that ICT can help eliminate "*the friction of distance in question of location and social interaction*" for rural young people, and that ICT is seen as a great device to improve communication. Similarly, Schmied (2005: 149) argued for Germany that young families and families with young children choose to live and settle in rural area because improved ICT facilitates "*actual and /or virtual commuting and therefore reduce the need for urban living*". Current studies, thus, have highlighted that ICT can help rural areas to be 'contemporary' and 'up-to-date' (Malecki 2003; Moseley 2003; Woods 2005;

Tookey *et al.* 2006; Schwanen and Kwan 2008; Moseley and Owen 2008). For example, Moseley and Owen (2008) argued that accessing services such as education, shops, banks, entertainment or health advice that meet people's needs is difficult in rural areas if a car is not readily available or where public transport is poor (Woods 2005). Therefore, in the UK, the diffusion of new information communication technology (notably the internet) can improve access to services enjoyed by rural residents.

In terms of investigation of the ICT potential in rural areas, some researchers have turned their attention to the 'village/community website' (Warren 2007) or 'neighbourhood networks' (Hampton 2007). According to Warren (2007), such websites represent the community as a whole to the world in which community history and present stories are available to a wider audience, especially as village websites are a key product of community activities. They mainly include community events, news, and church activities, and sometimes village websites also act as an on-line magazine, showing photos and news of recent events in the village (Hampton 2007; Warren 2007). The village websites can also provide services to current or former residents and relatives, or provide services as a way of promoting local tourism or businesses. However, according to Warren (2007), the evolution of village websites is still limited in the UK. Similarly, Hampton (2007) claimed that, although village websites have a strong community representation in the USA, the use of such websites to communicate locally does not appear to have significantly replaced contact and communication through other means of communication, in particular the telephone or face-to-face contact. This question surrounding the use of the internet and village websites for local networking will form an important focus of the analysis of this study in Chapters 5-8.

Based on the above-mentioned review, Table 2.1 summarises key aspects of ICT impacts and use discussed in the literature, in particular whether ICT is likely to enhance the competitive position of rural areas. It will, therefore, be particularly interesting to analyse which impact the use of ICT might have on people's lives in rural areas. Five key hypotheses will be tested to analyse rural people's understanding and use of ICT in the context of Hatherleigh:

<i>Authors and date of publication</i>	<i>ICT use and effects on rural areas</i>
Cross and Nutley (1999); Strover (2001); Woods (2005); Tookey <i>et al.</i> (2006)	1. <i>ICT helps rural people feel less isolated</i> (e.g. ICT makes rural people's life easier)
Sibley (1995); Valentine and Holloway (2001); Læggran (2002); Schäfer (2008)	2. <i>ICT helps young rural people to communicate</i> (e.g. rural young people can now use the internet to communicate with the world outside their community and village)
Clark (2000); Schmied (2005); Moseley and Owen (2008)	3. <i>ICT improves services in rural area</i> (e.g. internet helps rural people get better/ more services, e.g. holidays, jobs, etc.)
Cloke <i>et al.</i> (1998); Hugo and Bell (1998); Boyle and Halfacree (1998); Millard (2005); Schmied (2005)	4. <i>ICT helps rural people stay in their towns or villages (reduces out-migration)</i> (e.g. if there was no internet in a rural community, rural people would move away for jobs, an easier life, etc.).
Malecki (2003); Woods (2005); Tookey <i>et al.</i> (2006); Schwanen and Kwan (2008); Moseley and Owen (2008)	5. <i>ICT raises the quality of life in rural areas</i> (e.g. rural areas have been affected positively by the internet)

Table 2.1: Summary of previous studies discussing ICT use and effects on rural areas (Source: Author)

1. ICT helps rural people feel less isolated (Cross and Nutley 1999; Strover 2001; Woods 2005; Tookey *et al.* 2006).
2. ICT helps young rural people to communicate (Sibley 1995; Valentine and Holloway 2001; Schäfer 2008; Læggran 2002).

3. ICT improves services in rural areas (Clark 2000; Schmied 2005; Moseley and Owen 2008).
4. ICT helps rural people stay in their towns or villages (i.e. reduces out-migration) (Cloke *et al.* 1998; Hugo and Bell 1998; Boyle and Halfacree 1998; Millard 2005; Schmied 2005).
5. ICT raises the quality of life in rural areas (Malecki 2003; Woods 2005; Tookey *et al.* 2006; Schwanen and Kwan 2008; Moseley and Owen 2008).

Throughout Section 2.2 we have seen that any analysis of ICTs also needs to take into account issues of globalisation, notions of the 'information society', as well as questions regarding the interlinkages between ICTs and social exclusion, the digital divide, and empowerment. However, Chapter 1 also highlighted that ICT impacts cannot be fully understood without considering political impacts, in particular the possible links between ICT diffusion and changing governance structures – issues that the next section will turn to.

2.3 Governance: debates and issues

Section 2.3 will specifically focus on ICTs and governance. It will first provide a brief analysis of theoretical issues linked to the notion of 'governance', before investigating in more detail issues related to e-governance which may be affected by ICT diffusion. As Chapter 1 outlined, the notion of e-governance will form the conceptual framework for this thesis. The final part of Section 2.3 will then focus on linkages between ICT and rural governance, based on issues highlighted in Section 2.2. The focus here will be on assertions that ICT diffusion, at the moment

at least, has focused largely on urban areas, while rural areas have been neglected (although the situation is rapidly changing in most advanced economies).

2.3.1 Theorising governance

The wide applicability of the term 'governance' and its reference to basic problems of political order, as well as its possible relationship to ICT implementation, make it imperative for this study to briefly discuss theoretical concepts behind the notion of governance. It is reasonable to say that until the late 1980s, 'governance' was not a word heard frequently within political science (Hewitt de Alcantara 1998). The concept of governance can be seen as "*the development of governing styles in which borders between and within public and private sectors have become blurred*" (Stoker 1998:17; see also Hewitt de Alcantara 1998; Riley 2003). It is not easy today to find publications on development and societal issues – whether written by multilateral or bilateral agencies, academics, Non Governmental Organisation (NGOs) or public or private voluntary organisations – that do *not* rely on use of the notion of governance (for more detail see, for example, Stoker 1998; Hewitt de Alcantara 1998; Jessop 1998; Gaudin 1998; Valler *et al.* 2000).

Theoretical work on governance, thus, reflects the interest of the social science community in studying shifting patterns in styles of governing (Wong and Welch 2004; Stoker 1998). While the traditional use of 'governance' and its dictionary entry define it as a synonym for government (Stoker 1998), Rhodes (1996) argued that in growing work on governance there is a redirection in its use and import.

Rhodes (1996: 652-3) claimed that governance means “*a change in the meaning of government, referring to a new process of governing; or a changed condition of ordered rule; or the new method by which society is governed*”. Where government signals a concern with the formal institutions and structures of the state, the concept of governance is broader and draws attention to the ways in which governmental and non-governmental organisations, as well as other stakeholders, work together, and address the ways in which political power is distributed, both internal and external to the state (Stoker 1995).

In the words of Jessop (1995: 310-311), the term governance signals a shift to “*a broad concern with a wide range of governance mechanisms with no presumption that these are anchored primarily in the sovereign state*”. Much of the recent literature on the terms ‘government’ and ‘governance’, therefore, highlight the clear distinction between the two, including Kettl’s recent book (2002) on ‘The transformation of governance’ which provides a historical analysis of American public administration. There, government is seen as an institutional superstructure that society uses to translate politics into policies and legislation, while governance is the outcome of the interaction of government, the public service, and citizens throughout the political process, policy development, programme design, and service delivery. In a similar context, Riley (2003), in his study on governance and government, explained the distinction between the two. Riley saw governments as specialised institutions which contribute to governance, where representatives of government seek and receive citizen support, but also need active cooperation of their public servants. Governance is seen here as the outcome of politics, policies, and programmes. By contrast, some commentators argued that processes of governance have led to outcomes that are similar to those of the traditional

institutions of government. As Rosenau (1992: 3) commented, *“to presume the presence of governance without government is to conceive of functions that have to be performed in any viable human system ... Among the many necessary functions, for example, are the needs wherein any system has to cope with external challenges, to prevent conflicts among its members... to procure resources... and policies designed to achieve them”*.

This highlights that understanding governance is a matter of differing opinions, and academic literature on governance generally demonstrates that the term ‘governance’ is used in a variety of ways and has a variety of meanings (Rhodes 1996). Researchers have also emphasised that the essence of governance research is its focus on governing mechanisms that are not necessarily based on recourse to the authority and sanctions of government. In this respect, Kooiman and Van Vliet (1993: 64) claimed that *“the governance concept points to the creation of a structure or an order which cannot be externally imposed but is the result of the interaction of a multiplicity of governing and each- other- influencing actors”*.

What is interesting is how governance is used in a range of academic settings in an attempt to capture a shift in thinking and ways of working. In Britain and the USA, for example, the word ‘governance’ has entered the policy arena and also has a resonance in the policy debates (Jessop 1998). As already discussed in Chapter 1, arguably, academic thinkers use governance more broadly to recognise the interdependence of public, private and voluntary sectors in developing countries (Goodwin 1998). It is this tension between different ‘levels’ of governance – as well as issues about the notion of the existence of governance as

a whole – that makes extrapolations from governance situations particularly difficult. What will be applicable is that governance can be seen to be about a 'reinvented' form of government.

Osborne and Gaebler (1992), therefore, argued that as governments might make sensible and effective use of a wider range of tools beyond the direct provision of services (Stoker 1998), governance implies potential for contracting, franchising and new forms of regulation in whatever geographical context. In short, governance may be largely about what some refer to as 'new public management' (Hood 1991). However, Stoker (1998), in his study about the theory of governance, argued that governance is about more than a new set of managerial tools and that it is also more than achieving greater efficiency in production of public services. Stoker (1998: 18), therefore, suggested that the rise of governance "*undoubtedly reflects to a degree a search for reductions in the resource commitment and spending of government... the value of the governance perspective rests in its capacity to provide a framework for understanding changing processes of governing*".

These debates give this section the opportunity to demonstrate the characteristic elements of governance. On the one hand, the concept of governance can be understood as referring to the way in which power is distributed and exercised by different institutional actors within a given geographical territory, as most academic thinkers agree that this is a traditional vision of governance (Kahila and Lakso 2004). Yet, Goodwin (1998) saw notions of power in governance in a broader context, and describes this power as a result of development of governing styles that includes a complex set of institutions and actors. For Goodwin, therefore,

governance should be interpreted as a complex set of institutions and actors drawn from within, but also beyond, government, which means that the blurring of boundaries and responsibilities and power relations between stakeholders (institutions) and citizens involved in collective action compose the important feature of governance. Kahila and Lakso (2004: 4) had similar understandings of power in governance, and see this as power through indirect 'authority' – i.e. governance means getting things done without the use of direct authority.

However, key questions in relation to public concern are raised among a number of scholars and also how power is exercised and where it is situated in administrative structure (Lowe *et al.* 1993; Rhodes 1996; Stoker 1995, 1998; Goodwin 1998; Amin 2004). Stoker (1998) revealed the important and essential differences between governance as embedded within notions of the word 'govern': authorities that govern are usually governments, while authorities of governance usually mean plural subjects of governing. This suggests that the flow of power to 'govern' is from top to bottom, while the flow of power in 'governance' processes is reciprocal and interactive – the latter again highlighting that effective governance largely depends on interaction of different interplaying actors and functions (for more detail see Stoker 1998; Rhodes 1996; Kooiman 1993; Miller and Dickson 1996).

A final consideration in relation to the link between governance and policy is that much of the literature suggests that the 'developmental approach' within the governance literature considers not only the discourses within the policy document, but also the power relations within the broader policy process (Stoker 1997; Lagendijk 1999; MacLeod and Goodwin 1999; Amin 2004). However, Kahila

and Lakso (2004: 4) argued that the objectives and development of regional policies are embedded with importance and contribution to the construction of policy knowledge and implementation. They argue that this reflects interests of various actors in the particular formation of governance. This is in agreement with comments by Le Galés (1998) who suggested that governance is the capacity to form interaction and co-operation between local and regional interests groups, organisations and social groups. This concept of 'capacity' in Kahila and Lakso's (2004) governance model also refers to processes that take place *beyond* organisations or regions, namely through the capacity to organise collective actions and abilities and to build coalitions and partnerships towards specific goals. Therefore, Legendijk (1999) noted that internal approaches can induce detrimental processes of interregional competition and inhibit valuable flows of knowledge between actors in competing regions.

In these conceptualisations of governance, therefore, governance moves beyond efficiency and hierarchical structures, especially as modes of regional policies can be based on one or another internal or external factor, and different institutions are in different positions to define their economic and functional spaces (MacLeod and Goodwin 1999). However, as Stoker (1995) pointed out, the value of the governance perspective still rests in its capacity to provide a broader framework for understanding changing processes of *governing*. Consequently, according to Le Galés (1998: 496), the notion of governance has the capacity to integrate and give form to local and regional interests, organisation and social groups.

This brief review highlights both that theorising governance is a rapidly growing subject matter and that it is essential that government and governance structures

operate in harmony and within consistent evolutionary pathways. In this study, the 'common' perception of governance will be adopted in which the concept of governance refers to the development of forms of governing in a network type of relation between the public, private, and voluntary sectors. In such a situation boundaries between and within public, private and voluntary sectors have become blurred (Hewitt de Alcantara 1998, Stoker 1995, 1998; Riley 2003). This concept emphasises that individual, governmental and non-governmental institutions work together, and interact interdependently (Goodwin 1998; Stoker 1998). In addition, Section 2.3.1 has shown that understanding the possible interlinkages between ICTs and governance processes will be a complex process. This interlinkage has been particularly associated with the newly emerging notion of 'e-governance' – an issue I turn to in the next section.

2.3.2 E-governance

In seeking to address a key objective of this thesis, this section will explore a range of theoretical debates about e-governance. There is common agreement about the concept of 'e-governance' by authors such as Okot-Uma (2001), Millard (2003) and Odendaal (2003). Odendaal (2003: 586), for example, argued that e-governance refers *"to the ability of government or non-government agencies to interact with the public on-line in the delivery of services and in fulfilling their pre-designated mandates"*. Okot-Uma (2001) suggested that the emergence of new ICTs has the potential to positively change processes of governance. The rapid development, deployment and proliferation of ICTs, thus, may herald new opportunities for growth and development in countries around the world. It is,

therefore, important to understand the possible role that ICTs may play in societal development, and, in particular, to understand the possible interlinkages between ICTs and the newly emerging concept of 'e-governance'.

Okot-Uma (2001) suggested that e-governance incorporates all those processes and structures by means of which the new information and communication technologies can be deployed by government to enable the following:

- administration of government and delivery of services to the public (electronic government);
- informing, vote-enabling, representation-enabling, consulting and involving the citizenry in, among others, broad consensus-making in society in matters pertinent to decision-making in political, social and economic priorities in government (electronic democracy);
- transacting business with its 'supply chain', namely, partners, clients and the markets (electronic business).

By contrast, Millard (2003) argued that e-governance is not just about putting government services on-line and improving their delivery, but also constitutes a set of technology-mediated processes that could change the broader interactions between citizens and government. Hence, in the same vein, e-governance refers to governance processes in which information and communication technology play a significant role. A number of writers, therefore, argue that the role of ICT in governance could include improving standards of governance products and services currently provided, providing new governance services and products, enhancing participation of people in the provision of governance products and

services, and bringing new sections of society under the governance sphere, including those who are more likely to remain excluded, namely the poor, the illiterate, the differently able, indigenous people, as well as migrants and displaced people.

However, the route to e-governance is only newly emerging, as governments and citizens around the world experiment with, and learn to exploit, new media and new information technologies (Odendaal 2003; Riley 2003; Syrett and Baldock 2003). A central concern is that e-governance involves new styles of leadership, new ways of accessing services, new ways of transacting business, new ways of accessing education, new ways of listening to citizens and communities, and new ways of organising and delivering information. In addition, some of the literature on the relationship between ICT and governance suggests that the interactive aspects of e-governance allow both grassroots and stakeholders to send and receive information. By facilitating this two-way interaction, e-governance has the potential to act as a means to improve service delivery and responsiveness to citizens (Gore 1993; Markoff 2000; Raney 2000; Odendaal 2003).

With regard to the political process, writers such as Thompson (1999) have suggested that some aspects of interactive technologies bring about change because they weaken the factionalisation that plagues political systems. The interactive nature of ICTs, plus its ability to speed-up information, has the potential to make governance processes function better than it currently does. Further, new ICTs enhance governance processes by overcoming geographical distance, promoting ideological variety, opening citizens to more diverse viewpoints, and encouraging deliberation (Thompson 1999). However, others have claimed that

the relationship between ICT and governance is not just one underpinned by technology and capacity, but that it is also influenced by less predictable elements such as social pressures, community activism and capacity within local government areas of jurisdiction (Rakodi 2001; Cloete 2002; Odendall 2003). Rakodi (2001) claimed that e-governance is about the interaction between state and civil society in all its guises, not just including rules, regulations and systems that make up government. He claimed further that underlying forces that would determine the relationship between ICT and governance (e.g. how well do ICTs accommodate the processes necessary to achieve inclusive and democratic governance?) are contextual as well as determined by larger policy imperatives.

Fountain (2001) demonstrated such forces by a range of factors including institutional arrangements, budget scarcity, group conflict, cultural norms, and prevailing patterns of social and political behaviour. Budget considerations, in particular, restrict the ability of public and private sectors and NGOs to place services on-line and to use technology for democratic outreach – issues that will be specifically investigated in the context of the case study of Hatherleigh in this thesis. Groups also fight over 'small' issues such as whether on-line tax filing should be left to the private sector or performed by the government, while cultural norms and patterns of individual behaviour affect the way in which e-services are used by grassroots stakeholders (West 2004). Thus, with regard to political constraints, Davis (1999), Margolis and Resnick (2000) and Chadwick (2003) all suggested that ICTs will *not* improve democratic governance. With regard to technology, Davis (1999: 146-148) noted "*that the complex bureaucratic maze also has been duplicated on the web*". Agency websites may, therefore, just serve to perpetuate their own mission and do little to enhance responsiveness or citizen

participation. Margolis and Resnick (2000: vii) further argued that *"far from revolutionizing the conduct of politics and civic affairs in the real world, we found that the internet tends to reflect and reinforce the patterns of behaviour of that world"*. In a similar vein, Chadwick (2003) found government websites in the United States, Great Britain and the European Union to be predominantly non-interactive and non-deliberative, and concludes that e-government is not likely to reshape governance. How researchers have attempted to group together ICT and factors affecting e-governance is summarised in Table 2.2.

Borja and Castells (1997) argued that the relationship between ICT and governance is underpinned by technological, cultural, economic and institutional processes, leading Odendaal (2003) to argue that economic development, policy priorities and technological development will, in combination, most certainly determine the capacity of ICTs to incorporate governance processes (see Table 2.2).

However, Odendaal's study (2003) on ICT and local governance also investigated 'success factors' in achieving e-governance, and found that the integrated delivery of the necessary ICT infrastructure is important for ensuring that the capacity exists to service and run it, and that training facilities also exist to enable stakeholder access to these new technologies. Odendaal (2003), therefore, suggested that ICT not only enhances effective governance through e-governance, but can also create opportunities for growth and empowerment. Such empowerment was seen in MacKinnon and Phelps' (2001) work by providing possibilities for new political action, termed 'scaling from below' relating particularly to grassroots actors and marginalised communities.

Authors, date	Limitation of e-governance
Odendaal (2003) Rakodi (2001) Cloete(2002)	<ol style="list-style-type: none"> 1. Social pressure 2. Community activism 3. Capacity within local government or jurisdiction
Fountain (2001) West (2004)	<ol style="list-style-type: none"> 1. Institutional arrangement 2. Budget scarcity 3. Group conflict 4. Cultural norms 5. Pattern of social behaviour 6. Pattern of political behaviour
Borja and Castells (1997) Odendaal (2003)	<ol style="list-style-type: none"> 1. Economic development 2. Policy priorities (institutional process) 3. Technological development (ICT infrastructure, capacity to run services, and training facilities to enable citizens and stakeholders to access it)

Table 2.2: Summary of previous studies discussing the limitations of e-governance (Source: Author)

In the latter sense, grassroots and marginalised communities can gain empowerment by pressing claims and engaging with policy stakeholders at higher spatial scales – an issue linked to e-governance processes at local level and beyond which will be analysed in detail in Chapters 7 and 8. In this respect, as noted by Staeheli (1994: 388), *“the ability to press claims at a larger scale can be critical to success of local grassroots movements, while blocking access to arenas at larger scales can be a strategy to opposing groups”*. Bulkeley (2005: 880) similarly stressed the importance of the move away from state-centred analyses of governance to consider the *“multiplicity of actors and institutions that influence the ways in which global issues are addressed across different scales”*. From this perspective, scale should be understood *“as a factor in the construction and*

dynamics of geographical totalities – rather than simply as a product of geographical relations” (Howitt 1998: 65).

The determination of factors or limitations affecting e-governance is nonetheless a challenging issue of discussion. There is no unifying conceptual framework that includes all factors relevant to e-governance. Therefore, this study will investigate limiting factors which have a conceptual relationship with e-governance. In this context, previous studies on the use of ICT have investigated the possible barriers (factors) affecting e-governance. For example, Choudrie *et al.* (2005) argued that while most of e-government initiatives have focused on providing information and basic public services, the success of these initiatives will largely depend on providing value added services to citizens (see also Margretts and Dunleavy 2002; Dugdale *et al.* 2004). A Danish study showed that the development of on-line services was more focused on what is technologically feasible than on the demands of citizens (Henriksen 2006). Research has also shown that it is not a straightforward road for citizens looking for on-line services provided by governments. Similar trends have been suggested by other researchers (Hoffman *et al.* 1999; Jarvenpaa and Tractinsky 1999; Bonham *et al.* 2003). These studies have suggested that trust and security were key areas that needed attention in deployment of e-government and move citizens to engage with e-services. According to Vassilakis *et al.* (2005), there is often a lack of knowledge about the existence of on-line services and an inability to locate relevant sites. Moreover, Hedestig and Söderström (2008), in their research about e-government in Sweden, argued that ‘managerial’ problems can affect the success of e-government. They argued that spending most effort on front office activities had resulted in less effort spent on the work of establishing an effective organisation of

on-line resources by organisations. Likewise, Ke and Wei's (2004) work in Singapore, and Choudrie *et al.*'s (2005) work in the UK, has emphasised that changes that accompany a transition from manual to electronic government often also entail change in management approaches and quality management. Recent research by Becker *et al.* (2008), in a study of German use of e-services, identify five categories of reasons explaining why citizens do not use various on-line services: (a) infrastructure and accessibility, (b) security, trust and services complexity; (c) marketing and marketability; (d) personal contact; and (i) cost. Becker *et al.* (2008) refer to these reasons as 'inclusion gaps'.

In the context of the UK, use of on-line government services has increased somewhat since 2005. OxIS (2007) data revealed that in 2005, almost 40% undertook at least one e-government activity on-line, while 46% undertook at least one activity in 2007. According to the Office of National Statistics (2007b) this increase might coincide with the emergence of sites such as www.direct.gov.uk and ukon-line.gov.uk launched in May 2004, which provide one-stop-shops for on-line government services and have rapidly grown to become the most popular e-government websites. Further, Dutton and Helsper (2007) suggested that the increase in the use of e-government services between 2005 and 2007 is associated with the ease of access to political and civic information and knowledge. Such access has been said to empower those who have distanced themselves from offline participation as they have removed themselves from 'traditional' (i.e. offline) politics. The types of government services that are most frequently used are 'getting information about local council' (29%) and 'central government services' (26%). This has increased by ten percentage points and five percentage points, respectively, since 2005 (OxIS 2007). Looking for information

about schools and education is undertaken by a quarter (23%) of internet users. All other activities, such as paying for taxes and looking for information about a local council are undertaken by around a tenth of users (11% to 15% do this on-line).

However, Choudrie *et al.* (2005) argued that, in the UK, although these on-line government services can satisfy local e-government strategies, they fail to offer a single point of contact for integrated government services at national level. Correspondingly, Gant and Gant (2002) argued that although the ukon-line.gov.uk web portal provides a single point of contact for e-government initiatives, it is yet to function as a centralised and functioning web portal, i.e. one that offers a gateway to local and national government websites and that provides a single point of contact for on-line service delivery.

To many, in the future, most 'e-governance' developments will result from ICT-accelerated achievements among the various political forces in society (Norris 2001; Odendaal 2003; Clift 2003, 2004; Wong and Welch 2004). There is no doubt that the world is experiencing a dramatic e-governance evolution, but in this revolution, the role, interests, and the current activities of all actors are not yet understood, and there is still opportunity to influence its development 'for the better'. As each government or non-government sector improves their on-line services and activities, democratic intent will be required to achieve the greater goals of e-governance – issues that will be investigated in depth in the context of the town of Hatherleigh in this study.

As shown above, many researchers have attempted to group together ICT and governance structure changes. In order to capture this study's understanding and

structural framework of e-governance, Table 2.3 shows a summary of how previous studies perceive the potential benefits of e-governance in social and political contexts.

The discussion so far has highlighted that e-governance means different things to different people. It is, therefore, important to outline what e-governance means in the context of this study. Building on Okot-uma (2001), Millard (2003) and Odendaal (2003), e-governance refers in this thesis to governance processes in which ICT plays a significant role. E-governance can, therefore, be defined as the use of ICT with the aim of both improving information and services delivery and improving the interaction between citizens and stakeholders.

In seeking to address one of the main objectives of this thesis (to assess the current and potential contribution of ICT to e-governance; see also Chapter 1), this study needs first to provide structure for e-governance used in this thesis. Inspired by previous studies on e-governance (Table 2.1), Figure 1.1 (in Chapter 1) shows that the approach towards e-governance in this thesis takes into account two major dimensions: improved information delivery, and improved interaction between citizens and stakeholders. Figure 1.1 suggests that, through ICT, e-governance offers opportunities for citizens to access information, knowledge, and services about social and political processes. *Efficiency* can also be improved by enhancing information delivery and by overcoming geographical distance, thus reducing travel needs to get required services and cost. Improved information delivery, in turn, develops new information and service *options*.

Authors, date	E-governance perceptions
Okot-Uma (2001)	<ol style="list-style-type: none"> 1. E-government: ICT enables government services delivery to public 2. E-democracy: ICT enables voting, consultation, participation in decision making on-line. 3. E-business: ICT enables transaction
Millard (2003)	<ol style="list-style-type: none"> 1. ICT improves current services provided to public. 2. ICT provides new services and products. 3. ICT enhances people to participate in provision services and products. 4. ICT brings excluded section of society (poor, disabled, or displaced people) to participate in society.
Odendaal (2003), Riley (2003), Syrett and Baldock (2003)	<ol style="list-style-type: none"> 1. New styles of leadership 2. New ways of accessing services (e-services). 3. New ways of transecting business. 4. New ways of accessing education. 5. New ways of listing to citizens and communities. 6. New ways of organising and delivering information.
Odendaal (2003), Markoff 2000 Raney 2000	<ol style="list-style-type: none"> 1. E-governance allows both grassroots and stakeholders to send and receive information. 2. E-governance allows improve services delivery and responsiveness to citizens
Thompson (1999)	<p>ICT enhances governance by:</p> <ol style="list-style-type: none"> 1. Overcoming geographical distance 2. Promoting ideological variety 3. Opening citizens to more divers viewpoints 4. Encouraging deliberation
Rakodi (2001)	E-governance is about interaction between state and civil society in all its features and not just including rules, regulations and systems that make up governance.

Table 2.3: Summary of how previous studies perceive the benefits of e-governance (Source: Author)

Further, through ICT, e-governance can be improved by enhancing interaction between citizens and stakeholders mainly via e-mails to/from policy stakeholders. This may enable democratic engagement through participation in policy decision-making, for example through on-line voting forum or questionnaires. Use of ICT may also make governments more accountable and transparent.

However, processes underlying these factors are, in turn, influenced by factors that emanate from both individual and institutional standpoints and actions. This means that, along with assessing general processes of e-governance in the case study area, it is also important to investigate the barriers preventing the implementation of e-governance processes. As discussed above (see Table 2.2), while previous research has addressed a range of limitations (e.g. budget scarcity, institutional arrangements), there is no unifying approach that includes all barriers relevant to e-governance. Therefore, the present study will, first, investigate general factors affecting e-governance in the study area and, second, the sources of potential problems – individual or institutional – associated with implementation of e-governance. The analysis will, therefore, focus on individual dimensions (Rakodi 2001; Cloete 2002; Odendaal 2003) as well as institutional standpoints in order to understand possible barriers for e-governance. Barriers resulting from individual standpoints and actions will reflect Hatherleigh residents' individual approaches to e-governance, which may prevent people from using technology to access information from government or non-government websites (e.g. council website, town community website). In addition, barriers resulting from institutional standpoints may reflect an institution's inability to improve governance processes (e.g. poor information, weak service delivery, poor interaction with citizens) (Fountain 2001; Odendaal 2003; West 2004).

2.3.3 Rural governance

The case study for this thesis is set in a 'remote' rural setting (see Chapter 4), and, as Chapter 1 outlined, the 'rural hypothesis' continues to be seen as an important driver for understanding under-supply of ICT provision in a spatial context. As a result the issue of *rural* governance assumes particular importance.

As Section 2.3.1 highlighted, today the term of governance is widely used and accepted amongst a variety of academics and practitioners. However, in recent years the processes by which rural areas in the UK are governed have changed remarkably. This leads us to focus attention on the term of rural governance in this final section of the literature review.

Little's (2001: 97) recent critique that "*just as rural geographers were slow to apply theoretical debates on the state in the examination of rural government in 1980s, so they have shown similar reluctance to engage with recent theoretical empirical work on so-called new 'governance'*" is particularly pertinent. In a similar context, Goodwin (1998) believed that empirical research on the 'new governance' can help to establish whether the 'new magistracy' is simply taking over from the old in the running of rural areas.

Theoretical and conceptual debates surrounding rural governance have certainly attracted growing interest in the last decades, as rural analysts turn their attention to the institutional transformations that are taking place in and around the local state (Murdoch and Marsden 1998; Murdoch and Abram 1998; MacKinnon 2002; Yarwood 2002; Woods 1998a, 2005; Warren and Yarwood 2006). In the UK, this growing interest in the concept of governance as a key research theme reflects the

introduction of new institutions and initiatives in rural communities during the 1980s and 1990s (Goodwin 1998). The contemporary forms of rural governance are characterised by the involvement of a diverse range of actors drawn from the public, private and voluntary sectors (Jessop 1995; Rhodes 1996; Stokes 1998). The development of these new forms of governance opens up a series of research questions regarding the relationships between governance and communities, the changing relationships between key interest groups and the scope for community involvement and local empowerment (for more detail see, Goodwin 1998; Ray 1998; Cloke *et al.* 2000; Woods and Goodwin 2003; Woods 1998a, 2003, 2005).

Goodwin (1998) argued that there has been a noticeable neglect at the centre of contemporary rural studies concerning the ways in which rural communities are governed. Much of the literature refers to new forms of urban governance, as if governance was solely an urban phenomenon. Rural communities, however, along with all those citizens, agencies and organisations who live and work in them, have also been deeply affected by these new ways of governing (Goodwin 1998). It is generally accepted amongst rural scholars and academics that, at the rural level, the institutional map of rural local government has been transformed into a system of governance which involves a range of agencies, organisations and institutions drawn from the public, private and voluntary sectors (Marsden and Murdoch 1998; Little 2001; Mackinnon 2002; Welch 2002). The development of new structures and processes of governance in recent years in the economic sphere of rural areas reflects the establishment of unelected local agencies such as Rural Challenge, Training and Enterprise Councils, LEADER Action Groups, Rural Development Boards and Development areas, Enterprise Agencies, economic partnerships and fora of various kinds, and local enterprise companies

(Goodwin 1998; Ray 1998; Ward and McNicholas 1998; Jones and Little 2000). In the social and community fields the new structures include Housing Associations, Health Service Trusts, and Voluntary Agencies of various kinds (Goodwin 1998). However, rural scholars also argue that the formal local government in rural areas has also been re-formed, partly, through the introduction of quasi-markets in service delivery and through structural changes which include introduction of single-tier rural authorities.

While the new agencies and initiatives have come to emphasise the importance of a community-based approach which relies on notions of self-help and empowerment, Bryden *et al.* (1997), Ward and McNicholas (1998) and MacKinnon (2000) all argued that such an approach is evident in economic development policy where a focus on community is associated with 'bottom-up' or endogenous models of economic development. Regarding the rural community, the endogenous or 'bottom-up' approach seeks to mobilise existing local capacities in support of priorities identified by local people themselves, who are then able to take control of their lives, with the assistance of networks of experienced organisations, to meet challenges and secure the opportunities which enable rural communities to move forward (Herbert-Cheshire 2000; Murdoch 2000).

Herbert-Cheshire (2000) also argued that the use of 'community' in rural development strategies however, involves a number of contradictions. In addition to the tendency for 'empowerment' to be promoted by state agencies that are themselves largely the product of top-down forms of intervention, community involvement is constructed in forms that support hegemonic concepts of globalisation and entrepreneurialism. Murdoch (2000) argued that as an approach

which encourages communities to take responsibility for their own development, community developments are often set against top-down forms of development which stifle local initiative. Yet, this account of rural community development has been increasingly challenged by the 'governance approach' (MacKinnon 2002). As highlighted above, in common with most theoretical approaches of post-structuralist origin, the governance approach provides a set of concepts for interpreting and analysing a particular field of research (see Barnes 2001).

In this respect, a number of researchers offer critical insight into notions of 'rural governance'. In particular, the rural governance approach provides a framework for connecting notions of rural community development to emphasise 'governing through community' (Rose 1996; Murdoch 1997; Ward and McNicholas 1998; MacKinnon 2002; Woods and Goodwin 2003). Thus, the task of rural governance becomes one of seeking new routes through initiatives in innovation centres, industrial parks, food marketing, tourism information technology, and so on, and many rural communities are currently taking the initial steps down these routes.

Although this highlights that initial debates on the emergence of 'rural governance' are in the ascendancy, very little work has so far been undertaken on analysing the possible linkages between governance and ICT access in *rural* areas. It is this research gap that this study particularly aims to address, particularly with regard to the potential contribution of ICT to e-governance in the rural town of Hatherleigh. To do so, Figure 1.1 (Chapter 1) is used as a framework of the discussion. Whether ICT improves information delivery in the study area, and whether ICT improves the interaction between rural residents and stakeholders are two key questions that this study will investigate in detail.

Discussion will focus on the methods that rural people use to get information and services about community, councils, politics, new events etc (e.g. newspapers, parish pump and internet). This will help capture the role the internet plays in improving services in the town. Further, does the internet improve Hatherleigh residents' chances to get in touch with policy stakeholders, especially those stakeholders (e.g. councillors, politicians, various organisations) who were not easy to contact before the emergence of the internet? The study will also analyse rural people's experience with, and perceptions of, using the internet to make their voices heard, for example through on-line voting, which may also increase their feeling of 'democratic participation'. It will also be questioned whether ICT empowers rural citizens in the study area based on rural people's own perspectives. Considering that the use of e-governance tools is underpinned by a variety of factors (e.g. technological; see Section 2.3.2), the study also needs to analyse what the factors are that influence e-governance processes in Hatherleigh. Such factors will be identified with the help of Hatherleigh residents. This will shed light on the state of e-governance in the study area, and might, simultaneously, provide an opportunity for future research to develop strategies in which rural people can be increasingly included in the governance sphere.

2.4 E-governance and citizen engagement

The previous sections have highlighted the uneven use and understanding of the concepts of governance and e-governance in the academic literature. This section will highlight and explain the use of 'governance' and 'e-governance' in the context of this thesis, with a focus on how citizens engage online with each other and with

governing institutions to practice governance. Section 2.4.1 will briefly conceptualise 'governance' and how it is used in the context of this study, Section 2.4.2 will discuss the notion and definition of 'e-governance', and Section 2.4.3 will assess the interlinkages between ICT and citizen engagement.

2.4.1 Conceptualising governance

Although there are many different definitions of 'governance', the most commonly used is that by Stoker (1998). It is this definition, which also focuses on citizen participation in the governance process, which will be adopted in this study (Box 2.1)

According to Stoker (1998), governance refers to

the development of governing styles in which boundaries between and within public and private sectors have become blurred. Governance, in this sense, refers to a set of institutions and actors that are drawn from within and outside government. This is associated with the emergence of voluntary organisations and *citizen participation*. Governance is, therefore, an interactive process involving a network of partnerships between and within public, private and voluntary organisations, and in which relationships are based on coalitions, negotiation and competition.

Box 2.1: The definition of governance used in this study

Governance, therefore, involves the citizenry and the processes through which they participate in governance processes. The critical literature has suggested that these 'new governance processes' provide a way to engage individuals, citizens and the wider public with the activities of government, non-government institutions and other stakeholders (Hewitt de Alcantara 1998; Stoker 1995, 1998; Riley 2003). Jun (2002), therefore, suggested that governance is linked to power sharing in

decision-making, thereby encouraging citizen autonomy and independence, and providing a process for developing the common good through civic engagement. The enhancement of governance processes and public services through *citizen engagement* will, therefore, be the focus of research in this study (see Chapter 1). Indeed, Millard (2003) argued that citizen engagement is essential in any process attempting to address individual and community needs. As a result, fostering citizen engagement, and improving citizen participation in effective delivery of high quality public services, has now become a universally accepted practice in most countries (Kahila and Lakso 2004). Baraladi *et al.* (2008) and Curry (2008) argued that this enables identification of the causes of individual and community problems, and provides a framework for the selection of effective solutions to respond to the interests and needs of citizens.

2.4.2 Conceptualising e-governance

Section 2.3.2 suggested that governance structures and citizen engagement are increasingly affected by ICTs (Giddens 1994) – a process referred to as ‘e-governance’. The literature on e-governance suggests that e-governance processes allow, first, citizens and stakeholders to send and receive information and, second, improvement of service delivery and responsiveness to citizen concerns (Markoff 2000; Raney 2000).

In this study Odendaal’s (2003) definition of e-governance will be used (Box 2.2), especially as it focuses on how the use of ICT can aid *citizen engagement* and, therefore, builds on Stoker’s definition highlighted above.

According to Odendaal (2003), e-governance refers to

the ability of government or non-government agencies to interact with the public *online* in the delivery of services and in fulfilling their pre-designated mandates. This view, therefore, foregrounds citizens' use of ICT with the aim of improving information and service delivery, encouraging *citizen participation* in the decision-making process, and making government more accountable, transparent and effective through electronic and web-based technology.

Box 2.2: The definition of e-governance used in this study

2.4.3 ICT and citizen engagement

This study will focus on whether ICT access and use helps and promotes citizen engagement (see Chapter 1). In this context, West (2004) argued that in the USA e-governance has progressed towards fully integrated citizen engagement, and that engagement has made much progress through incorporation of interactive technology by providing online information and services. Similarly, the OECD (2001b) argued that, as e-governance needs to be democratic, transparent, open and accessible, ICTs can add significant impetus to all these goals, especially by engaging citizens through policy design, implementation and evaluation through the e-governance cycle. Therefore, Okot-Uma (2001) emphasised the importance of processes and structures that encompass electronic communication between stakeholders and citizens.

Citizen engagement through e-governance is, thus, characterised by the transition of the relationship between governmental and non-governmental organisations and citizens from *passive* information access towards *active* citizen participation via the internet. This relationship works in two ways. First, the web enables a one-way relationship in which agencies and stakeholders simply produce and deliver information for use by citizens. Thus, Millard (2003) argued that ICT can facilitate

e-governance processes by, in theory, providing both *equality* of access of the citizenry to government and non-government information, and *universality* of access for public information. Second, online interaction with citizens and active citizen participation is also a two-way relationship, in which citizens contact stakeholders and, in turn, provide feedback to agencies about issues regarding information provision, service quality, and general electronic feed-back mechanisms. E-governance, therefore, can be seen as a process that acknowledges an active role for citizens in both proposing policy options and directly shaping the policy dialogue (Okot-Uma 2001), although the responsibility for the final decision or policy formulation still rests with government.

As this study will highlight (see Chapters 5-8), this step of online citizen engagement in policy deliberation is undoubtedly the most difficult to generate and sustain (Clift 2003; Bonham *et al.* 2003; Riley 2003). Moreover, encouraging citizens to vote can be difficult overall, irrespective of the type of voting system in place. E-governance could, therefore, be a means with which to encourage stakeholders to be more involved in the voting process through 'e-voting', thereby stimulating further debate and exchange of views, while simultaneously providing online information on matters pertaining to voting, and sharing experiences on the pros and cons of election monitoring (Okot-Uma 2001; Clift 2003). In this context, Millard (2003) argued that experience in many countries has shown that e-governance can raise citizen-government interaction, especially at a time when this interaction appears to be increasingly failing.

In conclusion, to many, most future e-governance developments will be directly linked to increased ICT-related competition among the various political forces in

society (Okot-Uma 2001; Millard 2003). Some argue that many societies are experiencing a dramatic 'e-citizen' engagement revolution. However, as this thesis will highlight, in this 'revolution', the role, interests, and the current and future activities of all actors is not yet fully understood, and there is still opportunity to influence its development 'for the better'. Indeed, as the public, private and voluntary sectors improve their online activities, improved citizen engagement will be required to enable comprehensive e-governance processes to fully take hold. This means that individuals need to take part in a more comprehensive way in online government and non-government activities by self-serving (by accessing all or most services online) in the future. Only through such improved citizen online engagement will citizens be able to better manage their interactions with stakeholder groups and become fully involved in policy-making.

This discussion has highlighted that the interconnection between ICT and governance processes forms an important arena of research, especially with regard to debates about how *citizen engagement* may be enhanced through new ICTs. In this thesis, therefore, understanding citizen online engagement practices will form the core for understanding e-governance processes and will provide the framework for the empirical analysis in Chapters 5-8.

2.5 Conclusions

As this chapter has outlined, the new ICTs have emerged, conceptually, as a powerful factor whose implementation and deployment are believed to have considerable influence on many economic and social systems. Castells (1996), in particular, has developed a 'universal theory' for the information age, where he

outlines that new technology embodies the capacity of societies to transform themselves. Castells places particular emphasis on the revolution of ICT emergence and changing social relations, and, undoubtedly, Castells' theory of the information age has had a relatively high impact on contemporary studies within and beyond geography, and in the academic sphere, a number of attempts have been made to apply Castells' theory.

According to Slevin (2000) and Walsham (2001), however, Castells' model needs to be supported by further analyses of the specific role of ICTs in globalisation processes. They argue that global electronic communication has changed the relationship between culture and society. In addition, new technologies increase the opportunities for more global interaction between different cultures, which reinforces Castells' conception of the interlinkage between new ICTs and societal change. Thus, according to Castells (1996), the pervasive nature of ICTs and their application has great potential in community empowerment and social exclusion, and ICT adoption is inevitably related to a number of socio-economic characteristics including education, income, and age.

The chapter also reviewed a variety of studies that emphasised the ability of ICTs to improve governance processes. Some authors have argued that ICTs can enhance governance by overcoming geographical distance, opening citizens to more diverse viewpoints and by showing scope for growth and empowerment. For example, Okot-Uma (2001) argued that the deployment of ICTs by government enables e-government, e-democracy (e.g. voting on-line) and e-business. Millard (2003) also suggested that ICTs change the broader interaction between citizens and government in complex ways, and the central concern is that ICTs facilitate

interaction between citizens, stakeholders and governmental and non-governmental institutions and produces two-way relationships (Gore 1993; Markoff 2000; Raney 2000; Odendaal 2003). Many studies, therefore, have argued that ICT improves services delivery and responsiveness to citizens. Other researchers go even further by arguing that ICTs can contribute greatly towards political change, economic development, community activism, and alleviating social pressure (Thompson 1999; Rakodi 2001; Cloete 2002; Odendaal 2003).

However, the largest gap that emerges in the literature is related to the scarcity of studies on ICT impacts on governance patterns and processes in *rural* areas. Goodwin (1998) and Little (2001) have drawn attention to the importance of better understanding the emergence of rural governance, and the rural governance approach has certainly provided a more suitable framework for understanding rural community development and 'governing through community' associated with 'bottom-up' models of economic and social development. Yet, although 'basic' information is available concerning rural governance as characterised by involvement of a range of agencies, organisation and institutions drawn from the public, private, and voluntary sectors (see Section 2.3.3), very little is currently known about what role ICTs may have in empowering, or disempowering, people in rural areas.

More specifically, very little information is available about possible interlinkages between ICTs and e-governance processes in rural areas. Yet, these are crucial questions in a day and age when ICT diffusion is accelerating rapidly around the globe, with potential long-term repercussions for how societies are organised and organise themselves – issues that Chapter 3 will discuss in more detail.

Chapter 3: The geography of information and communication technologies

3.1 Introduction

Chapters 1 and 2 discussed theoretical and conceptual debates about changes in economic and social systems linked to ICT, in particular e-governance and digital exclusion associated with the emergence of new ICTs. Building on Chapter 2, it is important to shed light on the emergence of ICTs and the internet in particular, and to give the geography of ICT diffusion special attention in the UK where the case study area¹ is based (Hatherleigh). This chapter will, therefore, provide some insight about the current status of UK internet access and use, and will discuss the relative positioning of UK ICT access and internet status both in a global and EU context. The chapter will also focus on exploring the geography of the 'digital divide' and will briefly discuss UK strategies aiming at including rural people more in the digital world.

3.2 Internet access and use in the UK

In order to situate the case study area used in this thesis (Hatherleigh, Devon) and to highlight the spatiality of internet access and use (see Chapter 4) we need to shed light on the UK ICT position in the internet world. The author acknowledges the rapid changes currently occurring in internet access and use in both the UK and globally, with new users and localities being connected on a daily basis (in the

¹ The case study town of Hatherleigh is located in Devon, in the South West of the UK (see Chapter 4).

UK a new broadband connection is established every ten seconds!), but for practical reasons of data availability the cut-off date for the discussion below had to be 2006/2007.

The UK introduced the internet much earlier than countries in Asia, Africa, and Latin America. For instance, University College London (England) was connected to the Advanced Research Projects Agency Network as early as 1973 (Goldstein 2000). In 2007, the Internet World Statistics highlighted that the UK was among the top 20 countries with high numbers of internet users (7th place with 3.2% of world users) (for more detail see www.internetworldstats.com). This result might be related to the UK government aiming to become fully connected to the internet by 2005 (Choudrie *et al.* 2005). In the context of Europe, in 2007, the UK came second in the EU after Germany for numbers of internet users, with 14.8% of all usage in the EU for the UK and 19.5% for Germany (Table 3.1). With respect to internet penetration, in 2007, the Netherlands had the largest proportion of users with 87% of population penetration (Table 3.1). The next highest were Sweden (77.3%) and Portugal (73.1%). The UK at 66.4% was above the EU average of 55.7%.

Vicente and Lopez (2006) argued that despite the fact that penetration rates among European countries are rapidly increasing, there are differences in usage between countries. Factors such as income, political approaches and educational levels for these countries play a role in internet adoption (Warf 2007; see also Chapter 2). For example, the ten states that joined the EU in May 2004 (Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia and Slovenia) generally had the lowest proportions of household internet access in

the EU. Of these, Slovenia had the highest proportion with 62.2% (World Internet Usage Statistics and Population Stats 2007).

Internet Usage in the European Union 2007				
EUROPEAN UNION	Internet Users, Latest Data	Penetration (% Population)	Usage % in EU	User Growth (2000-2007)%
Netherlands	14,544,400	87.8 %	5.3 %	272.9 %
Sweden	6,981,200	77.3 %	2.6 %	72.5 %
Portugal	7,782,760	73.1 %	2.8 %	211.3 %
Luxembourg	339,000	70.6 %	0.1 %	239.0 %
Denmark	3,762,500	68.8 %	1.4 %	92.9 %
United Kingdom	40,362,842	66.4 %	14.8 %	162.1 %
Germany	53,240,115	64.6 %	19.5 %	121.8 %
Finland	3,286,000	62.7 %	1.2 %	70.5 %
Slovenia	1,250,000	62.2 %	0.5 %	316.9 %
Estonia	760,000	57.8 %	0.3 %	107.3 %
Italy	33,143,152	57.0 %	12.1 %	151.1 %
Austria	4,650,000	56.7 %	1.7 %	121.4 %
Spain	22,843,915	56.5 %	8.4 %	324.0 %
France	34,851,835	54.7 %	12.8 %	310.0 %
Ireland	2,060,000	50.1 %	0.8 %	162.8 %
Czech Republic	5,100,000	49.9 %	1.9 %	410.0 %
Belgium	5,100,000	49.1 %	1.9 %	155.0 %
Latvia	1,070,800	47.4 %	0.4 %	613.9 %
Slovakia	2,500,000	45.9 %	0.9 %	284.6 %
Cyprus	356,000	45.2 %	0.1 %	197.2 %
Bulgaria	2,200,000	30.0 %	0.8 %	411.6 %
Greece	3,800,000	35.5 %	1.4 %	280.0 %
Hungary	3,500,000	35.2 %	1.3 %	389.5 %
Lithuania	1,221,700	34.2 %	0.4 %	443.0 %
Malta	127,200	31.7 %	0.0 %	218.0 %
Romania	7,000,000	31.4 %	2.6 %	775.0 %
Poland	11,400,000	29.6 %	4.2 %	307.1 %
European Union	273,234,619	55.7 %	100.0 %	189.5 %

Table 3.1 Internet usage in the European Union 2007

(Source: World Internet Usage Statistics and Population Stats 2007)

However, the late adaptor countries have the benefit of getting connecting at low price (Jensen 2002). Moreover, Biggs and Kelly (2006) have argued that broadband costs are falling, while internet speed is increasing. This often offsets the negative impact of prices for broadband adoption (Tookey *et al.* 2006).

With respect to internet access and broadband connections by households, the UK compares favourably with other EU countries (Figure 3.1). In 2006, at 63 percent the UK was above the EU average of 52 per cent of households with access to the internet. Bauer *et al.* (2005) examined broadband diffusion across 30 Organisation for Economic Co-operation and Development (OECD) countries and found that the main factors influencing broadband take-up were *cost* of network deployment and *awareness* levels of the population. They also argued that broadband adoption could be linked to path dependency or leapfrogging². In contrast, Savage and Waldman (2005) suggested that broadband attributes are the most important factor for adopters. In the context of rural Hatherleigh, this study will, therefore, also consider constraints and opportunities associated with these specificities of internet access and use.

At a time when the internet has become 'domesticated' in the household (Cumming and Kraut 2001; Haddon 1992, 2006), interest in the implications of such internet use for businesses has been growing. This refers particularly to the conducting of business transactions over electronic/computer networks, including the internet (Barnes and Hunt 2001). This encompasses processes related to shopping, buying, selling and trading of products, services and information (Gunasekaran *et al.* 2002).

² 'Path dependency' occurs when countries that were early adopters of dial-up are slowly migrating to broadband, whilst 'leapfrogging' happens when those countries that were late adopters of dial-up move straight to broadband (Bauer *et al.* 2005).

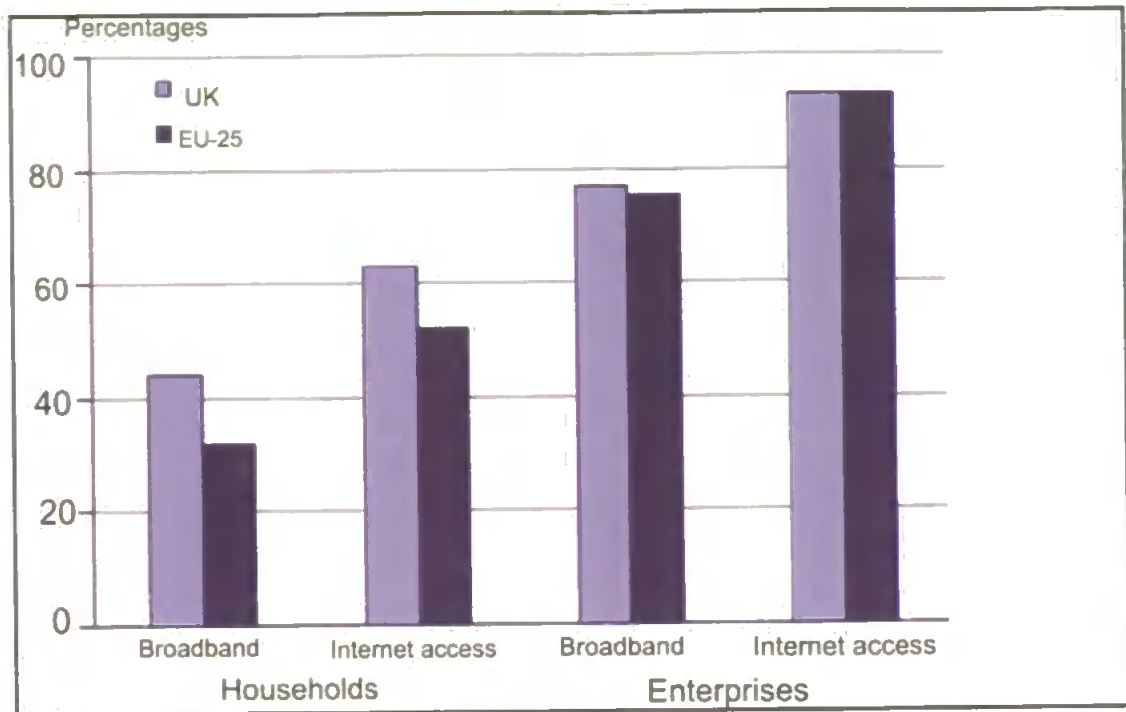


Figure 3.1: Internet access and broadband connections in the UK and EU, by households and enterprises, 2006 (Source: Eurostat 2006)

Klang (2001, 2004), thus, argued that the internet has overcome the barriers set by time and geography and has made it possible for a shop to have customers from the whole world requiring and receiving services at any time of day. Such 'e-business', therefore, facilitates the integration of buyers and sellers (Santos 2003; Semeijn *et al.* 2005, Gunasekaran and Ngai 2005). A sequential process of e-business adoption or evolution from the most limiting to the most comprehensive has been suggested (Cagliano *et al.* 2005; Croom 2005). Furthermore, Farag *et al.* (2006) found that internet usage for buying and shopping is dependent on issues such as accessibility to shops and products that consumers intend to buy. In the current business environment, adoption of the internet is seemingly unavoidable (Webster *et al.* 2006), in particular as e-business "is no longer an alternative, but an imperative. [However] many companies are struggling with the most basic

problem: what is the best approach for establishing and doing business in the digital economy?" (Lee 2001: 349).

In 2006, the UK had the second highest proportion of enterprises receiving orders via ICTs in the EU, at 30 per cent. Denmark had the highest proportion at 34 per cent, which was well above the EU-25 average of 14 per cent (Office of National Statistic 2007b). Davies *et al.* (2007) argued that the UK government envisages that being at the forefront in the development and adoption of e-commerce will play a key role in supporting the competitiveness of industry in future years. Indeed, a UK strategy towards e-commerce has been agreed with the mission "to develop the UK as a world leader for electronic business" (Cabinet Office 2002). The extent of internet diffusion in the UK will, therefore, be discussed in more detail in the next section.

3.3 Internet diffusion in the UK

According to the Cabinet Office (2005), in 1997 the UK government recognised the growth and application of ICT and the development of electronic services and the skills to use them as crucial to the UK economy. The UK was then lagging behind, and the Government claimed that it resolved to tackle these issues and move the UK to the forefront of e-commerce and digital services. Modernisation of the UK's economy and public services through new technology was placed centre stage in the 1998 *Knowledge Economy White Paper*, with the consequent decision to create the 'Office of the e-Envoy' and a 'Minister for e-commerce' (Cabinet Office 2005).

In 1999, economic factors such as income level, availability and price of ICT products and services severely hampered successful diffusion of the internet (Kshetri 2001, 2005). Internet access prices were among the highest, costing around \$15 per month more in the UK than in other leading countries for only moderate levels of use. The UK's broadband market was non-existent, placing the country only 24th out of the 32 OECD countries for take-up. Similarly, Choudrie *et al.* (2005) argued that the cost of broadband services and internet access in the UK in the late 1990s prevented the less privileged from using the internet. Less than 1 in 10 households were on-line and the population that were on-line were pre-dominantly young, rich and male. Only 9% of the over 65s, 3% of the lowest income and 52% of males compared to 39% of females were on-line in 1999 (*ibid*). Furthermore, OxIS (2007) argued that, in the UK the most important reasons for non-use of the internet were 'lack of internet skills' (81%), 'lack of computer skills' (77%), 'no access to computer' (74%), 'too difficult to use' (64%), 'not for people like me' (60%), 'no interest' (52%), 'cost' (51%), 'not for my age' (46%), and 'no time' (40%). Meanwhile, UK business attitudes towards the internet were conservative, with only 7% of board directors seeing the internet as a strategic issue for their business. As a result in 1999, only 25% of businesses had a website and fewer than 16% were selling on-line (Chadwick *et al.* 2003; Choudrie *et al.* 2005). Choudrie *et al.* (2005) found that in the London Borough of Hillingdon, for example, from an organisational perspective some staff members were resisting shifting into e-business and preferred using the telephone than the internet for communication.

Andres *et al.* (2007) argued that the number of internet service providers operating in a country will have an impact on the speed of internet diffusion (see also Chapter 2 Section 2.2.4). Thus, the price of high speed internet connection will decline because of competition. With regard to broadband, building on the Cabinet Office (2005), it was claimed that the UK went from being a poor provider in 2001 to having the most extensive broadband market in the world – although some rural areas still have no access to broadband (see Chapter 1). Thus, while at the beginning of 2002 there were only 350,000 broadband subscribers, by 2005 seven million addresses (twenty times as many) had broadband connections (Cabinet Office 2005), while in 2007 there were around 13 million subscribers (World internet Usage Statistics and Population Stats 2007), with a new connection being made about every ten seconds.

With respect to UK education, in 1999, the use of ICT in education was seriously lagging. Indeed, only 17% of primary schools were connected to the internet and pupil/ Personal Computer (PC) ratios were poor with 18 pupils per PC in primary schools and 9 in secondary (Cabinet Office 2005). The UK Government has continued to argue that it has a clear role in helping to promote and increase public awareness about the internet, and to harness economic and social returns in a way that benefits all society. As a result, the UK Government has classified 'e-skills' as the third key area of adult basic skills, alongside literacy and numeracy (Department of Education and Skills 2003). According to the Department of Education and Skills (2003), one aspect of this objective has been to ensure that all school children have access to the internet at school, and that all primary and secondary schools have broadband access. West (2004) argued that the UK Government drew up a 'positive' vision of public service delivery transformed by

modern technology and a strategy for achieving 'e-government'. In addition, and as part of this strategy, the government has supported technology, particularly internet applications, to enhance access to, and delivery of, government information and service to citizens, business partners and other agencies, where it is appropriate and cost-effective.

As a result, and as discussed in Chapter 2, some writers argued that e-government has become widely adopted and utilised in most countries around the globe (Tian and Tianfield 2003, Bakry 2004, West 2004, Choudrie *et al.* 2005). In the UK, it was announced that a key aim of e-government was to make all government services electronically available (Choudrie *et al.* 2005). According to the Cabinet Office (2005), government websites include 'National Health Service – on-line' or 'Direct Online' where people can find health information, 'Direct Government' where people can access government services such as booking a driving tests or renewing a passport, and the 'Childcare Link' where people can get information about local childcare facilities (Cabinet Office 2005).

It is this apparent move towards processes of e-governance and government e-services that will be tested in the context of the case study of Hatherleigh in this study. Indeed, this brief review has suggested that the introduction of ICTs has not only challenged individuals, households and businesses, but also government in the UK to use ICTs, to innovate their traditional structures, and to consider electronic approaches for participation and implementation of effective public service delivery. However, this section has also shown that using the internet and accessing e-government services are uneven in the UK. Such uneven use of the internet may reflect the emergence of a 'digital divide', leading to 'ICT exclusion'

of certain individuals or segments of society (see Chapter 2, Section 2.2.3). This leads us to the next section which focuses more specifically on the 'digital divide' in the context of the UK and discusses some of the UK government strategies/policies to address this issue.

3.4 Policies and the digital divide

Having discussed and explained the term 'digital divide' in Chapter 2, this section will briefly discuss issues of the digital divide in the UK, especially with a focus on possible urban/rural disparities and policy initiatives that have been put in place to alleviate the digital divide.

3.4.1 Digital divide in the UK

In 2005, the UK government admitted that there is a disparity between rural and urban areas in the UK, especially in the ICT environment. For example, ex Prime Minister Tony Blair claimed that

"Information technology is transforming our world. It is as crucial to our economy, prosperity and life chances as steam was to the first Industrial Revolution. Broadband is now a vital part of the next stage of this remarkable revolution. By speeding up communication and removing physical barriers to knowledge, it is opening up immense new opportunities in almost every area of our lives. Despite real progress in recent years, however, too many people and communities remain excluded from the full opportunities of the new information age. Rural communities, in particular, can find themselves on the wrong side of the digital divide which is damaging to the health and prosperity of our society" (DEFRA 2005: 2).

Cawkell (2001) argued that within some information-rich countries, a divide exists based on relative wealth – i.e. poorer sections receive inadequate information, while richer people are able to obtain what they need. Similarly, Thompson and

Homer (2000) argued that in the UK, which is an information-rich country, there may still exist certain types of information deprivation in rural areas. In parts of rural Shropshire, for example, *“even a modest expenditure on equipment such as a modem and high specification multimedia computer is impossible”* (Thompson and Homer 2000: 141). The reason for the current interest in reducing the information divide of whatever kind is the enormous importance of information to any community. As Wilson (1987: 4) stated *“information is a resource of immense social and economic value. It is vital to the proper functioning of a democratic society, a crucial tool in a productive economy and in effective government, a central part of the growth and well-being of individuals . . . There has always been inequality of opportunity to be informed and to learn from information – all that technology does is to accentuate it. Traditionally ‘to him that hath shall be given’ in information as well as in wealth creation and power”*.

Yet by 2008 rural areas in the UK, according to the Cabinet Office and Ofcom (2008), had more or less caught up with their urban counterparts (see Chapter 2). The digital revolution may, therefore, no longer be restricted to metropolitan centres.

While in 2005 and 2006 broadband take-up was still strikingly lower in rural than in urban areas of the UK, by 2008 rural areas had caught up and even slightly overtaking urban areas (Ofcom 2008). Thus, by 2008, 59% of UK rural homes had broadband internet connection, up from 41% a year earlier (Figure 3.2).

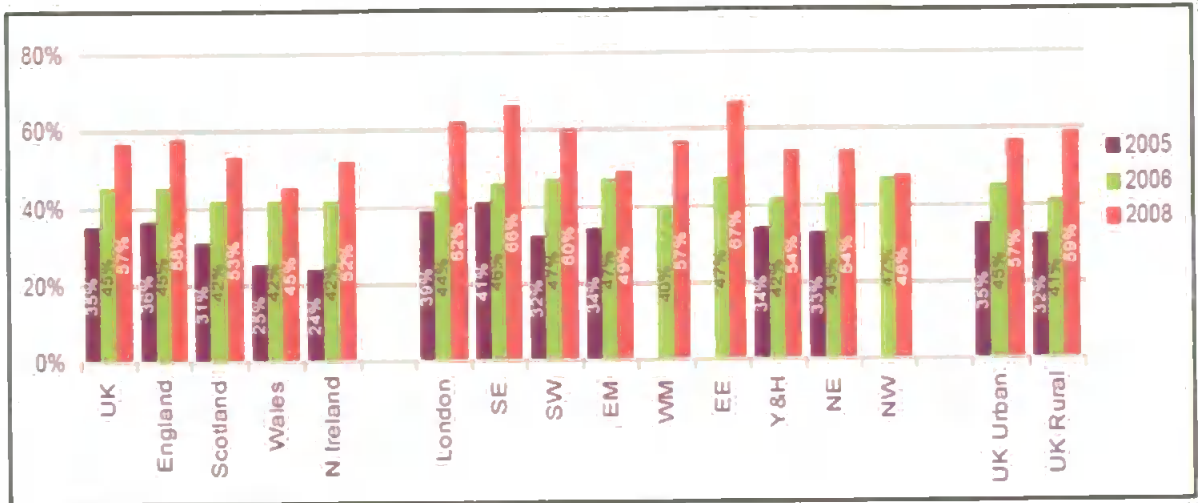


Figure 3.2: Broadband take-up in rural and urban areas of the UK
(Source: Ofcom, 2008)

However, the Ofcom (2008) report also claimed that the satisfaction with broadband speed was still lower in rural areas. Figure 3.3 shows that the large majority of broadband customers are satisfied with the speed of their connection, but broadband customers in rural areas are still slightly less satisfied with their broadband speeds (only 80% satisfied) than those in urban areas (84% satisfied).

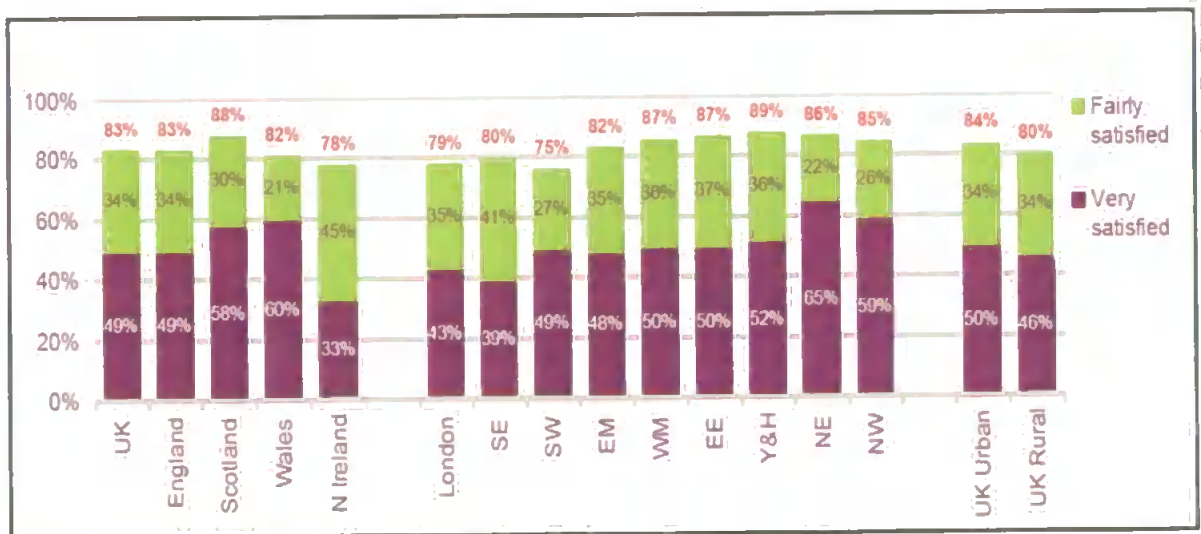


Figure 3.3: Satisfaction with speed of broadband connection
(Source: Ofcom, 2008)

There are nonetheless still some ICT-related 'problem areas' in rural areas of the UK. For example, a recent BBC (2008) report claimed that in Arnisdale, a village in the North West of Scotland, British Telecom (BT) continues to be reluctant to supply a broadband connection. The BBC, thus, highlighted the importance of broadband connection to people who live in this remote rural area, where people have to go to extraordinary lengths to get connected to obtain services they need from the internet (e.g. rowing out onto a lake!). This supports a key argument that internet service providers are often unwilling and unlikely to invest in sparsely populated areas, due to low critical mass and, therefore, a low customer base for their products (Commission for Rural Communities 2009b). Nonetheless, Skerratt and Warren (2003) argued that in the UK these urban-rural and intra-rural digital divides are recognised by government, telecoms, and by rural citizens themselves. However, they also argued that while the technology is in theory available to achieve wide rural broadband rollout at reasonable cost, the use of this technology remains subject to considerable constraints, for example institutional (e.g. licensing of wireless frequencies) and corporate (e.g. dominance of the profit motive in oligopolistic suppliers of basic network connections).

In a more recent study, Warren (2007) argued that while the internet offers rural inhabitants opportunities to overcome various difficulties, such as distance and dispersion, it can also lead to more social exclusion for those who will not use the internet. This can lead to polarization in a community, creating a gap between those who do have access to and use the potentialities of the internet and those who do not (Wyatt *et al.* 2002; Becker *et al.* 2008). Chapter 2 highlighted that factors such as age, gender, employment, and income, among others, can be powerful barriers in the adoption of the internet between internet users and non-

users – questions that this study will analyse in detail in the context of the rural town of Hatherleigh.

Further, ICT exclusion may exist because little thought has been given to the internet content appropriate for information for deprived people. In this context, Cawkell (2001) argued that a connection to an information source is required before information can flow. As a result, the UK Government started a 'UK On-line' campaign on 1st September 2000, which identified 600 centers in some of the poorest communities where anyone can get training how to use the internet. The first wave of partners in the drive to make Britain a 'leading knowledge economy' included the Confederation of British Industry, the Trades Union Congress, the International Organization Development, the Consumer Association and major businesses ranging from BT, the Royal Bank of Scotland, Microsoft to the BBC. The Government announced three key packages of initiatives as part of the UK on-line initiative: getting people on-line, getting business on-line, and getting government on-line (www.number-10.gov.uk). However, the National Audit Office (NAO) highlighted that by 2007 some government websites were still difficult to navigate and understand, and that some groups of citizens were still excluded from the benefits of on-line services (NAO 2007). Accessing information on-line (for example, health information, social benefit information, jobs) can be particularly helpful for remote rural people, or for people from socially disadvantaged groups. However, many of these groups currently lack the necessary ICT skills needed to use the internet by themselves. Indeed, research by the *Department for Children, Schools and Families* suggested that in 2003, 79 per cent of people receiving means-tested benefits lacked practical ICT skills (DCSF 2003). Further, a study conducted by the National Statistics Omnibus

Survey found that in 2006, 51 per cent of adults earning less than £10,400 a year had never used the internet (Office of National Statistics 2006).

The UK Government claims to have worked closely with people in rural areas to ensure that the benefits technology can provide can be delivered and shared across the UK. Government alleges to have worked with stakeholders at all levels in the public, private and voluntary sectors to identify best practice and value for money to address the problems and issues relevant to rural areas (Cabinet Office 2005). As a result, the UK government has claimed that the results have been impressive (e.g. DEFRA 2005), and this assertion will be particularly tested in this study in the context of the Hatherleigh case study area. Some credence to the government claim has recently been provided by the Community Broadband Network, which announced that it had identified community broadband activity in more than 550 locations in the UK (many in rural areas), with services provided by 260 organisations (community, public and private enterprises) (Cabinet Office 2005). Many of these projects are innovating around access technologies (mainly wireless networks), community engagement, and the development of new content and services (Cabinet Office 2005). However, with respect to the latter point, Skerratt and Warren (2003:490) cautioned that *"if government is really serious in its aim to enable broadband rollout to the rural population, it will need to be resolute in tackling the major institutional and corporate barriers that remain"*.

For these reasons, the issue of connecting all rural areas in the UK to the broadband internet infrastructure is becoming a key priority. In this context, Digital Britain (2009), a co-operation between government, regulators and industry³, have

³ In particular, the Department for Business, Enterprise and Regulatory Reform, and the Department for Culture, Media and Sport.

therefore focused their work on building national economic competitiveness through better ICT connection. It has particularly focused on people living in rural areas likely to be excluded from the digital age:

"This technology is particularly critical for certain sections of society. For example, for families with school age children where the Internet is essential for educational purposes, for the unemployed, as more job search is conducted online, and for the physically and socially isolated, such as the elderly, people with disabilities and those living in rural and remote areas, for whom the Internet can bring huge new opportunities for engagement and participation" (The Digital Britain report 2009, 30-31).

The Commission for Rural Communities (2009b) also supports the belief that digital technology is vital for the sustainability of rural communities and the UK economy, but that the lack of access to internet and good broadband speeds in particular continues to exacerbate the digital divide between rural and urban areas. Although the 'physical' digital divide has been reduced in many rural areas (i.e. in terms of having access to the internet at all via dial-up connections), there is still a long way to go before good internet access quality is achieved especially with regard to bandwidth or speed of the connection. It was, therefore, particularly noted that the demand for better internet use and acceptable internet speed is greater in rural areas than in urban areas in the UK, thereby lending continued credence to the notion of an urban-rural digital divide. This demand in rural areas is particularly linked to the need for more online shopping, information, banking and communication in general. Currently, 75% of internet users in rural area use the internet for transactions, which is already higher than the UK average of 69% (Commission for Rural Communities 2009). Similarly, in terms of using the internet for working from home, the Commission for Rural Communities (2009) also highlighted that home working is as much as three times greater in rural areas than in urban areas. These statistics all reflect the importance of the internet with

regard to overcoming the distance and isolation disadvantages associated with rural locations – issues to be discussed in detail in Chapter 6.

The digital divide linked to broadband speed, rather than general access to the internet, therefore continues to be the main problem for rural areas. The BBC (2008), for example, highlighted that three million households in the UK still have broadband speeds of <2 Mbps (magebites per second). Areas with low speed connections or without connection at all have been termed 'notspots'. As Figure 3.4 highlights, these notspots are mainly located in remote rural locations (including the case study town of Hatherleigh). Consequently, the recent Digital Britain report (2009) has highlighted that the UK Government has promised to provide all households in the UK located in these 'notspots' with speeds of at least 2 Mbps by 2012 through Next Generation Access (NGA) services (super-speed broadband).

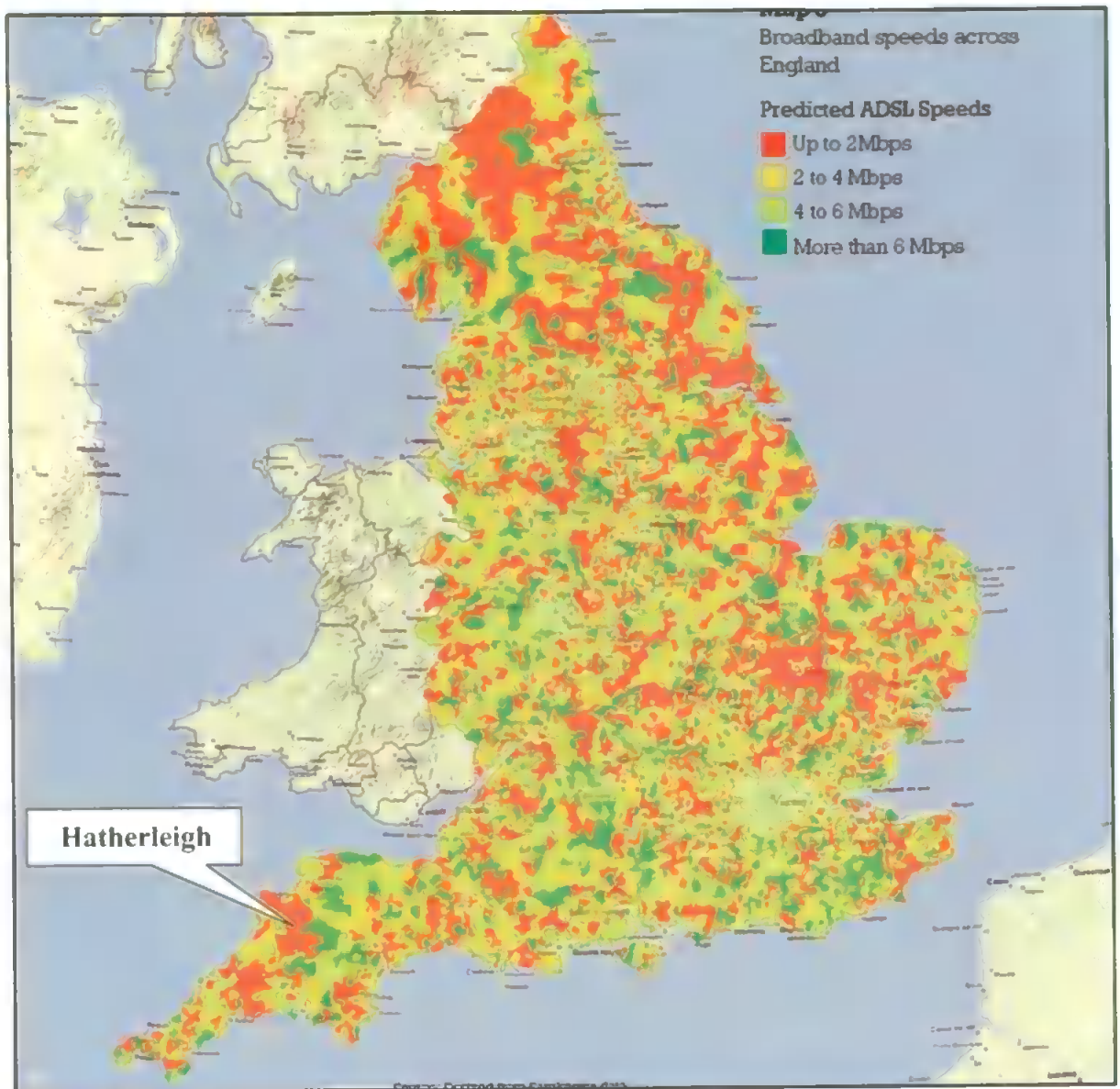


Figure 3.4: Broadband 'notspots' and speed across the UK 2008⁴

(Source: Samknows.com)

For remote areas to get speeds of > 2 Mbps, homes need to be 4 km or less from an exchange. Because of this, the Commission for Rural Communities (2009b) has argued that that some rural areas will continue to stay behind, as provisions for improved broadband speed are likely to take place first in rural areas where most financial return can be made, rather than in areas where 'only' improvement

⁴ Figure 3.4 shows that the rural town of Hatherleigh, the case study for this thesis, is located in a 'notspot' area with current broadband internet speed of < 2 Mbps.

of local economic and social needs is important. As a result, NGA roll-out will be more complex and will take longer in more remote rural areas (Commission for Rural Communities 2009b). It also remains questionable whether a minimum of 2 Mbps will be sufficient to deliver high quality public services, and whether it will satisfy existing and, more importantly, future demand for existing services. The Commission for Rural Communities (2009b) particularly claims that if 10% (or more) of rural areas in the UK remain in notspots, then the divide in access and connectivity between rural and urban areas will not be overcome, resulting in the fact that some rural areas will be even more excluded.

3.4.2 ICT in the South West of England

In order to contextualise the case study area of Hatherleigh (see Chapter 4), a brief discussion of internet access in the South West of England is necessary.

Despite the positive claims by government about the diminishing urban-rural divide (see Section 3.4.1); by 2007 the UK regions still had differential access to the internet (Table 3.2). The South West of England, for example, joined London as the region with the most internet connected households (Office of National Statistics 2007a). Indeed, 69 per cent of households in the South West had internet access, the same percentage as London, and the South West was the region with the highest increase in internet access (10 per cent) between 2006 and 2007. The East of England (67%), South East (65%) and Scotland (60%) make up the rest of the top five (Table 3.2).

Per cent	Internet access		
	2005	2006	2007
South West⁵	55	59	69
London	53	63	69
East of England	57	64	67
South East	62	66	65
Scotland	53	48	60
East Midlands	59	55	59
North West	52	54	56
Wales	54	52	57
West Midlands	56	53	56
Yorks & Humber	50	52	52
North East	44	54	52
Northern Ireland	-	50	52
England	55	59	61
GB	55	57	61
UK	-	57	

Table 3.2: Households with Internet access by country and region, GB and UK, 2005, 2006 and 2007 (Source: Office for National Statistics 2007a)

With regard to broadband connection, annual increases also vary substantially across regions, from 17 percent increase in Wales (2006-2007) to 'only' 6 percent in the South East (2006-2007). The increase for the South West was 17 per cent, from 36 per cent in 2006 to 53 per cent in 2007 (Table 3.3)

⁵ The South West is highlighted as it contains the case study upon which this study will focus

	Broadband access			Non-Broadband access			No Internet access		
	2005	2006	2007	2005	2006	2007	2005	2006	2007
Per cent									
South West	25	36	53	30	23	16	45	41	31
London	32	49	60	21	14	8	46	37	31
East of England	27	44	55	30	21	12	42	36	32
South East	36	48	54	26	18	11	37	33	35
Scotland	21	34	50	32	14	10	47	52	40
East Midlands	31	41	49	28	14	10	41	44	41
North West	28	38	51	24	16	6	48	45	44
Wales	27	32	49	27	20	8	46	48	42
West Midlands	30	43	46	26	18	10	44	47	44
Yorks & Humber	21	43	43	29	18	9	49	48	48
North East	28	38	46	15	16	5	56	45	48
Northern Ireland	-	28	40	-	22	11	-	50	48
England	29	41	52	26	18	10	44	41	39
GB	28	40	51	26	17	10	45	42	39
UK	-	40	51	-	17	10	-	43	39

Table 3.3 Households with Internet access by country, region and type of connection, GB and UK, 2005, 2006 and 2007 (Source: Office for National Statistics 2007a)

The latest Ofcom (2008) report revealed that, in 2007, 65% of households have broadband internet access in rural Devon and Cornwall, with Plymouth as the main urban centre having only 64% access (Table 3.4).

	Broadband access
	%
South West	60
Bristol and South West urban	59
Plymouth	64
Truro	53
Rural Devon/ Cornwall	65
Other South West rural	65

Table 3.4: Broadband access in the South West in 2007
(Source: Ofcom 2008)

In 2008, the Devon Economic Partnership highlighted that investment in ICT is critical to further improve the competitiveness of Devon's businesses. It concluded that ICT can put businesses in touch with global markets, make it easier for businesses to respond to changing markets and competitor activity, and that it can reduce communication and overhead costs. There has indeed been some investment in Devon, especially via the *Broadband4Devon* partnership project. While it was claimed that this project has succeeded in connecting a significant number of SMEs across Devon to broadband, and that it has encouraged businesses to get onto the 'e-adoption' ladder, thereby providing the opportunity to develop more innovative and efficient operations, it was nonetheless argued by Warren (2008) that the changes broadband can make to the business process also has its limitations. Warren claimed that the business type might play a role in constraining businesses from getting broadband and climbing the e-ladder, and that agricultural businesses were often particularly negatively affected. Also, small

businesses might face constraints such as time and finance for getting the full potential from the internet (Warren 2008).

However, Devon County Council (2007) claimed that if Devon's economy is to succeed in the 21st century, it needs to face the fast moving world of technological change, so the county needs to focus on creating the right environment for ICT to emerge, and needs to focus on building the county's knowledge economy. It is these issues linked to the role of ICTs in rural areas such as Devon, and different opportunities offered by ICT to different stakeholder groups, that will be at the heart of the investigation of ICT access and use in the remote rural town of Hatherleigh, the case study area for this research (see Chapter 4).

Despite of the positive developments in recent years with regard to connecting as many UK households as possible to the internet, Tables 3.3 and 3.4 (above) shows that, despite of the target of the UK government to provide broadband connection to everyone (DEFRA 2005), many households in the UK do not have a broadband connection. Nonetheless, the proportion of UK households with access to the internet, but with a non-broadband connection, fell from 17 per cent in 2006 to 'only' 10 per cent in 2007. Households with internet access but without broadband connection were asked reasons why they did not have a broadband connection. The most common reason given at 40 % was that they 'did not need a broadband connection', 29% mentioned 'other reasons', 21% argued that it was 'too expensive', and 15% said that broadband connection facilities were 'not available in their area' or that they could 'access broadband elsewhere' (Office for National Statistics 2007a). Research carried out in Hillingdon (London) and Conwy (Wales) by Choudrie *et al.* in 2005 indicated that the cost of broadband services

and internet access in the UK was a key factor for people not to connect to broadband, thereby preventing the less privileged from using e-services (Choudrie *et al.* 2005).

This brief review highlights that the increase in ICT use in the UK is a growing subject matter, based on the assumption that it is essential that everyone can have access to this new technology in a modern world. Access to the internet in rural areas of the UK emerges as a particularly contentious issue. This issue of a possible 'digital divide' warrants particular attention, especially as rural communities, compromising individuals and local businesses, could be severely disadvantaged socially and economically (Warren 2007).

3.5 Conclusions

The aim of this chapter was to highlight the geography of internet diffusion in the context of the UK. In so doing, it attempted to give an insight into the UK internet status globally and within the EU. The chapter showed that the UK occupies a 'reasonably good' position in terms of number of internet users – i.e. 7th in the world and second in the context of European countries (in 2007). This highlights the increased importance of the internet in the UK and the potential for 'e-governance' (see Chapter 2).

This chapter also highlighted that internet diffusion in the UK has been geographically uneven and that it has experienced some problems with regard to connections for individuals, households and businesses. As Chapter 2 highlighted, key barriers may be related to factors such as age, employment, cost of

broadband, lack of skills, awareness, interest, etc. – factors that will be analysed in detail in the context of Hatherleigh in Chapters 5 and 6. Although these factors reflect the increased inequality in internet use between individuals in general, the discussion in this chapter also highlighted possible inequalities in internet use between rural and urban areas. This 'digital divide' might especially lead to inequality of opportunities of growth and welfare of *rural* residents. In this context, the chapter also reviewed information provided by the UK Government about possible actions taken for the benefit of rural areas, such as the 'UK On-line Campaign' which has aimed at getting people, businesses and local government on-line and to provide better content and services through the internet.

However, there is yet little empirical evidence that UK rural areas have become better connected based on these government initiatives. As a result, this study will investigate in detail rural people's perceptions and experiences of the internet. In light of the Office of National Statistics' (2007a) claim that the South West of England (mainly comprised of rural areas) is particularly well connected to the internet, it will be particularly important to assess whether a South West rural town such as Hatherleigh has indeed high numbers of internet connected households. Overall, the combination of globally increased internet use, the specific UK situation with regard to relatively high internet penetration, the possible rural-urban digital divide, and the rapid increase of broadband connection in the UK, all highlight the urgent need for further investigation of the nature and processes of ICT use and access in a UK rural setting. First, however, I need to highlight how data will be collected for this study – which will be the main focus of Chapter 4.

Chapter 4: Research methodology

4.1 Introduction

Chapters 1 and 2 provided a conceptual understanding of the emergence of ICTs. According to the literature, many scholars accept the conceptual and theoretical debate concerning the actual and potential impact of ICTs as a means of enhancing governance processes, but few have attempted to support their argument by conducting detailed empirical analyses of the role and influence of ICTs towards e-governance in rural communities. The aim of this thesis is to analyse the impacts of ICT availability and use for e-governance processes in rural areas in the UK (see Chapter 1), using the 'remote rural' town of Hatherleigh (West Devon) as a case study. One of the main objectives is to assess the potential contribution of ICTs to e-governance processes in Hatherleigh. Specific emphasis will be placed on how residents use the internet for accessing on-line information and services and how they use the internet to engage with policy stakeholders within and beyond Hatherleigh.

In seeking to address the main objective of this research, this section will explain and justify the research methodology adopted in this study. It will provide a detailed justification of the study area chosen; the use of a 'snowballing' technique to build a network of respondents; and the adoption of participant observation in order to understand the town from the inside. The section will go on to outline the decision to adopt a quantitative personal questionnaire within the research, including the conduct of interviews and the selection of interviewees.

4.2 Methodological approaches in the social sciences

Frankfort-Nachmias and Nachmias (1996) argued that methodology is a system of rules and procedures on which research is based and against which claims for understanding are evaluated (see also, Flowerdew and Martin 2005). Punch (2005) supported this idea and sheds light upon some developments in social science research, particularly the widespread use of both quantitative and qualitative methods today, and an increasing tendency to combine them.

Beginning in the 1960s, the conventional dominance of quantitative methods as the basis of empirical research in social science was challenged. That challenge accompanied a major growth of interest in using qualitative methods, and this in turn created a division in the field between quantitative and qualitative researchers. However, the quantitative-qualitative debate has attracted the attention of social science researchers. Some thought that only quantitative approaches should be used to study human behaviour. Others were just as insistent that only qualitative approaches are appropriate (Punch 2005)

More recently, however, there has been increased interest in the combination of quantitative and qualitative methods, commonly referred to as 'multi-method' (Bryman 1988, 1992; Hammersley 1992; Clifford and Valentine 2004). This is the approach which will be used to achieve the aims of this study.

Clifford and Valentine (2004: 7) suggested that *"there is no set recipe for choosing the most appropriate method(s): different methods have particular strengths and collect different forms of empirical material. The most appropriate method(s) for your research will therefore depend on the questions you want to ask and sort of*

information you want to generate". In considering the appropriate mix of methods, it is important to distinguish between the two types of research method, and to consider their relative benefits and costs.

4.2.1 Quantitative methods

Quantitative methods are generally geared towards documentary subject attributes expressed in quantity, extent, or strength (Sarantakos 2005). The purpose of quantitative methods is to measure variables and to produce figures which will allow judgements as to the status of the variables in question (Alreck and Settle 1995), which in turn will allow further processing, and comparisons and permit reliability. The most common methods are surveys, documentary methods, observation and experiments.

The main way of gathering quantitative data in social science is through the use of questionnaires (Hoggart *et al.* 2003; Clifford and Valentine 2004; Parfitt 2005). The particular aim of this method is to take a general view of a phenomenon, in which *"snapshots of practices, situations or view at a particular point in time [are taken] using questionnaires or interviews from which inferences may be made"* (Galliers 1992: 153-4). Parfitt (2005) argued that this data can broadly be classified into three types. Firstly data that classify people, their conditions and their environment (e.g. age of respondent, gender, social status, income, employment status, household type); secondly data which relate to the behaviour of people (for example, 'how have you learnt to use the internet? How do you find out about information/services in your local area?'). Finally data which relate to attitudes,

opinions and beliefs (for example, 'how satisfied are you overall with Hatherleigh Community Website?'). The latter seem to be the most difficult data categories to gather (Clifford and Valentine 2004; Parfitt 2005).

4.2.2 Qualitative methods

Van Maanen (1983:9) defined qualitative techniques as "*an array of interpretative techniques which seek to describe, decode, translate and otherwise come to terms with the meaning, not frequency, of certain more or less naturally occurring phenomena in the social world*". So, in general, qualitative methods help researchers to seek answers to a question by systematically using a predefined set of procedures to answer the question; collecting evidence; produce findings that were not determined in advance; and produce findings that are applicable beyond the immediate boundaries of the study. Additionally, qualitative methods help to understand a given research problem from the perspective of the particular population it involves. In this context, Hoggart *et al.* (2002) argued that qualitative methods are especially effective in obtaining socially specific information about the values, opinions, behaviours, and social contexts of particular populations. Qualitative researchers attempt to understand behaviour and conditions by getting to know the persons involved (participants) and their values, rituals, beliefs, and emotions. Consequently, the strength of qualitative research is its ability to provide complex textual descriptions of how people experience a given research issue – in the context of this study, how they use the internet. It provides information about the human side of an issue – that is, the often contradictory behaviour, belief, opinions, and emotions of individuals. Qualitative methods are

also effective in identifying intangible factors, such as social norms, socioeconomic status, and age roles, whose role in the research issue may not be readily apparent. Furthermore, Easterby-Smith *et al.* (2002) suggested that when using qualitative along with quantitative methods, the former can help the researcher to interpret and better understand the complex reality of a given situation, and thus the implications of quantitative data. Several types of qualitative data collection will be used in this study, including participant *observation* – appropriate for collecting data on naturally occurring behaviours in people's usual contexts, and *personal interviews* which help to collect data on individuals' personal perspectives, experiences, and attitudes.

4.2.3 Using multi-methods

The multi-methods approach has been written about by many writers, for example Abrahamson (1983), Hoggart *et al.* (2002), and Easterby-Smith *et al.* (2002), Williams (2000, 2003), David and Sutton (2004), Denzin and Lincoln (2005) and Punch (2005). They agreed that there are good reasons for using several methods in the same study. Abrahamson (1983) is one of the writers who pointed out that this approach prevents the research becoming method-bound. Indeed almost every measure is flawed in some way or other, and therefore research designs and strategies can be offset by counter-balancing strengths from one to another.

Most frequently, the advantages of a multi-methods approach are asserted to arise from the capability to undertake 'triangulation'. This is the use of a progression of complementary methods in sequence to gain deeper insight on a research

problem (Hoggart *et al.* 2002). The advantage of using complementary methods is to that they augment capacities for understanding meaning and behaviour. This is because insights gained can build up confidence in conclusions by providing compound routes to the equivalent result (Bryman1992; Hoggart *et al.* 2002).

Easterby-Smith *et al.* (2002) and Flick (1998) argued that using triangulation allows the researcher to be thorough in addressing all potential aspects of a topic; to enrich the nature of research data, to facilitate a study (where one procedure serves as a stepping-stone for the other), and to accomplish a high level of validity, credibility and research effectiveness.

Consequently, taking the advantages of the multi-methods into this research consideration and according to the abovementioned discussion and in the development of the analytical research methods for this study, it is being stressed that it is possible to combine a range of different types of methods. Particularly, in order to gain a rich insight into rural people's use of the internet.

Two main sources of data were used in this study: primary data from participant observation, questionnaire data, interviews and secondary data sources. Questionnaire data and participant observation provided the basis for deeper investigation and evidence of internet use in the study area. Interviewing internet users and non-users as well as policy stakeholders provided additional valuable information on the state of e-governance (e.g. improved information and service delivery, improved interaction between rural citizens and stakeholders). Secondary data, meanwhile, was obtained from census data, from the internet, Hatherleigh newsletters and posters, in such a way as to complement primary sources.

The methodology described in this chapter is organised accordingly. In Section 4.3, the spatial scale of investigation is explained. This includes a discussion of the case study approach in general and its application in this thesis. The justification and criteria for selecting the case study area in the South West of the UK are addressed.

Section 4.4 reviews research methods used in the case study area: participant observation, snowballing, the personally-delivered questionnaire and individual interviews with Hatherleigh residents and local and regional policy stakeholders. Particular attention is given to interviewee selection.

4.3 The spatial scale of investigation

This section identifies and justifies the appropriate spatial scale for e-governance analysis in the study area (see Chapter 7 and 8). It also discusses the case study approach in a general context and in terms of this study's application. The section then addresses the justification for selection Hatherleigh in the South West of the UK as a study area.

4.3.1 Selecting the appropriate scale for analysis: the 'local scale' and 'regional –national scale' interface

The importance of the spatial scale issue in the analysis of globalisation and e-governance has been mentioned on several occasions in this thesis (see Chapter 2) (Staeheli 1994; Thompson 1995; Le Galés 1998; Dabinett 2000; MacKinnon and Phelps' 2001; Howitt 1998, 2002; Bulkeley 2005). In human geography and

political sciences, questions about scale are at the forefront (Marston 2000; Swyngedouw 1997, 2004). In this respect some writers argue that human activities, including political behaviour, have causes and consequences measured at various levels along multiple scales (Clark 1996; Gibson *et al.* 2000; Haarstad and Floysand 2007). For example, many researchers have focused on actions and outcomes of aggregated units of government operating at different geographical levels: local, regional, national, and international (Le Galés 1998; Dabinett 2000).

Gibson *et al.* (2000) argued that geographers use the terms of local, national, and global to stress conceptual levels. Also Meyer *et al.* (1992, p: 256) claimed that local and global may correspond to conceptual levels of *"totality, comprehensiveness and particularity, discreteness, contextuality"*. Further, Swyngedouw (1997) argued that scale is one of the most important issues in any study of human geography, and Gibson *et al.* (2000: 218) in particular argued that *"it is necessary for social scientists to identify more clearly the effects of diverse levels on multiple scales in their own analyses"*.

In this context geographers have attempted to address scale by focussing on the processes that shape and constitute social practices at different levels of analysis (Marston 2000; Swyngedouw 2003, 2004). Swyngedouw (2003) explained this use of scale and argued that local, regional, national and global scale is not only the predetermined hierarchical framework for ordering the world; it is also a contingent outcome of the tensions that exist between structural forces and the practices of human representatives. However, some writers who focused on the scale issue in

social sciences (see, Gibson *et al.* 2000; Marston 2000; Haarstad and Floysand 2007) have argued that the spatial level at which the social or human changes are modelled affects the type of explanation given to social changes.

Therefore, there is a need to employ a nested set of scales for comprehensive explanation of e-governance processes (Figure 4.1). This study uses the spatial scales local-regional and national in order to demonstrate the way in which the internet influences e-governance structures (see Figure 1.1) and is dependent on those dimensions.

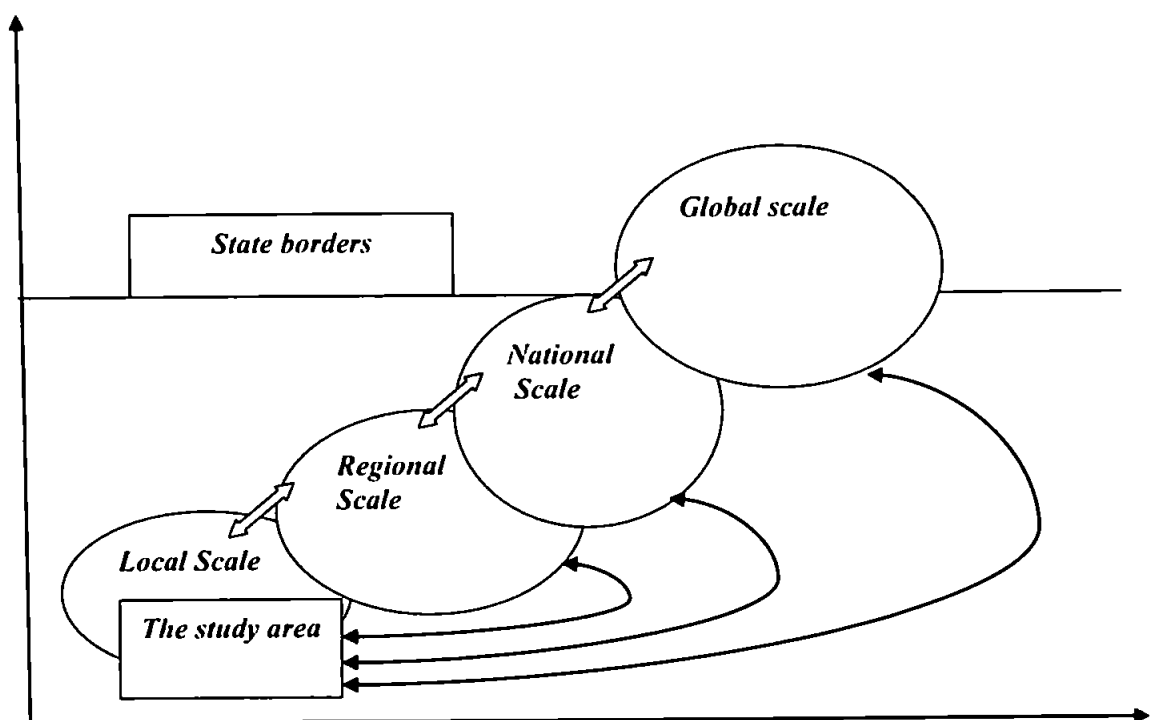


Figure 4.1: The spatial scale of this study
(Source: adapted from Wilson 2007)

As mentioned in Chapter 2 by some authors (Wilcox 1996; MacKinnon and Phelps' 2001; Swyngedouw 2003, 2004) the responses at local level to the information society emphasise the desirability of engaging users, and the need to

utilize the emerging technologies to empower people. Staeheli (1994: 388) noted that *"the ability to press claims at a larger scale can be critical to success of local grassroots movements, while blocking access to arenas at larger scales can be a strategy to opposing groups"*. Also in this context, local grassroots and remote towns and communities can gain empowerment by pressing claims and engaging with policy stakeholders at higher points in the spatial scale. This assertion leads to consideration of the importance of the local-national scale in this study of e-governance. This in turn will help understand the degree to which the internet helps the people of Hatherleigh to obtain information/services and interact with policy stakeholders at the local level (see Chapter 7) and beyond locality at regional or national level (see Chapter 8).

The next step is to discuss the methods used to conduct this research and the justifications for the case study approach adopted in this study.

4.3.2 The case study approach

The case study approach has been used as a common research strategy in different fields of sciences, especially in social and political sciences, business studies, economics and planning (Stake 1995; Yin 1994, 2003a, 2005). The importance of using this approach comes from its unique contribution to understanding information about individual, community, organisation, social, and political events and from the desire to understand complex social and natural phenomenon. The case study was described by Yin (1994:3) as an approach that *"allows an investigation to retain the holistic and meaningful characteristics of real-*

life events such as individual life cycles, organisational and managerial processes neighbourhood change, international relations, and the maturation of industries”.

Yin (1994) identified five components of research design that are important for case studies. These components are: research questions, research propositions (if any), the unit(s) of analysis, the logic linking the data to the propositions, and the criteria for interpreting the findings. The research questions in any case study investigation are most likely to be of the 'how' and 'why' type and their definition is the first task of the researcher. The research propositions sometimes derive from the 'how' and 'why' questions, and can be helpful in focussing on the research aims. Not all studies need to have propositions: an exploratory study, rather than having propositions, may have a stated purpose or criteria on which the success will be judged. The unit of analysis defines the case itself: this could be individuals, groups, organisations or countries.

Case studies have been used as practical methodological tools for three types of research (Figure 4.2): 'descriptive', 'exploratory', and 'explanatory' (Creswell 2003; Yin 1994, 2003a, 2005). Fisher and Ziviani (2004) argued that descriptive case studies usually describe interventions or demonstrate certain topics. This type of case study is usually considered less demanding than an explanatory one and no causal links are made. In exploratory case studies, fieldwork and data collection may be carried out prior to definition of a research question and hypotheses (Madon 2004; Steenhuis and Bruijn 2006). Explanatory case study approaches are suitable for conducting research aiming at explaining causal relationships (Joia 2004; Choudrie and Ghinea 2005).

The importance of using a case study approach in social research investigation has been recognised in recent years by researchers of community processes. Methodologically, community studies are typically carried out by researchers living in a settlement in order to investigate local social networks in the residential area (Payne and Payne 2004).

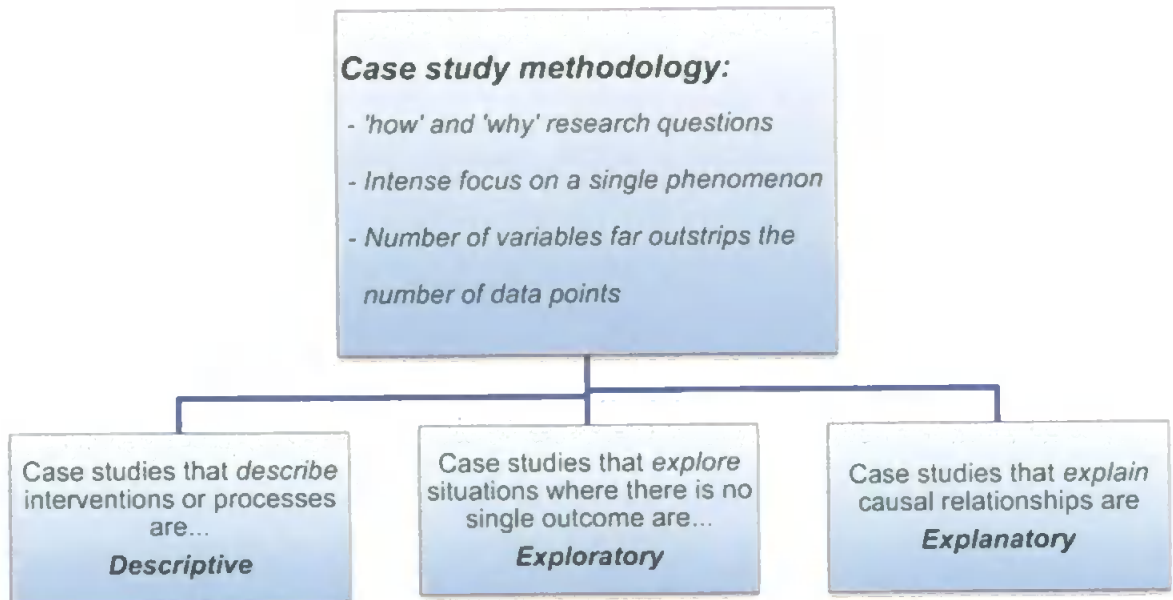


Figure 4.2: Types of case study methodologies (Source: Fisher and Ziviani 2004)

Community studies are an example of research practice associated with a single sociological concept, that of 'community'. Most commonly, community studies have comprised research into place communities (Payne and Payne 2004; Yin 2005). The research focus has been the local social systems in the area, these and the people in them being loosely referred to as a 'community'. For example, several studies on e-government or e-democracy (Choudrie *et al.* 2005), and on the digital divide (Warren and Skerratt 2003; Warren 2002, 2007) emphasised that the use of a community-based case study as a methodological approach in

investigation can provide a deep and meaningful understanding of the factors driving e-government, e-governance and the digital divide in a selected study area. Payne (1996) cited a number of studies concentrating on specific topics within the context of community, such as crime, local politics, unemployment, friendships, education, class, poverty, social welfare or housing. Rural-based examples include Bryden *et al.* (1997), Ward and McNicholas (1998), Murdoch (2000), Mackinnon (2002), Hollifield and Donnermeyer (2003) and Malecki (2003).

As such, the place community study serves as *"the most complete and detailed sort of presentation of the subject under investigation which has been made possible by giving special attention to totalising observation, reconstruction and analysis of the objects under study"* (Zonabend 1992: 52). In addition, concentrating research efforts on one community as a case study can reduce costs, limit travel, and enable in-depth immersion and prolonged engagement (Patton 2002). Despite its advantages, however, it is widely acknowledged that this method is beset with many problems. It can be expensive for the researcher on a number of levels; the required level of access can be difficult to negotiate; the researcher can come to have an effect on the researched and vice versa; and immersion can come with emotional costs for all parties involved (O'Leary 2004).

"A case study is expected to catch the complexity of a single case. The single leaf, even a single toothpick, has unique complexities - but rarely will we care enough to submit it to case study. We study a case when it itself is of very special interest" (Stake 1995: xi). Case studies allow in-depth research and produce first-hand information, in that they work in natural settings, allow the employment of a variety of interrelated methods and sources, imply long-term contacts and personal

experiences, and finally produce information that covers the whole unit and not only small aspects of it (Mackinnon 2002; Malecki 2003).

The case study approach is not without its problems. According to Yin (2003b) and Sarantakos (2005), results relate to the unit of analysis only and allow no inductive generalisations, and there is limited access to the field and to the personal subjective information that constitutes the basis of case studies. However, used with discretion and rigour it is a useful and legitimate approach to social research (see for more details, Yin 2003b, 1994; Payne and Payne 2004, 1996; Patton 2002).

The ability of the case study approach to utilise different types of data and information resources (cross-checking), and the nature of research questions and aims identified earlier in Chapter 1, have formed the basis for the present study to consider the community case study approach as a methodological tool for investigating ICT, e-governance, and ICT exclusion.

Given that the main concern of this research is the impact of ICT in a rural community in the UK (see chapter 1), it is appropriate to adopt a community case study approach, basing selection of the case study on rurality classification, and availability of access to ICT and size (see Table 4.1 below). According to Collis and Hussey (2003), the target population must be large enough to ensure that if some of the very high or very low 'extreme' members of a population are chosen to be in the sample, they do not affect any results obtained from the sample more than they should.

CRITERIA
remote rural area
population around 1000 – 2000
availability of access to ICT (internet)
transportation availability (for avoiding problems during field work)

Table 4.1: Criteria for case study selection (Source: Author)

Based on these criteria, Hatherleigh was chosen as a case study. It is a small town with just under 2,000 inhabitants, located in West Devon, in the South West of England (see Figures 4.3).

4.3.3 The rationale for selecting Hatherleigh as a case study area

The central aim of this study is to understand the impact of ICT availability and use for governance processes in rural areas, and this implies focussing on a specific rural area with ICT accessibility (internet broadband in particular).

In seeking a suitable area, I undertook a field visit around Devon villages and market towns in order to get a hands-on geographical perspective of the area. I relied also on maps (for clues about geographical location of different areas) and the Office of National Statistics' (2004) *Rural and Urban Area Classification* for its rurality classification. I also considered the distance from large cities (see Table 4.2) as one factor of remoteness, though it was also important to consider ease of access from the point-of-view of being a researcher based in Plymouth. The first decision was made to choose between three sites:

Sampford Courtenay, Inwardleigh, and Hatherleigh (see Figure 4.3).

In the context of Table 4.2, Sampford Courtenay, Hatherleigh and Inwardleigh all meet the criteria of rurality, access to broadband internet and transportation availability. However, in respect to population, Sampford Courtenay and Inwardleigh have small populations compared to Hatherleigh.



Figure 4.3: Hatherleigh and its location in the county of Devon, South West of England

Additionally, Hatherleigh is the furthest of the three from the nearest market town, Okehampton. Thus Sampford Courtenay and Inwardleigh were rejected while Hatherleigh was selected as the study area.

		<i>First selected sites</i>		
		Sampford Courtenay	Hatherleigh	Inwardleigh
<i>Remote rural area</i> ⁶		Yes	Yes	Yes
<i>Population</i> ⁷		509	1,096	454
<i>Access to broadband internet</i>		Yes	Yes	Yes
<i>Transportation availability</i>		Yes	Yes	Yes
<i>Distance from big cities or towns (miles)</i>	<i>Plymouth</i>	36	36	34
	<i>Exeter</i>	25	31	27
	<i>Okehampton</i>	4	8	4
	<i>Crediton</i>	14	20	19
	<i>Bideford</i>	27	20	24

Table 4.2: Summary of the first three selected sites (Source: Author)

4.3.4 The Case study area of Hatherleigh: economy, services and governance structure

This section will provide a brief introductory overview of Hatherleigh. It will focus specifically on Hatherleigh's demographic characteristics, its economy and services, governance structures, and the history of internet access in Hatherleigh.

⁶This classification is based on the Office National Statistics' Rural and Urban Area Classification (2004).

⁷Based on UK Census 2001.

Demographic characteristics

Table 4.3 shows the population characteristics of Hatherleigh in 2001. Hatherleigh is demographically 'mixed', with 443 households, 1096 inhabitants and with various age groups represented, including about 19% children under the age of 16 and 21% people aged 65+. This meant that, with regard to ICT access and use, the sample population (see Section 4.4) was not too skewed by demography. Various visits by the researcher to Hatherleigh revealed that it is a compact town, which allowed a large part of the population to be surveyed (30% of population surveyed in questionnaire; see Section 4.4).

		Hatherleigh	
Total households		443	
Residents	Total persons	1,096	
	Males	537	
	Females	559	
	Percentage	Aged under 16	18.5
		Pensionable aged to 74	12.7
		75 and over	8.1

Table 4.3: Residents and households of Hatherleigh (Source: UK census 2001)

Hatherleigh as a 'remote' rural town

According to the 'Rural and Urban Area Classification' of the Office of National Statistics (2004), Hatherleigh, with its location in the North-West of Devon, is classified as 'remote rural area' characterised by 'remote towns, hamlets and isolated dwellings' (sparsely populated) (see Figure 4.3 above). The discussion in Chapter 3 (Section 3.4.1) on ICT 'notspots' also highlighted that Hatherleigh is

located in an ICT notspot (Figure 3.4) with broadband speeds of < 2Mbps. Hatherleigh's remote location is particularly evident through its situation approximately eight miles from the nearest larger town (Okehampton) and thirty one miles from Exeter, the nearest city (Figure 4.3 above). Its remoteness is also evident through the fact that some people in Hatherleigh have to travel long distances to get to work (Office of National Statistics, 2005). Table 4.4 shows that nearly half of people with jobs living in Hatherleigh have to travel some distance for job purposes, with 30% travelling 10-60 km. In this sense, Hatherleigh fulfilled one of the key preconditions for selection of the case study area linked to this study's aim and objectives, i.e. that it was classified as 'remote rural' where internet use and access may play a particularly important role for overcoming issues of rural isolation and lack of services.

<i>Distance travelled to work in Hatherleigh 2005 data</i>	<i>%</i>
Works mainly at or from home	30
Less than 2km	20
2km to less than 10km	20
10km to less than 20km	17
20km to less than 60km	13

Table 4.4: Distance travelled to work in Hatherleigh (Source: www.statistics.gov.uk)

Economy and services

In respect to employment in Hatherleigh, the 2001 census data in Table 4.5 shows that most of Hatherleigh residents are employed full-time and that they mainly have skilled trade occupations (Table 4.6 below).

Hatherleigh employment	%
Employee: Part-time	16
Employee: Full-time	33
Self-employed	20
Unemployed	9
Full-time Students	4
Retired	18
Total	100

Table 4.5: Employment in Hatherleigh (Source: UK census 2001)

Employment by occupation in Hatherleigh	%
Managers and Senior Officials	13
Professional Occupations	7
Associate Professional and Technical Occupations	8
Administrative and Secretarial Occupations	9
Skilled Trades Occupations	25
Personal Service Occupations	10
Sales and Customer Service Occupations	6
Process; Plant and Machine Operatives	5
Elementary Trades; Plant and Storage Related Occupations	4
Elementary Administration and Service Occupations	13
Total	100

Table 4.6: Employment by occupation in Hatherleigh (Source: UK census 2001)

Despite its small size, like many small towns in the UK's South West touched by tourism Hatherleigh has a wide range of shops, including a junk shop, an antiques shop, and an arts and craft shop selling local paintings, pottery, fabrics and specialist furniture. Hatherleigh has many old listed thatched houses, and a large livestock and general market on Tuesday mornings.

The main services available in Hatherleigh are the Hatherleigh primary school and the Hatherleigh medical centre, but for other educational and health services Hatherleigh residents have to go to either Okehampton or Exeter. Hatherleigh has a local Co-op store, and Hatherleigh residents argued that this was very convenient for a remote rural town although it was also perceived as too expensive. As a result, people often preferred travelling to Okehampton for food shopping. Hatherleigh also has a local post office which is located in the town



The Local Store Co-op



Hatherleigh Antiques



Children Play Area



Hatherleigh Community Centre



Hatherleigh Post Office



Hatherleigh Livestock Market

Figure 4.4: Some services available in Hatherleigh (Source: Author)

centre (see Figure 4.4 above). In respect to transportation, in theory, Hatherleigh public transportation is supposed to be available twice every day (not at weekends), but in practice public transport was poor⁸, suffering from long delays and cancellation of services for unknown reasons. The Hatherleigh Community Centre is situated in a new purpose-built building, offering space for town events and activities⁹.

Overall, Hatherleigh can be described as having 'average' services and facilities for a remote rural town, with some services available in the town, but with many services only available a long distance away – issues that this study will explore in detail with regard to whether internet access helps Hatherleigh residents bridge this 'service gap' (see Chapters 5-8).

Governance structures in Hatherleigh

As the main focus of this study is the use of ICT for citizen engagement with stakeholders from government and non-government agencies, it is necessary to explain the governance structures for Hatherleigh in more detail, including the role and functions of the different scales of elected local government which include Hatherleigh Parish Council, the West Devon District Council and Devon County Council, as well as other bodies involved in governance.

⁸ During the research process, the researcher learned driving and bought a car to facilitate further data collection (e.g. questionnaire distribution and collection).

⁹ This is a large hall with capacity for 400 or tiered seating for 200 people. It is used, for example, for badminton, children's parties, functions and receptions. It also has a fully equipped kitchen and an astroturf area with floodlights for all year round use.

Located in the county of Devon, Hatherleigh Parish and Town Council is under the authority of West Devon Borough Council which itself is under the authority of Devon County Council. This nested hierarchy of council governance structures is shown in Figure 4.5.

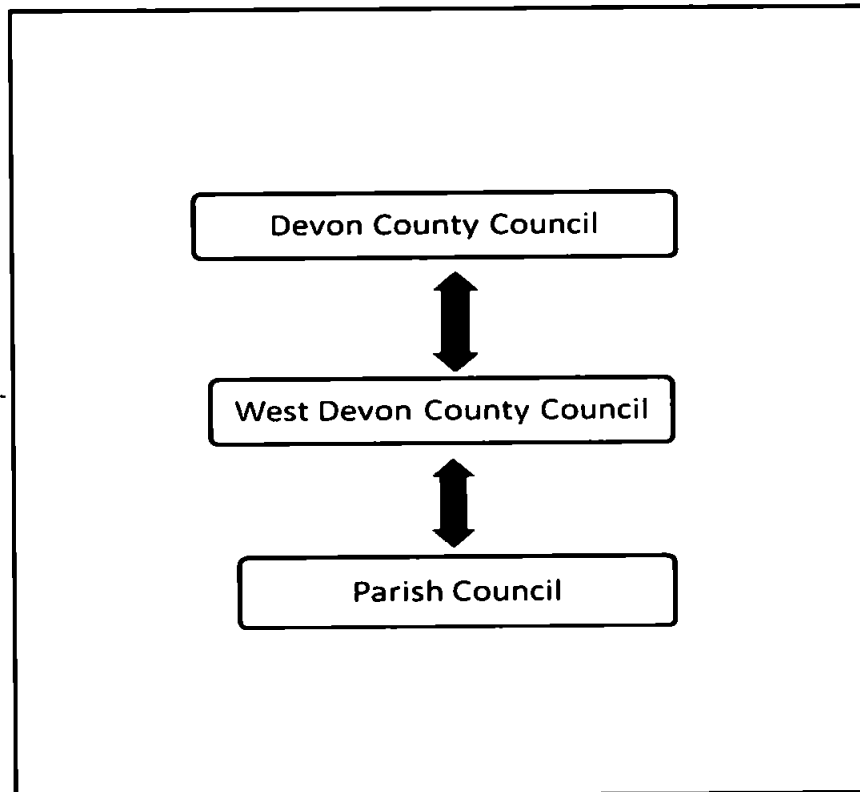


Figure 4.5: Hierarchy of county, district and parish councils (Source: Author, adapted from www.devon.gov.uk)

Hatherleigh Parish Council is the tier of elected government closest to the Hatherleigh residents which they serve. Hatherleigh has a town Mayor (with limited power) and a local West Devon Councillor. The latter has a duty to the whole community in the West Devon Borough, but especially to the ward of Hatherleigh. Each of these councils is independent of the other and they are responsible for the provision of different services (see below).

The Hatherleigh Parish Council (HPC) as a local authority has a limited number of duties, and uses its power with agreement of the West Devon Borough Council (district council) and the Devon County Council (county council). HPC mainly deals with such matters as footpaths, village greens, parish and community property, and provision of seats and shelters (www.westdevon.gov.uk). HPC is also allowed to raise money through a compulsory 'precept' which forms part of the Council Tax and is collected on their behalf by West Devon Council (HPC can set its precept at a level of its choice). It can also obtain grants for specific projects from West Devon Council, Devon County Council, government departments, and charitable foundations. The limited role of the mayor of Hatherleigh is to act as chairman at meetings of the Council, and to represent the Council at civic and ceremonial events. The local West Devon councillor has more power and sits on the committees and is also appointed to outside bodies and partnerships.

West Devon Council has a wider remit and is responsible for housing, local planning, refuse collection, environmental health, public parks and gardens, provision of sports and arts facilities, allotments, cemeteries, street cleaning, organising elections and maintaining the electoral roll, car parking and collecting the council tax for the whole of West Devon (www.westdevon.gov.uk). Meanwhile, Devon County Council is responsible for county-level education, the youth service, child care, promoting the economic well-being of the county, care for elderly and vulnerable people, promoting opportunities in heritage, arts and sport, libraries, highways and transportation, campaigning for an attractive and cleaner environment, waste disposal and recycling, strategic planning, planning applications for minerals and waste, and trading standards and emergency planning (www.devon.gov.uk). Via the HPC, Hatherleigh is also directly affected by

decisions linked to the above issues (e.g. waste disposal). In practice, the different tiers of local government are working more and more in partnership to enhance the value of the services they provide to the people of Devon (www.devon.gov.uk).

The West Devon Council website highlights how citizens in Devon, including Hatherleigh residents, have specific rights with regard to their dealings with the council (Table 4.7). In light of the research objectives of this study, it is interesting to note that no reference is made to citizens' rights for use of the *internet* as a method of communication with the council. The assumption that most communication still occurs in writing (i.e. by letter; see bullet point 7 in Table 4.7) can partly be interpreted as a lack of willingness by public agencies to encourage citizens to use the internet (see Chapters 5-8).

Citizens' rights

- vote at local elections, if they are registered;
- contact their local councillor about any matters of concern to them;
- obtain a copy of the constitution and other council documents (unless they are confidential);
- attend meetings of the council and its committees except where, for example, personal or confidential matters are being discussed;
- inspect agendas and reports except where, for example, a report has been written about a confidential matter;
- petition to request, at any time after 1 February 2006, a referendum on a mayoral form of executive;
- submit questions in writing to the council;
- complain to the council under its internal complaints process;
- complain to the local government ombudsman if they think the council has either broken the law or not followed its procedures properly. However, they should only do this after using the council's own complaints procedure;
- complain to the Standards Board for England if they have evidence which they think shows that a councillor has not followed the council's Code of Conduct for Members; and
- inspect the council's accounts and make their views known to the external auditor.

Table 4.7: List of Citizens right (Source: www.westdevon.gov.uk)

In the only academic study of governance structures in Hatherleigh so far, Winter (2006) suggested that Hatherleigh is a typical example for the blurring of public and private boundaries in partnership processes. He argued that, in towns such as Hatherleigh, the limited capacity of local authority, and the resulting necessity for cooperative networking, has supported the promotion of partnership work between different government institutions at different scales and comprising both private and voluntary sectors. However, Winter also suggested that there continues to be a need to improve the coordination of central government policies and their implementation in remote rural towns in the UK – issues that the internet may help to address (see Chapters 5-8).

This suggests that towns such as Hatherleigh have become involved in the process of developing new forms of governance and partnership approaches, especially with regard to development of new local institutional geographies and local initiatives. Such initiatives may encourage communities to take more responsibility over their own development, to stimulate local opportunities, and to meet local people's needs. Partly as a result of these processes, Hatherleigh witnessed the birth of a local-level project: the Hatherleigh Area Project (HAP). This project was set up in April 2001 with the principal aim of addressing the social and economic consequences of the foot-and-mouth disease outbreak (Winter 2006). The South West Regional Development Agency and West Devon Borough Council funded the project, with additional funding from a range of other organisations including Devon County Council and the Arkleton Trust. Winter (2006) argued that the establishment of HAP provides an example of the rescaling of the relationships that might underpin local, regional or national patterns of policy learning and engagement and rural development. Winter provided a clear

illustration of the different organisational relationships of HAP which, in turn, reflect the complex governance network of rural towns such as Hatherleigh (Figure 4.6).

The different arrow thickness in the figure refers to different types of relationship between the given organisations and was classified by Winter (2006) as follows: praxis' relationships, e.g. where HAP works with another local institution because of mutual interest or complementarity (thin lines); strategic relationships, e.g. where HAP is guided in some way by the policy or strategy at a higher level organisation (dotted lines); financial relationships, e.g. where the HAP has received support for its core activities or where there is potential for HAP projects to receive funding (thick lines); activities that are both strategic and financial (double lines).

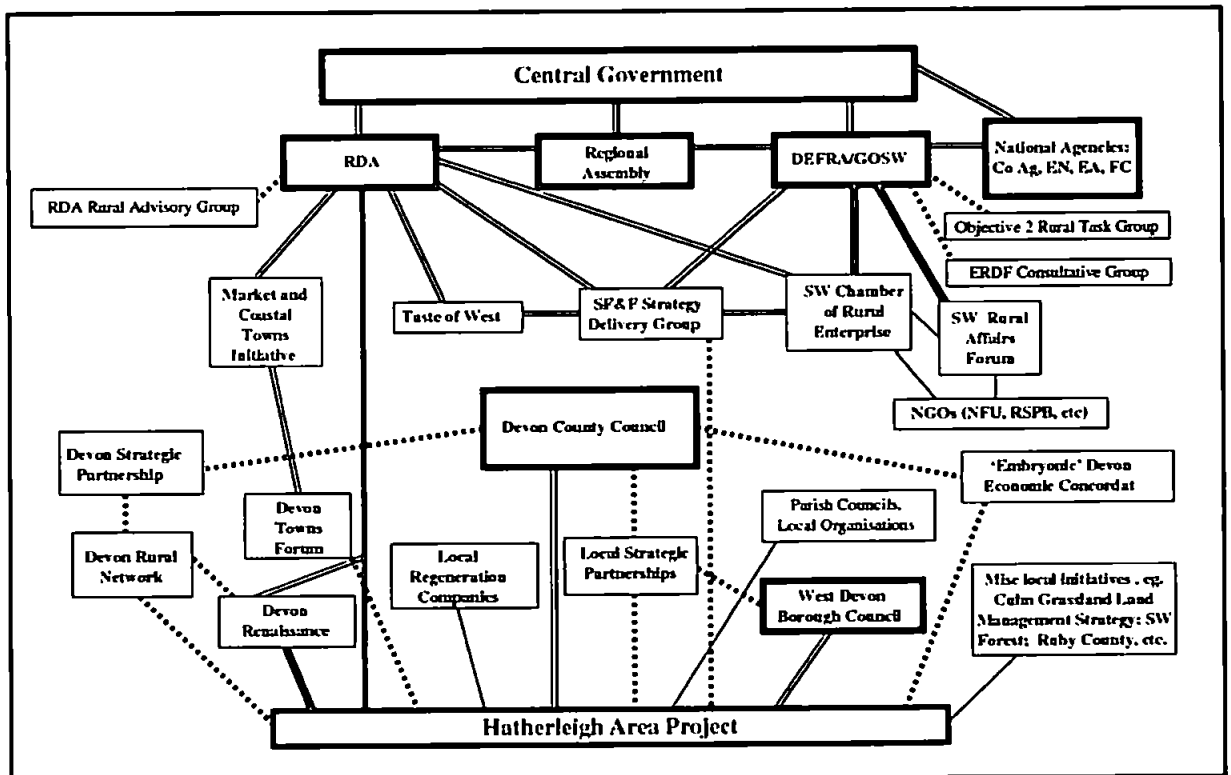


Figure 4.6: HAP and the governance network of Hatherleigh (Source: Winter 2006: 748)

Figure 4.6 highlights that in terms of the local opportunities associated with such initiatives; HAP has provided opportunities for Hatherleigh residents seeking to assert their own revival route through endogenous development initiatives. One example of the outcomes of the HAP in Hatherleigh was the new Community and Enterprise Centre (see above) which replaced the 100-year old town hall, and which has been seen by the community as an important part of the recovery of the area after it was at the epicentre of the foot-and-mouth outbreak in the South West England with its severe economic repercussions.

The analysis in Chapters 5-8 will investigate in more detail what role the internet plays in a town such as Hatherleigh in facilitating further communication and exchange between the different and complex networks of local government and governance structures, as well as between Hatherleigh and regional/national governmental and non-governmental organisations.

Hatherleigh and internet access

A key area of interest in relation to this study relates to the history of internet access and broadband provision in Hatherleigh in order to better understand residents' access and use of ICT discussed in Chapters 5-8.

With respect to internet access, at the time of the study (completed in 2009), the town had access to both broadband internet, and had its own website (www.Hatherleigh.net). Beyond dial-up internet connection available to residents from the mid 1990s onward, the internet was formally introduced to Hatherleigh in 1999 through a Devon County Council (DCC) initiative called 'IntraCom'. IntraCom

was the collective name devised by the DCC policy unit for a network of community information sources¹⁰. The project was funded by DCC and the European Union (EU) through which it was linked to broader European interests about exploring the potential benefits of the internet as a public source of government information (DCC report 1999, unpublished). The IntraCom project was set up as an 'internet gateway' to information for those living in Devon and for those seeking information about Devon. The types of information it incorporated included council services, job vacancies, government benefits, tourist information, transport information, etc., available via dial-up internet connections for Hatherleigh residents. According to the IntraCom project they embedded local information provided by local sources including individuals, companies, businesses, council authorities, organisations and voluntary groups into this framework (DCC IntraCom promotion pamphlet 1998, unpublished). The strategy involved providing internet access points in local communities throughout Devon and encouraging communities to self-manage these.

Hatherleigh was part of the IntraCom project starting in 1999, providing the town with a PC and printer and a dial-up internet connection. Though the facility no longer exists, this was a great start for Hatherleigh residents to experience the internet quite early compared to many other rural areas in the UK (DCC report 1999, unpublished¹¹; see also Chapter 3). In Hatherleigh, the IntraCom project lasted from the first of April 1999 until the end of March 2000.

However, because of remoteness and low population density, Hatherleigh was not a desired place for internet services providers to make an investment in the

¹⁰ The name has now changed to 'OurDevon' because it was agreed that IntraCom had little meaning whereas 'OurDevon' gave a sense of ownership.

¹¹ Some information can be found on <http://www.southmolton.org.uk/index/intracom.htm>.

town and to connect Hatherleigh to the *broadband* infrastructure. Consequently, Hatherleigh residents went through a difficult experience in order to be connected to broadband (see Section 5.2 for more detail). In 2005, Hatherleigh residents saw the importance of broadband for their area, especially as they realised that no broadband investment was planned for their town due to potentially limited demand. As a result, Hatherleigh residents started a local campaign and petitioned British Telecom (BT) (the only internet service provider in Devon) asking for a broadband connection to the town. However, BT claimed that such services could not be provided unless the cost of investment could be covered through future revenues from the broadband connection. Accordingly, a petition was set up by Hatherleigh residents to obtain signatures from people who agreed to subscribe to the broadband service when connected. The campaign was successful and the number of households who accepted to purchase the service was enough to encourage BT to provide Hatherleigh with broadband internet services in 2005.

Although broadband internet speed in Hatherleigh is still less than 2Mbps situating Hatherleigh within a 'notspot' broadband area (see figure 3.4 in Chapter 3), the availability of broadband connection nonetheless provided many new opportunities to Hatherleigh residents to use different e-services and to have a local website (Hatherleigh community website) run privately but sponsored by different local businesses in Hatherleigh (see Section 5.8 in Chapter 5).

It is particularly issues related to Hatherleigh's internet and broadband connection, and how Hatherleigh residents access and use such services, that will be at the heart of the analysis in Chapters 5-8.

4.4 Research methods used in the case study area

Having reviewed the overall approach adopted for this study and identified the study area and rationale for its choice, this section identifies and justifies the research methods used to collect and analyse data. As mentioned in Section 4.3.2, one of the advantages of using the case study approach is the ability to utilise different types of data and information resources (cross-checking). The present study will use four different sources of data in order to meet the objectives of the research: participant observation, questionnaires, interviews with local residents of Hatherleigh and local and regional stakeholders, and secondary sources (e.g. census data, internet, newsletter, the parish pump, and the Hatherleigh community website). An explanation for each method is presented next.

4.4.1 Participant observation and research positionality

Participant observation is one of the methods used widely in social science and human geography studies. Robson (2007: 85) stated that "*as the term suggests, participant observation is defined by the role taken by the observer. He/she, to some greater or lesser extent, actually participates in the situation being observed*". This method is usually used to describe what goes on, how things happen, who or what is involved and moreover, it is an appropriate methodology for studying processes, relationships among people and events (Hoggart *et al.* 2002; Flowerdew and Martin 2005). One of the main advantages of using participant observation is that the researcher can obtain a deeper and more detailed insight into the activities that the members of a society perform and the ways in which they think. It also allows the researcher to gain a good overview of

how and why a society functions (Flowerdew and Martin 2005; Kawulich 2005). Data and information gained by applying participant observation are typically written or taped as accounts of what has been observed.

Hoggart *et al.* (2002) outlined the importance of using participant observation as a data collection tool in social science studies. They stressed that participant observation provides several advantages to research. First, it enhances the quality of data obtained during field work. Second, it helps in interpretation of other data gathered. Third, participant observation encourages the development of new research questions and hypotheses which may be raised from the case study under observation.

Problems encountered through participant observation are also discussed by many authors in different social science and human geography fields. Robson (2007), for example, suggested that participant observation is a demanding and time-consuming way of gathering data. It can be a problem finding opportunities to record or make notes of what has been observed while it is fresh in the mind. The researcher may encounter difficulties in being accepted by the target population. The data obtained by participant observation can be very valuable both in terms of quantity and quality, but requires careful analysis and interpretation.

The main justification for adopting the participant observation method was the nature of the study itself. This study is looking at a specific community. Thus, rather than looking for a new event or trying to find a new theory, it is attempting to develop deep understanding of that community and how it reacts to a specific phenomenon (ICT) (Hoggart *et al.* 2002). Participant observation allows the researcher to develop a rich picture of the community. In doing so, it allows me

[the researcher] to familiarise myself with the conditions and context of that community, so helping to make the use of other, more impersonal research methods more effective. Devine and Heath (1999: 24-34) argued that "*participant observation means playing a role, devoting energies to maintaining the pretence that the researcher is not really researching but in fact working, visiting, and living there*". Accordingly, in this study I lived in Hatherleigh for approximately two months, immersing myself in the community. Participant observation was doubly important for me as I am from Syria (see also snowballing technique section 4.4.2), and so this process helped me to familiarise myself with life in a rural community in the UK.

Data collection started from the day of arrival, using a diary (see Figure 4.7) to record observations. The format of the record was adjusted to ensure that: "*inferences and personal observations, reflections, hunches, and emotional reactions of the field researcher [were] recorded separately from the stream of field notes that [described] the event or situation*" (Schensul et al. 1999: 115-116).

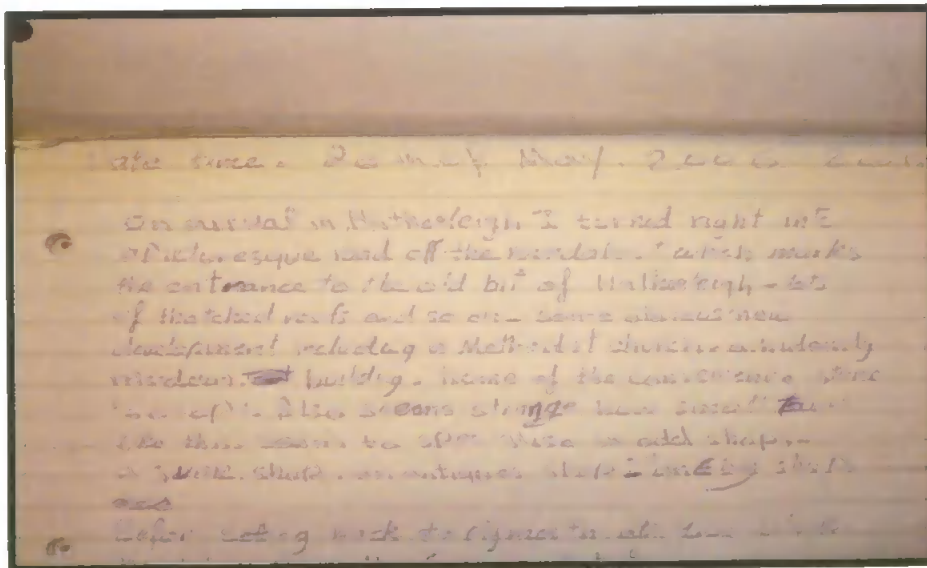


Figure 4.7: Sample of the research diary (Source: Author)

4.4.2 The snowballing method

The snowballing method is an important method which complements and facilitates the use of other methods in the research. Valentine (2005:117), for example, argued that the snowballing method *“describes using one contact to help you recruit another contact, who in turn can put you in touch with someone else. The initial contact may be a friend, relative, neighbour, or someone from a social group of formal of organisation”*. As the term implies, through this method, recruiting gains momentum or ‘snowballs’ as the researcher builds up layers of contacts (see Figure 4.8). For example Donovan (1988), a white researcher, described how she used black friends to help her get an introduction to Afro-Caribbean groups in the UK. She was then able to snowball further using one informant to introduce her to another.

In studies where the researcher is foreign and may have different ethnic background (as is the case with this study), some difficulties can be faced, particularly that of approaching potential informants. Snowballing may be considered one the best approaches in these cases (Flowerdew and Martin 2005; Valentine 2005). Valentine (2005) outlined that the advantages of this technique. First, it helps the researcher to overcome one of the main barriers to recruiting interviewees, gaining their trust. Second, it allows the researcher to seek out more easily interviewees with particular experiences or backgrounds. However, snowballing – where respondents tell the researcher about others they know with the same specified characteristics – has disadvantages. As potential respondents often know each other, the disadvantage with snowballing is that a contact network created using this method alone may be prone to bias (Valentine 2005).

This is because those who know each other may have similar behaviours and attitudes or may influence each other in relation to the research. Those that are missed may have quite different characteristics. As a result, the sample or the contact network may not be particularly diverse and important phenomena may be missed. In this context, the main recommendation when starting the snowballing method is to use more than one initial contact point to recruit interviewees in order to obtain people with different views and backgrounds. This will also help to maintain the confidentiality of each interviewee (Bryman 2001; Valentine 2005).

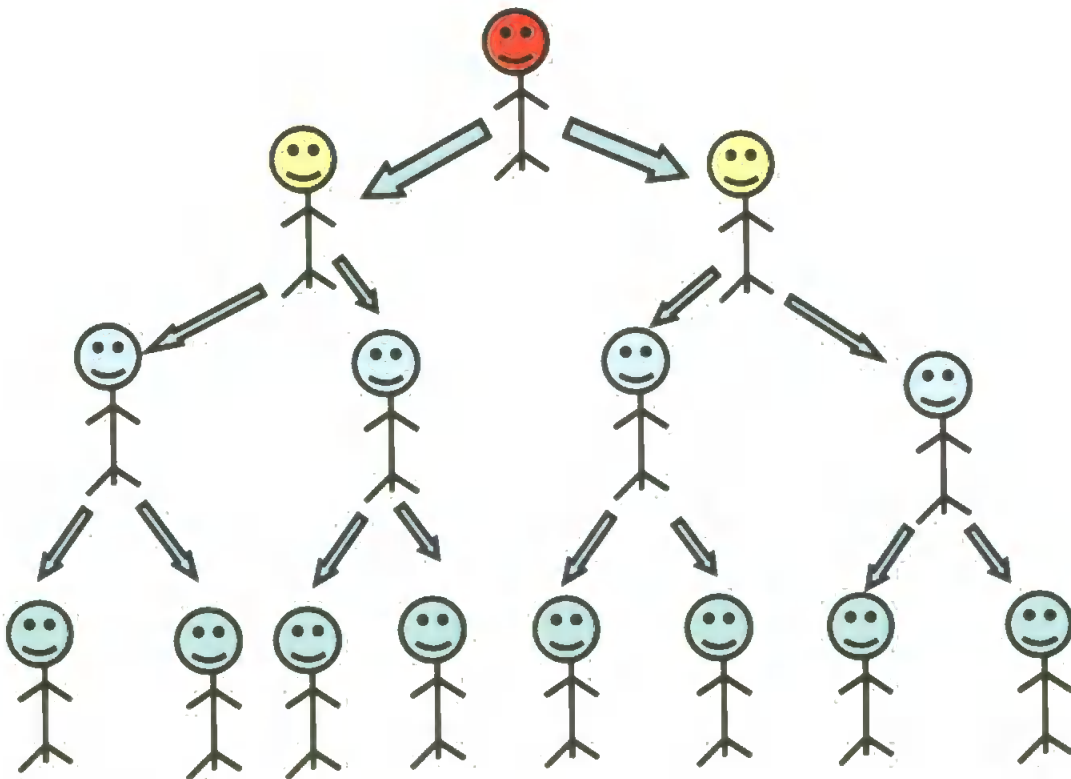


Figure 4.8: The snowballing method (Source: adapted from Flowerdew and Martin 2005)

In light of the above, a 'snowballing' technique was adopted. It is very important to mention here that the use of this method was not as a sampling technique for recruiting interviewees. I used the snowballing method in this research as a

complementary technique that helped me alongside participant observation in first, access the study area and familiarise myself with English rural life and, secondly, familiarise Hatherleigh residents with myself and my research. This process had particular advantages given that I am of Syrian nationality and female, helping to compensate for cultural differences and unfamiliarity, and to gain the trust of residents. It was also useful in identifying key stakeholders and informants for later stages of the study (see Sections 4.4.3, 4.4.4, and 4.4.5). Before starting the study I knew one person who had previously lived and worked in Hatherleigh for ten years as a clergyman; this person made introductions to current residents of the town. Those people were the first individuals I met in the town, and they were very helpful in finding accommodation, introducing me to a large number of people, and taking me sightseeing in Hatherleigh. Subsequently I used the snowballing method through interviewing¹² these initial contacts, then using information from that interview to make further contacts and build the network of participants.

4.4.3 Getting access to Hatherleigh: a Syrian researcher's experience

Table 4.8 provides specific details on how the above processes were used and implemented during my initial stay in the town.

I lived in Hatherleigh for approximately two months between 3rd July and 31st August 2006.

¹² These interviews were mainly informal and only for building a social network.

Date	Events
20 th May 2006	Visited Hatherleigh for the first time. Explore the area by walking around. Had lunch in the Hatherleigh restaurant and had conversation with people there about the town in general.
13 th June 2006	Visited the Tuesday market in Hatherleigh for more impressions of the town.
16 th - 17 th June 2006	Arrived in Hatherleigh for a two-day visit. Spent night in George Hotel. Got myself more familiar with the area. Attempted to find long-time accommodation by leaving small posters in the two restaurants.
18 th June 2006	In Plymouth, I was at church on Sunday morning when John the Vicar told me about his previous living and working experiences in Hatherleigh and offered help. Later that day John phoned me saying that his couple of friends who live in Hatherleigh were happy to help me in my research and gave me their contact number. I called the couple for thanking them and introduced myself. I also provided a brief introduction about my research which left them interested.
3 rd July 2006	Moved to Hatherleigh for a long stay. Met my first contacts in Hatherleigh, the couple Chris and Jane and their family (two boys and one daughter). Long stay accommodation was arranged. Tour of Hatherleigh and sightseeing with Chris. Introduced myself to people as a student doing research on the internet.
3 rd - 15 th July 2006	I started to get more familiar with people and place. My main task was to get myself more recognised by people: going to church visit, reading in the park, attending Tuesday and Sunday markets.
16 th - 31 st July 2006	I got more confidence at this stage. I met the Hatherleigh Community website editor and shared interest in the internet. I met the man who runs an eBay business through a little shop in the town. I met the Hatherleigh Councillor.
1 st - 31 st August	I started talking more about internet, for example, how/why people use or do not use the internet? I told people about the questionnaire survey. I announced that I am going to distribute and collect the questionnaire by myself.

Table 4.8: Some dates from the research diary (Source: Author)

I needed to become part of the town to understand the context of the town 'from the inside', to understand various local powers and exclusions in the community, and, more importantly, to get myself recognised by community members for further research steps – questionnaires and interviews. It was also crucial to embed myself in the town so I could connect with people who might find it hard to trust a stranger at first, particularly old people. This was essential for obtaining a high response rate for subsequent procedures.

As a participant observer, my initial research status was somewhere between overt and covert participant, and the extent to which people were aware of my research objectives varied between people and over the course of the research process. My main research tool was my research diary, in which detailed entries were made each day (see above). At first this included very broad and general information, for example the opening times of the local restaurants. As my relationships in the field became more defined, field notes began to take on a more specific character, as detailed 'stories' began to emerge, and interesting conversations were recorded as soon afterwards as possible. Keeping a research diary proved to be extremely useful in helping me to follow my first network and to inform my position with respect to later relationships in the field. As a whole, the participant observation approach and consequent embedding in the community had a positive role on the questionnaire response rate and facilitated the contributions to questionnaires (see Section 4.4.4).

Table 4.8 (above) shows some key dates from my diary that illustrate the field work schedule. When I first moved to Hatherleigh I was aware that gaining access to people relies on interpersonal resources and strategies (Flowerdew and Martin

2005). Although I had used a snowballing technique to build up my first network in the town (see Section 4.4.2), I did not want this 'good network' to dictate too strongly the 'who' and 'where' of my new contacts in the field. Choosing somewhere to live was fundamental to my research status in the field. On a visit to Hatherleigh prior to my moving there, Chris and Jane, my first contacts in the town (see Figure 4.9), said to me:

"you can always stay here with us, there should be a room free for a long time up there" to which I spontaneously replied something like *'sounds ideal, but I have got lots of papers, laptop and things to bring down here and because I will be down here for two months or more, I need my own place really, but many thanks for the offer'* (Diary, July 3 2006).

Luckily, Chris knew a young woman, Mary, who lived in a small cottage by herself and she kindly offered me a room for two months. She was not from Hatherleigh, but had moved down from London fifteen months previously. As she said, her reason was that she was *"fed up from the noise up there, and I found peace here"* (Diary, July 10th 2006). The room was big and well furnished; the cottage was in the old town just opposite an old church with a very old clock whose bell rang every 15 minutes. It was important living with this lady, because the more people I knew, the more contacts I had and the more visible I became. Chris and Jane with their family (two sons are aged 21, 24 and one daughter who is 16) helped to build up my network: each one introduced me to his/her friends, and introduced me as a PhD student doing research in Hatherleigh about the internet. Also, my 'snowballing network' got bigger by having a good relationship with Mary who was happy to introduce me to her friends. I did form quite strong friendships with some residents in Hatherleigh and in many respects I started enjoying staying there and

doing my field work. However, I felt that maintaining a neutral position was essential to relationships in the field and subsequently the validity of study.



Figure 4.9: Photos from the participant observation diary in Hatherleigh

(Source: Author)

As far as I am aware, I managed on the whole to be on good terms with everyone. To maintain such a stance I did nonetheless need to take on several positions and act in certain ways with different people. There were many people I got on with, for example, who were not internet users, and who did not find my research very interesting. The following shows how I developed relationships in the field.

Initially my first contacts in Hatherleigh were with those who are friends to Chris and Jane and family and to Mary; these included people who had an interest in the internet in general and in my research in particular, and those who had some curiosity about my home country of Syria.

In the first two weeks of my living there, I was introduced to a very large number of people. The summer time helped in different ways. First, my initial contact 'Chris' (he is retired) and I got the chance to go every day for a walk in the lovely sunshine and meet others afterwards for a tea. Second, my first contact's daughter was on holiday, so we spent lots of time as well with her friends. It was a good opportunity for me to meet different people from different generations and talk about different subjects and gain initial insights into attitudes they held with regard to the internet. Also in order to make myself well-recognised in the town, I planned to have lunch and dinner alternating between the two Hatherleigh restaurants, avoiding heavily depending on either one of them. Sitting at the bar and starting a conversation with the barman or woman by asking for example "do you have internet access in the restaurant?" helped me to proceed to 'deeper' chat about the town. It was in the later weeks that I particularly began to recognise the benefits of living temporarily in Hatherleigh. People in the town started saying "Hello, how is your research going?". Old grannies for example started talking to

me in the Park – for example, “who/how are you?” or “do you like Hatherleigh?”
Meanwhile, that built more confidence in myself and greatly benefited me.

Furthermore, the technique used in questionnaires distribution helped me to continue my observations during data collection (see Section 4.4.4). Knocking on doors and having little conversations¹³ about the internet in general gave me rich opportunities to observe initial reactions of survey respondents.

4.4.4 Questionnaire Survey

The questionnaire is a widely used method in the social sciences for collecting data (Brace 2004; Flowerdew and Martin 2005; Parfitt 2005; Robson 2007). The questionnaire is a fundamental tool when data are required about people, their behaviour, attitudes and opinions and their awareness of specific issues (Parfitt 2005; Flowerdew and Martin 2005).

Oppenheim (2001) argued that it is possible to distinguish between two main types of questionnaire surveys: descriptive and analytical. A descriptive questionnaire is commonly conducted in large scale surveys, such as those carried out by national institutions which are mainly concerned with counting numbers of people in particular categories and with particular characteristics. An analytical questionnaire meanwhile, is more concerned with explanations and causality especially in exploring the more difficult ‘why’ questions and is, therefore, more frequently adopted by academic researchers. Advantages and disadvantages of using questionnaires in the social sciences have been summarised in Table 4.9.

¹³ The conversations lasted between 10 minutes to 30 minutes, and sometimes the researcher was invited for a cup of tea for a longer talk.

However, there are different types of questionnaires used by researchers in the social sciences (Bryman and Burgess 1994; Hoggart *et al.* 2002): the personal questionnaire, the intercept questionnaire, the postal questionnaire, the telephone questionnaire and the on-line questionnaire (Gray and Guppy 1994).

Advantages	Disadvantages
<ul style="list-style-type: none"> • Questionnaires are less expensive than other methods. • They produce quick results. • They can be completed at the respondent's convenience. • They offer greater assurance of anonymity. • They offer less opportunity for bias or errors caused by the presence or attitudes of the interviewer. • They are a stable consistent and uniform measure, free of variation. • They offer a considered and objective view of the issue, since respondents can consult their document and since many subjects prefer to write rather than talk about certain issues. • The use of questionnaires allows a wider coverage, since researchers can approach respondents more easily than other methods. • They are not affected by problems of 'non-contacts'. 	<ul style="list-style-type: none"> • Questionnaires do not allow probing, prompting and clarification of questions. • They do not provide opportunities for motivating the respondent to participate in the survey or to answer the questions. • The identity of the respondent and the conditions and which the questionnaire is answered are not known (researcher are not sure whether the right [person has answered the questions). • It is not possible to check whether the question order – where required- was followed. • Questionnaires do not provide an opportunity to collect additional information while they are being completed. • Due to lack of supervision partial response is quite possible.

Table 4.9: Advantages and disadvantages of using questionnaires
(Source: Sarantakos 2005)

Hoggart *et al.* (2002: 175) argued that “*different procedures for surveys create differential distances between researcher and respondent*”. The personal questionnaire, for instance, involves less distance than the postal questionnaire.

Further, questionnaire surveys can be written or oral (Hoggart *et al.* 2002). In the written version (e.g. a postal questionnaire), similar questions but more impersonal ones may be asked, and there is no conversation between the researcher and the respondent. In oral (personal or telephone) questionnaires, on the other hand, the researcher interviews the respondent verbally according to a pre-designed and structured set of questions (Flowerdew and Martin 2005; Hoggart *et al.* 2002). However, researchers have to decide which type of survey to conduct, regarding the nature of their study and other considerations such as cost, time, and social interaction implications.

As Lovelock *et al.* (1976: 363) pointed out, "*personal delivery and collection of self-administered questionnaires appears to be a particularly appropriate method in social science questionnaires*". Detailed surveys of participants' attitudes and behaviour patterns are especially likely to be in this category. In this context, Lovelock *et al.* (1976) highlighted the main disadvantages and advantages of personal delivery questionnaire.

Disadvantages:

- High cost (e.g. travel, accommodation, and catering cost).
- Time consuming.
- Personal visit may be regarded as threatening and may serve to discourage participation.
- It may be possible to ascertain the nature of the bias resulting from refusal.

Advantages

- Very high response rate.

- Such surveys have greater control over the sample design.
- It encompasses complete, and up-to-date identification of participants' geographical locations.
- It provides useful insights into aspects such as respondent characteristics, attitudes toward the survey, and reasons for non-participation.

In light of the above, personal delivery and collection of a self-administered questionnaire was employed in this study to provide quantifiable data with regard to socio-economic background, attitudes, and behaviour of participants with regard to the internet (see also section on sampling strategy below).

4.4.4.1 Questionnaire structure

Questions included in a questionnaire can be asked and data recorded in different ways. Oppenheim (2001) for example, suggested that questions included in a questionnaire are either open or closed. Closed questions are usually designed in a way that the respondents have the choice of alternative answers. Questions of this type may offer simple alternatives such as 'yes' and 'no', or a choice of category of age groups in which the respondents are asked to tick or underline their chosen answers. Open questions, however, do not constrain the choice of answer, and the respondents are asked to respond using their own words in full. Broadly speaking, most questionnaires used in the social sciences include a mixture of both open and closed questions. The relative advantages of the two are shown in Table 4.10.

Flowerdew and Martin (2005) argued that questionnaire data can be broadly divided into three main types: the first type *classifies* people, their circumstances

and their environment. Examples of these data are: age of respondent, gender, employment, and households types. The second type of data is related to the *behaviour* of people: for instance, how often do they use the internet for specified purposes, or how do they find out about information and services in their local area.

Type of questions	Advantages	Disadvantages
Open questions	Freedom and spontaneity of answers. Useful for testing hypotheses about ideas or awareness.	Time consuming. In interviews: costly of interviewer time. Coding: very costly and slow to process, and may be unreliable. Demands more effort from respondents.
Closed questions	Require little time. No extended writing. Low cost. Easy to process. Make group comparison easy. Useful for testing specific hypotheses. Less interviewer training needed.	Loss of spontaneous responses. Bias in answer categories. Sometimes too crude. May irritate respondents.

Table 4.10: advantages and disadvantages of open and closed questions
(Source: Oppenheim 2001)

The third type of data is related to people's *attitudes, opinions and beliefs*: this type of data is the most difficult to collect because of the nature of attitude questions which are vulnerable to biased responses depending on how they are asked, and the respondent's tendency to want to please the interviewer.

In the context of the present study, the questionnaire (see Appendix 1) was designed to include different types of questions related to the objectives of the study. As well as identifying patterns of computer and internet use within each household surveyed, the questionnaire elicited opinions on the degree to which

ICT offer opportunities for growth and empowerment, and on the interlinkages between ICTs and e-governance processes in Hatherleigh. Taking into consideration internet non-users as well as internet users, two separate questionnaires were designed: questionnaire (A) for internet users and questionnaire (B) for internet non-users (see Appendix 1). Each questionnaire was divided into several sections covering different areas of investigation.

The internet user questionnaire (A) concentrated on the following topics:

- Socio-economic background of respondent; geography of internet use;
- Questions about the reasons for using internet: gaining information about social change in rural area arising from internet; respondents' satisfaction with websites in general;
- Question about Hatherleigh Community Website, use and satisfaction which might help to investigate how the website contributes to the community of Hatherleigh;
- Questions about respondents' agreement or disagreement with statements that reflect rural perception of internet as a tool to help overcoming distance disadvantages of rural areas;
- Questions about use of internet to access government websites and their satisfaction with government websites;

Non-users questionnaire (B)

- Socio-economic background of respondent;
- Questions about their reasons for not using the internet;

Before the actual survey was undertaken, a pilot study of questions to be posed to the residents was undertaken. As Walliman (2001) found, pilot studies are useful in preventing inappropriate questions to arise or confusion amongst the participants to accrue. A similar strategy was pursued in this study and 20 participants from various age groups, gender categories and locations were contacted and tested upon. Seven respondents were internet non-users, and these did not result in any changes in the questions and could, therefore, be included in the main sample. Thirteen respondents were internet users: in this case certain questions were adjusted to improve language and clarity and these respondents were excluded from the main sample.

4.4.4.2 Sampling strategy

Data collection using a questionnaire survey usually involves sampling from a population rather than contacting all members of the population. Sarantakos (2005) argued that sampling methods can be classified as either probability or non-probability. Probability sampling is a procedure in which the selection of respondents is guided by the probability principle, according to which every unit of the target population has an equal calculable and non-zero probability of being included in the sample. Probability sampling includes:

- *Simple random sample*: each member of the target population has the same chance of being selected for participation in the study, which is ideal for statistical purposes. Disadvantages are that such samples are hard to achieve in practice, require an accurate list of the whole population, and are expensive to conduct as those sampled may be scattered over a wide area.

- *Systematic sampling*: this is a random sample with a system. From the sampling frame, a starting point is chosen at random, and thereafter further respondents at regular intervals. Its advantages are that it spreads the sample more evenly over the population, and it is easier to conduct than a simple random sample. On the other hand, the system may interact with some hidden pattern in the population, e.g. every third house along the street might be the middle one of a terrace of three.
- *Stratified sampling*: an approach in which the population has been classified into 'strata' or subgroups and then a random sample is pulled from each subgroup.

In non-probability sampling, respondents are chosen from the population in a non-random manner. Generally, non-probability sampling is used in three situations: hard-to-find groups, surveys of specific groups, and surveys in pilot work.

Examples include:

- *Convenience sampling* is used in exploratory research where the researcher is interested in getting an inexpensive approximation of the truth. As the name implies, the sample is selected because they are convenient. This non-probability sampling is often used during preliminary research efforts to get a gross estimate of the results without incurring the cost required to select a random sample.
- *Snowball sampling*. In snowball sampling the researcher begins by identifying someone who meets the criteria for inclusion in his/ her study. The researcher then asks respondents to recommend others who may also meet the criteria (see also discussion above). Although this method would hardly lead to

representative samples, there are times when it may be the best available. This sampling is especially useful when trying to reach populations that are inaccessible or hard to find.

- *Quota sampling* is the non-probability equivalent of stratified sampling. Like stratified sampling, the researcher first identifies the strata and their proportions as they are represented in the population. Although it is quick and cheap, it is not as representative of the population.

In this study, to ensure comprehensive coverage of all parts of the community, *systematic sampling* was used. Questionnaires were delivered to every second household in Hatherleigh, mainly during afternoon or evening hours, to ensure availability of at least one family member who could receive the questionnaire in person. I briefly described the survey, obtained the family member's cooperation and arranged a return visit in two days' time for the collection of the completed questionnaires. If the questionnaires were not completed by this time I had to make a third visit (sometimes four or five or even ten visits) two days later again. Each household contact had to fill in a simple form¹⁴ (see Figure 4.10) – this form was the cover page of the questionnaire – which in turn stayed with me as an important record of the questionnaire collection. I adopted some small technical procedures that facilitated the field work. I asked the person designated to participate in the research to leave the questionnaire outside the door if they were not at home, and in order to protect the copies, each household was provided with

¹⁴ This form had to be filled in by the researcher by building on information provided by the household member who opened the door. It is worth mentioning that most people in Hatherleigh were expecting me to visit for questionnaire work (see above), especially as I had provided initial information while living in the town that questionnaire distribution would be part of the study and that it had nothing to do with commercial business – an issue that many people were most concerned about.

a good quality plastic file (see Figure 4.11), which saved the questionnaire from rain or wind, etc. Meanwhile, if the respondent forgot to leave the questionnaire outside or they were not at home, or even if they forgot to do them all, a new collection date was provided by leaving a letter in the post.

Information communication technology (ICT) in the rural community

Hatherleigh case study

1. Could you please specify in the table below the number of people who live in your house indicating their age, gender, and if they are users or non-users of the internet?

	12-19		20-29		30-39		40-49		50-59		60-69		70+	
	User	Non-user	User	Non-user	User	Non-user	User	Non-user	User	Non-user	User	Non-user	User	Non-user
Female														
Male														

2. What is your household type? (please tick whichever applies)

- Childless couple
- Single parent
- Single adult
- Cohabiting
- Nuclear family
- Other

3. Do you use the internet (at home or elsewhere)?

- Yes
- No

If **YES**, please go to questionnaire **A**
 If **NO**, please go to questionnaire **B**

Figure 4.10: The cover page of the questionnaire (Source: Author)



Figure 4.11: Afraa (researcher) in Hatherleigh collecting the questionnaire which was placed in provided plastic files (Source: Author)

To make the work easy and avoid any geographical and socio-economic bias, Hatherleigh was divided into four districts (Figure 4.12); each one contained a certain number of roads and streets. Questionnaire distribution started first with District 1, but to make the work easy I would not move from one street to another within a district until I had completed all questionnaire delivery and collection. After ensuring the completion of the distribution and the collection of all the questionnaires, I moved to District (2), then (3) and (4).

For the actual survey, questionnaires were delivered to every second household in the town (164 in all), including each household member over 12 years old as a respondent receiving a questionnaire, whether users or non-users of the internet (during my participant observation I had found that young people mainly use the internet for fun and games and they have less experience of government websites).



Figure 4.12: Satellite image of Hatherleigh streets showing four districts identified by the researcher (Source: Google)

328 questionnaires were distributed and 100% usable responses were collected. This response rate reflected the interest of Hatherleigh people in the research subject right from the beginning. Hatherleigh is a very small town: adopting participant observation in this research, living in the town and embedding myself in the community along with the importance of personal contacts (see above) built a trust between me and Hatherleigh residents. Personal delivery and collection of questionnaires, as well as my approach of providing plastic files and arranging many visits, were also key factors. During the questionnaire distribution, Hatherleigh residents started calling me 'the internet girl'. Distribution and collection of the questionnaires took nine months, starting in January 2007 and finishing in September 2007.

Six months after data collection, thirty respondents were selected from the sample to be interviewed.

4.4.5 Interviews

An interview is another important source of information used to complement both participant observation and questionnaire data. A personal interview involves a face-to-face, interpersonal role situation in which an interviewer asks interviewees questions designed to elicit answers pertinent to research hypotheses (Nachmias and Frankfort-Nachmias 2007). An interview may be structured or non-structured. Alternatively, an interview may combine both of these approaches (semi-structured), depending on the purpose of the study. For example, a researcher may use the structured interview for most questions but rely on the non-structured format for questions that are particularly sensitive (Frankfort-Nachmias and Nachmias 1996: 237). The personal interview method has advantages and disadvantages (See Frankfort-Nachmias and Nachmias 1996; Hoggart *et al.* 2002; De Vaus 2002; Patton 2002; Sarantakos 2005; Easterby-Smith *et al.* 2002):

Advantages:

- Flexibility in questioning process. Interviews can range from highly structured to non-structured depending on the research problem under examination. The interviewer can clarify questions and probe for additional information.
- Easy administration: interviews do not require respondents to have the ability to read or to handle complex documents or long questionnaires.

- Less tedium: less patience and motivation is required than in other methods. Interviews require 'participation', not just 'response'. Participation involves the researcher to interact with respondents to complete the interview. Hence, interviewing is often perceived as an obliging endeavour rather than a one-sided exercise.
- Opportunity to observe non-verbal behaviour: such opportunities are obviously not available when questionnaires or indirect methods are used.
- Capacity for correcting misunderstandings by respondents: such an option is very important and not available in other forms of data collection, such as questionnaires.
- Opportunity to record spontaneous answers: the respondent does not have as much time available to answer questions when questionnaires are employed; when spontaneity is important, interviews offer a real advantage over other methods.
- Completeness: the fact that the interviewer presents the questions guarantees that all questions will be attempted and the interview will be complete.
- Control of the interview situation: interviewers determine who answers questions, where the interview is conducted and the order in which questions are answered.
- High response rate: interviewing attracts a relatively high response rate.
- Fuller information: interviewers are able to collect supplementary information from respondents. Personal characteristics and their environment can aid the researcher in interpreting the results.

Disadvantages:

- Higher cost: interviews are more costly and time consuming than some other methods such as questionnaires, especially when respondents are widely dispersed geographically.
- Interviewer bias: innate characteristics of interviewers and differences in interviewer techniques may affect respondents' answers.
- Lack of anonymity: the presence of the interviewer may make the respondent feel threatened or intimidated.
- Sensitivity: it is less suitable than other methods when sensitive issues are discussed. For example, many people prefer to write about sensitive issues rather than to talk about them.

In an exploratory study, in-depth semi-structured interviews can be very helpful to *"find out what is happening [and] to seek new insights"* (Robson 1993:42). Semi-structured interviews can be prepared ahead of time with lists of questions and topics that need to be covered during the conversation. It helps to develop a keen understanding of the topic of interest necessary for developing relevant and meaningful conclusions. Questions tend to be open-ended and express little control over interviewees' responses. Also, the semi-structured interview is a useful method for developing an understanding of an as-of-yet not fully understood or appreciated behaviour, experience, or setting (for example why BT does not connect some rural areas to broadband).

In this study, in-depth semi-structured interviews were conducted, firstly, with a sub-set of questionnaire respondents; secondly with key stakeholders involved

with ICT in Devon. The semi-structured interviews with internet non-users focussed on topics related to the internet in general, as well as trying to get more information about questions they answered in the questionnaire. The main focus for the internet users' interviews, on the other hand, was to gain additional insight and information from respondents with regard to different purposes of internet use, detailed information about e-governance processes, information/services delivery and interaction between citizens and policy stakeholders (see Table 4.7).

In-depth interviews with key stakeholders involved with ICT in Devon varied from one stakeholder to another (see Table 4.9 below), designed to give insight into the relationship between ICT, potential improvements in information and service delivery to rural citizens, and interaction between rural citizens and stakeholders. They also helped to identify institutional problems that might affect this interaction.

4.4.6 Interviewee selection

In order to ensure adequate coverage of internet users and non-users in this study and to gain more detail for internet non-users, 10 internet non-users were chosen randomly to be interviewed and 20 internet users (see Table 4.11 below). Interviews were conducted in March and April 2008.

Snowballing was used to identify key stakeholders (local and regional) for interview (see below). Nine key stakeholders were contacted by e-mail, and seven accepted the invitation and were interviewed. Four of them were local policy stakeholders and the rest were regional policy stakeholders (Table 4.12). Stakeholder interviews were carried out in September and October 2008.

<i>Description of the interviews group</i>	<i>interviewees</i>	<i>Interview focus</i>
<i>Internet users</i>	20 interviewees	<ul style="list-style-type: none"> • Individual understanding of whether internet improves information/service delivery for Hatherleigh residents • Does the internet improve the interaction between rural people in Hatherleigh with stakeholders (i.e. local or regional, national)?
<i>Internet non-users</i>	10 interviewees	<ul style="list-style-type: none"> • Discuss topics that were important in the questionnaire for not using the internet. • Discuss whether help was provided to internet non-users, for example someone purchasing an item or finding information in the web on their behalf.

Table 4.11: Key discussion topics with interviewees (Source: Author)

<i>Description of stakeholder group</i>	<i>Interviewees</i>	<i>Interview focus</i>
<i>Local policy stakeholders</i>	Vice-Chair of the Hatherleigh Area Project (HAP)	Discuss internet use by the institution
	Hatherleigh Local Councillor (HLC)	Local councillor's understanding of the internet in respect to governance processes
	Hatherleigh website's editor	Discuss issues of Hatherleigh Community Website (HCW) such as its role in the community
	Chairman of Hatherleigh Area business forum (HABF)	Internet use by the institution
<i>Regional policy stakeholders</i>	Chief Executive of the Community Council of Devon (CCD)	Internet role for the institution's work (includes internet role in information delivery to rural people and interaction with rural people)
	Head of Regional ICT for the South West Regional Development Agency (SWRDA)	The state of internet in the South West of England in general and in Devon in particular
	Client Director of South West Government Services (SWGS) for BT	Discuss why BT doesn't connect all rural areas to the internet

Table 4.12: Key stakeholder interviewees and key topics of discussion (Source: Author)

All interviews were digitally recorded and transcribed afterwards (see Appendix 2 showing example of one transcript), giving me a chance to get rich qualitative quotes and data.

4.5 Secondary sources

The data collection methods discussed so far are concerned with generating primary data. Secondary data, meanwhile, is data which already exists. Examples of sources of secondary data include:

- books, articles in journals, magazines and newspapers (e.g. local newspaper, 'Parish Pump' newsletter);
- web pages (e.g. Hatherleigh Community Website, World Internet States);
- Archival data, media, and published statistics (e.g. census, Office of National Statistics);
- companies' annual reports (e.g. Ofcom; OxIS)
- organisations' internal records (e.g. Devon Community Council record).

Increasingly, social scientists are making use of data previously collected by other investigators, usually for purposes that differ from their own research objectives. For example, social scientists have used census data collected by government for administrative and public policy purposes, to investigate, for example, the structures of households, income distribution and redistribution, immigration and migration patterns, changes in family composition, occupational structures, social mobility, and attributes of rural, urban, and metropolitan areas (Nachmias and Frankfort-Nachmias 2007). In the UK, data collected by DEFRA, the Office of National Statistics, and other national research organisations have been used to

study a variety of issues (for example, in rural studies and environmental researches).

Frankfort-Nachmias and Nachmias (1996) pointed out several advantages of secondary data. First, if reliable and accurate it provides opportunities for replication. A research finding gains more credibility if it appears in a number of studies. Rather than conduct several studies personally, a researcher can use data collected by others in addition to his/her own. Second, the availability of data over time enables the researcher to employ longitudinal research designs. One can find baseline measurements in studies conducted decades ago and locate similar data collected more recently. Indeed, when researchers compare their primary data with those collected in earlier studies, they essentially conduct a follow-up to the original research. Third, it is considerably cheaper to use existing data rather than to collect new data.

Like other data collection methods, secondary data have some disadvantages. Frankfort-Nachmias and Nachmias (1996), among others (Sarantakos 2005; Easterby-Smith *et al.* 2002), highlighted these disadvantages. Firstly, perhaps the most serious problem in using secondary data is that often they only approximate the kind of data that the investigator would like to employ for testing hypotheses. A second problem is to access such data. Although many studies (e.g. newspapers, media sources) are available in data archives, it may be difficult to find the ones with the variables of interest. A third problem may emerge if the researcher has insufficient information about how the data was collected (Frankfort-Nachmias and Nachmias 1996; Hoggart *et al.* 2002; Easterby-Smith *et al.* 2002; Punch 2005; Nachmias and Frankfort-Nachmias 2007).

In the context of this study, secondary data provided an important source of information and were used to complement other forms of data collection. For example, census data information was important to track the socio-economic diversity in Hatherleigh. Office of National Statistics data was used to investigate the geography of internet access in the UK (see Chapter 3). In terms of responses of internet use in Hatherleigh, information from the Hatherleigh Community website (e.g. access to website, electronic news, business events and activities) was used to investigate how the internet affects activities in general and the town in particular. Newsletters (the 'Parish Pump'), local newspapers, leaflets, and posters (see Figure 4.13) were also used.

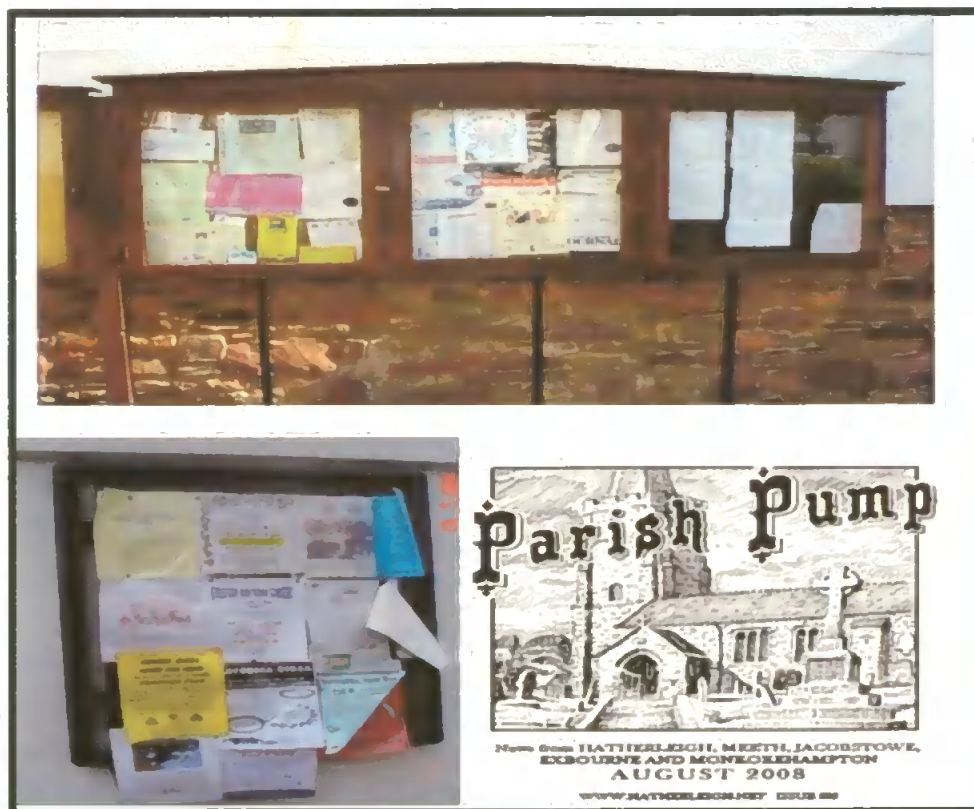


Figure 4.13: the Hatherleigh posters and the parish pump
(Source: Author)

4.6 Some lessons learned

Being a Syrian researcher coming to a Western country was a big learning challenge in my life. Coming to the UK with limited English skills, limited understanding of what research means, limited experience of social research, from a different cultural background, and as a non-geographer doing a PhD in a geography department, only my ambition was substantial. Although I learned a great deal about doing research and qualitative and quantitative inquiry while engaged in my PhD study, writing this narrative consolidated and extended that learning.

Being a countryside girl and having studied agricultural engineering and rural economy for five years in my undergraduate study built up my interest in rural issues. So when I was offered a PhD scholarship, doing a PhD in the UK was a key choice. Working in Hatherleigh with rural people was an unforgettable experience for me. At times I felt so nervous about taking the decision to conduct my research in a rural area in the UK, but I loved doing this work, which is why I became so involved in it. According to Watt (2007:82) it "*is reasonable to expect new researchers to feel some trepidation at the onset of a first study*". However, I concur with Wolcott (1995) who asserted that the rewards make it worth the effort. Reflecting on my first research effort strengthened my conviction, for I gained confidence in my ability to overcome the demands my research required. Moreover, Valentine (2005:113) explained that when a researcher is thinking about qualitative research "*it is important to reflect on who you are and how your own identity will shape the interactions that you have with others*". That in turn was described as recognising the researcher's positionality and being reflexive

(Valentine 2005). Furthermore, Schoenberger (1992) suggested that issues such as gender, nationality, race, history and experiences might affect the relationships between the researcher and the researched. In this way, I was aware that my positioning as a stranger, a 'Syrian' and a female would affect my research in some way.

What surprises me most about this experience is how positively people in Hatherleigh reacted to my research and to me as a stranger doing research in their community. When I approached people there with my research idea about internet on-line services, and their community website, they readily agreed to participate through questionnaire or interview. On the one hand, they thought that I would provide a good learning experience for them. When I spoke to Chris and Jane, my first contacts, they were enthusiastic and so were lots of people including the older residents. For example, I knew a couple who were not internet users who I met in the first three weeks of my living in Hatherleigh: a month later when I was passing where they live the wife shouted from the second floor window calling me to come into their house. Excitingly she guided me up-stairs without saying a word, and waited to see my reaction when I saw their new computer. There was her husband sitting next to their new PC which was also connected to the internet. Although their experiences at that time did not go beyond switching on and off the computer, she said very happily "*you see we have a computer and internet now, we paid our neighbour's son to have it installed ... we are internet non-users no more*" (Diary, 28th July 2006). Being female and a foreigner may have also affected the decision of people in Hatherleigh to participate in the research

positively, contradicting the opinion of Tim May (1998) who argued that the 'stranger as researcher' is at risk to be confined to his/her social group of study.

People in Hatherleigh, nonetheless, thought me brave to carry on my research in the UK and had the chance to meet my family and my son in particular who joined me lots of times during the research. Consequently, people in Hatherleigh were so supportive to my research and felt a kind of obligation to fill in my questionnaire, and sometimes to participate in a further interview. For example, I received a phone call from an old couple in Hatherleigh who participated in the questionnaire, informing me that they are moving house and providing me with their new address for my information if I needed them for a forthcoming interview. There are lots of other stories I could tell which reflect the support of Hatherleigh people for me as a researcher. As I finished the fieldwork in Hatherleigh, I realised how much this experience affected my understanding of doing research, and secondly and most important for me, how rural people in the UK perceived my research interest in the internet which will help me in future research on the same subject in rural areas of Syria (see also Chapter 9).

4.7 Conclusions

This chapter discussed and explained the research methodology used in this study. It provided first a review about the methodological approach in social science, illustrating the value of combining quantitative and qualitative methods. The importance of the spatial scale issue and justification for the selection of local-national scale for analysing the e-governance process was addressed. This chapter also identified the case study approach as a key research methodological

step for the research addressed in this thesis. The rationale for selecting Hatherleigh as a study area was presented. Four research methods used to collect data and analyse the impacts of ICT availability and use for e-governance processes in rural area of Hatherleigh were outlined: participant observation, questionnaire, interview and secondary data sources. Selection of interview subjects was also explained in detail.

Having discussed and explained the methods used in this study for data collection, the following chapters (5, 6, 7 and 8) present the data resulting from the application of these methods, and its analysis.

Chapter 5: ICT access and use in Hatherleigh

In order to analyse the impacts of ICT upon e-governance in rural areas of the UK, Hatherleigh in West Devon will be used as a case study. Having established the methodology in Chapter 4, Chapters 5, 6, 7 and 8 will present the data analysis with regard to the aim and objectives of this thesis. Chapter 5 focuses on the first objective of this thesis, which is to examine patterns of ICT adoption in Hatherleigh and to assess the motivations underlying individual use or non-use of the internet. Chapter 6 focuses on the second objective and considers the inclusive and exclusionary aspects of internet access. It examines the impact that ICT has had on people who live in Hatherleigh and assesses the reasons why people choose not to use the internet and developing a typology to represent this.

Chapters 7 and 8 consider the third and final objective and so assess the potential contribution of ICT to e-governance processes in Hatherleigh. Specific emphasis will be placed on how residents use the internet for accessing on-line information and services and how they use the internet to engage with policy stakeholders within the locale of Hatherleigh (Chapter 7) and beyond (Chapter 8). Chapter 7 analyses whether the internet improves information delivery at the local level, i.e. the HCW and to what extent the internet improves interaction between the residents of Hatherleigh and local stakeholders. Chapter 8 assesses the interaction between residents and regional and national policy stakeholders to establish whether the internet improves the delivery of regional and national information to the residents of Hatherleigh.

5.1 Introduction

Following the call for research to pay attention to the time-space compression impacts of ICT in rural areas, different uses of internet are analysed using questionnaire data and with quotes from interviews. Castells (1996) and Graham and Marvin (1996) have asserted that ICT and its applications have reached into everyday life and changed the social landscape of people's lives and that this has prompted social change, including social exclusion. It has, however, also been argued that the time-space compression ICT offers provides positive opportunities for rural areas (Graham 1994; Castells 1996; Robertson 1992, 2003; Giddens and Griffiths 2006). These debates raise questions about the diffusion of information technology in rural areas and how rural citizens construct and perceive their use of technology in the context of rapid technological change.

In light of this, Chapter 5 addresses the first aim of this thesis which is to examine patterns of ICT adoption in Hatherleigh and to assess the motivations underlying individual use and non-use of the internet. The Chapter presents a range of data gained through participant observation, questionnaires and interviews and establishes the following:

- The circumstances by which Hatherleigh became connected to the internet;
- The motivation underling individuals' use of the internet;
- The social and economic factors which influence internet use and non-use;
- Patterns of internet access;
- Levels of satisfaction with the internet;
- Perceptions and use of the Hatherleigh Community Website

Section 5.2 describes the circumstances by which Hatherleigh first became connected to the internet. Section 5.3 then presents the socio-demographic characteristics of the sample population. Section 5.4 discusses different uses of the internet before section 5.5 considers the geography of internet access in Hatherleigh. Section 5.6 establishes how internet users have accrued their internet skills and 5.7 assesses residents' levels of satisfaction with the internet, exploring why it is valued in a rural context and suggesting how the internet is affecting aspects of society and culture in Hatherleigh. Section 5.8 focuses on the HCW, evaluating how this resource is used and valued by the local community before section 5.9 finally draws together the chapter conclusions.

The findings emphasise the importance of an internet service to the residents of Hatherleigh and highlight the role of the community in securing an internet connection. Furthermore, internet uses such as sending email, shopping, chatting on-line and working from home provided important connections which re-contextualised peoples' lives, providing evidence of internet-stimulated social change in a rural area.

5.2 ICT access and use

Chapter 3 described how data from the Office of National Statistics (2007a) showed that the South West of England was the region with the highest increase in the proportion of internet adoption of 10% between 2006 and 2007 (Table 3.2). Although there is currently no literature which explains this increase, interviews with the Head of Regional ICT for the SWRDA and the Client Director of SWGS for BT, suggest that the reasons are technological, geographical and promotional.

In respect to technological perspective, the Client Director, SWGS BT (2008) said that *"the coverage in Devon is very high 89-99% and it is high in rural Devon. What is happening is that technology is changing to provide higher bandwidth services at greater distances from the local exchange"*. Geographically, the remoteness of the South West is a strong driving factor for internet adoption and the promotion of internet services has been well received by the public. For example the Head of Regional ICT in for the SWRDA, stated that:

"I think there are two reasons for this result [South West Take-up broadband is ahead of the UK alongside London], one is the appetite for it, it is quite large because of the rurality and remoteness, most of the South West is rural, it means there is an appetite for people to connect to the wider world and it its offered by the internet so they use it. The other reason is that there is a huge amount of effort to help people take it [internet] on and use it and the result is that, they have done so and more services and types of use have become apparent, and as a result it has built on itself".

The internet was introduced to Hatherleigh in 1998 through a Devon County Council (DCC) initiative called 'IntraCom'. IntraCom was the collective name devised by the DCC policy unit for a network of community information sources¹⁵. The project was funded by DCC and the European Union (EU) through which it was linked to broader European interests about exploring the potential benefits of the internet as a public source of government information (DCC report 1996, unpublished). The IntraCom project was set up as an 'internet gateway' to information for those living in Devon and for those seeking information about Devon. The types of information they incorporated included council services, job vacancies, government benefits, tourist information and transport information and so on. According to the IntraCom project they embed local information provided by local sources including individuals, companies, businesses, council authorities,

¹⁵ The name has now changed to 'OurDevon' because it was agreed that IntraCom had little meaning whereas 'OurDevon' gave a sense of ownership.

organisations and voluntary groups into this framework (DCC IntraCom promotion pamphlet 1998, unpublished). The strategy involved providing internet access points in local communities throughout Devon and encouraging communities to self-manage these.

Through the IntraCom project Hatherleigh was provided with a PC, printer and a dial-up internet connection in 1998. The PC was installed in the Tearoom¹⁶ in the town centre with the proviso from DCC that it should be used for information retrieval, education and training and promoting community groups. This facility is no longer available and the data suggests that this resource was not well promoted. Despite the relatively small size of the community at Hatherleigh the interviews indicated that awareness was low. One couple stated that, *"we came across the Tearoom many times and we never heard that there was an internet project running inside"* (Respondent 63). Other residents heard by word-of-mouth that there was internet access in the Tea-room, but they had assumed it was a private access point and not for public use. Still other residents claimed that although they were aware of the project they were reticent to use it as the owners of the Tearoom were perceived as hostile. *"They were not friendly, they made you feel uncomfortable and if you used that computer it felt like you were invading their privacy"* (Respondent 156).

The IntraCom project provided dial-up connection which remained the only infrastructure available in Hatherleigh until 2005. Broadband connection was not provided in Hatherleigh (as in other rural settlements) until there was an established demand which took time due to the low population density and the high cost of installation.

¹⁶ The Tearoom was privately owned restaurant.

"We are [BT group] a commercial company and the cost of delivering broadband services is very, very, very high, and there is no assistance for BT to do this. So if one person in a village wants a broadband service and we cannot get the cost without spending. The cost is around a half or a million pounds, so we have to make a very difficult commercial decision not to deliver broadband services. In Devon, there are several thousand villages and if few do not have Broadband then statistically that would not be that problem" (Client Director, SWGS, BT 2008).

This demonstrates how rural areas with low demand for internet services are vulnerable to digital exclusion, however, once a demand has been established BT was prepared to provide services if costs could be met.

"If people said they want the services, then we can look at different ways of delivering services and that was what happened sometimes for those areas partly funded by the European Union and that happened in Cornwall and Devon. However, in rural areas, nobody from BT went around and knocked on doors and said: 'Do you want broadband because we are installing broadband this week'. Because in order for people to have services like that they needed to ask for it and they need to pay for it" (Client Director, SWGS, BT 2008).

In 2005, the residents of Hatherleigh organised a campaign to get broadband provision in the town. They created a petition for BT to provide a broadband cable which was placed in the town post office to gain public support. As a result, BT installed broadband to Hatherleigh after a large proportion of residents agreed to purchase the services and subscribe to BT broadband. Although other companies have now entered the market and can provide Hatherleigh broadband customers, these residents are still bound to BT contracts. *"BT are not the only people providing broadband services, there are others but they had to use BT line. BT are the internet service provider to the majority of Devon"* (Client Director of SWGS, BT 2008). These findings are consistent with previous studies such as Malecki (2001), Strover (2001), Grimes (2003), Hollifield and Donnermeyer (2003) and Nicholas (2003) who argue that ICT implementation in rural areas is related to, and restricted by, private services providers mainly because of the low level of demand for new technologies that is associated with low population densities.

Hatherleigh residents articulated a range of needs that were met through the introduction of broadband. A couple who had previously lived in a big city said that, *“when we first moved down to Hatherleigh five years ago in 2003, there was no broadband and we could not believe the difference, we needed it, we almost wanted to move back”* (Respondent 18). Other residents reported similar experiences. *“We were begging the phone company to offer broadband”* (Respondent 73). *“I work as web designer and use the internet all the time as it means I can make a living without living in a large town or city”* (Respondent 133).

These quotes confirm that there was acute need for many individuals in Hatherleigh to secure a broadband connection and high levels of awareness of opportunities missed through its absence. Many interviewees expressed their desire to be digitally connected and not to be ‘left behind’. By securing broadband through a community-wide effort the Hatherleigh example supports work by Castells (2003: 144), which emphasises the importance of the citizen network in securing internet facilities.

“From the mid 1980s to the late 1990s, a wide array of local communities around the world went on-line. They often linked up with local institutions and municipal governments, grassroots citizen democracy in cyberspace. Generally speaking, three different components converged in the formation of these community based computer networks: the pre-internet grassroots movements in search of new opportunities for self-organising and consciousness raising; the hacker movement in its most politically oriented expressions, and municipal governments trying to strengthen their legitimacy by creating new channels of citizen participation. Social entrepreneurs emerged as leaders of many of these projects usually community activists who became aware of possibilities offered by computer network”.

The questionnaires and interviews provided evidence that residents required broadband for different purposes echoing Castells (2003: 139) assertion that the internet *“is more than just a handy tool to be used because it is there”*. People depend on it for employment which indicates that the internet has an impact on job

opportunities for people in Hatherleigh (this will be discussed in more detail later). In addition the small businesses in the town used email and web addresses on business posters that were displayed on the advertising board in the town centre and the Parish Pump magazine. Most respondents reported that they used commercial and information services that the internet offers such as *“purchases through e-bay, searching for information on Google and forwarding it to someone else. Websites that would be useful to family members or friends, for example flight tickets and hotels”* (Respondent 35), which signifies how the internet enables rural people to challenge geographical distance by shopping and searching for information on-line. Others used the internet as a method of communication, for example a female respondent in her twenties reported that *“I moved away from Bournemouth so the internet helps me feel less alone”* (Respondent 187).

These findings suggest that there was high awareness of a need for broadband in Hatherleigh which prompted a successful community initiative to secure a broadband connection in 2005. Section 5.3 now considers the social and economic factors that influence internet use in Hatherleigh.

5.3 Social and economic factors and internet use

Section 5.3 examines the data for evidence of associations between household type, age, gender, employment status and internet use.

5.3.1 ICT and respondent characteristics

Table 5.1 presents the socio-economic details of the sample. There were 328 respondents in total with an age range from 12 to 70+yrs. Although the sample was distributed across the age bands the 30-49 year old age groups were the largest cohort with 37% of the total sample and the smallest cohort was 20-29 years with 10%. In term of gender, there were slightly more females (54%) than males (46%).

Respondents features		Count	%
Age	12-19	47	15
	20-29	34	10
	30-39	61	19
	40-49	58	18
	50-59	47	14
	60-69	47	14
	70+	34	10
Gender	Male	150	46
	Female	178	54
Employment	Student	53	16
	Employment part-time	46	14
	Employment full-time	99	30
	Self employed	43	13
	Retired	66	20
	Unemployed	21	7
Households type	Childless couple	59	18
	Single parent	30	9
	Single adult	29	9
	Cohabiting	30	9
	Nuclear family	180	55
Total of questionnaire respondents		328	100

Table 5.1: Age, gender, employment and household type distribution in Hatherleigh (Source: Author's questionnaire, 2007)

With regard to employment status, full-time employment was the largest category with 30% of the sample, although when combined with part-time employment and self-employed individuals this rises to 57%, 20% were retired. 55% of the sample described themselves as living in a nuclear family which rises to 64% when combined with single parents (so indicating families with children).

Figure 5.1 shows the 2001 census age profile for Hatherleigh which when compared to Table 5.1 shows that the sample's age profile broadly reflects the census profile.

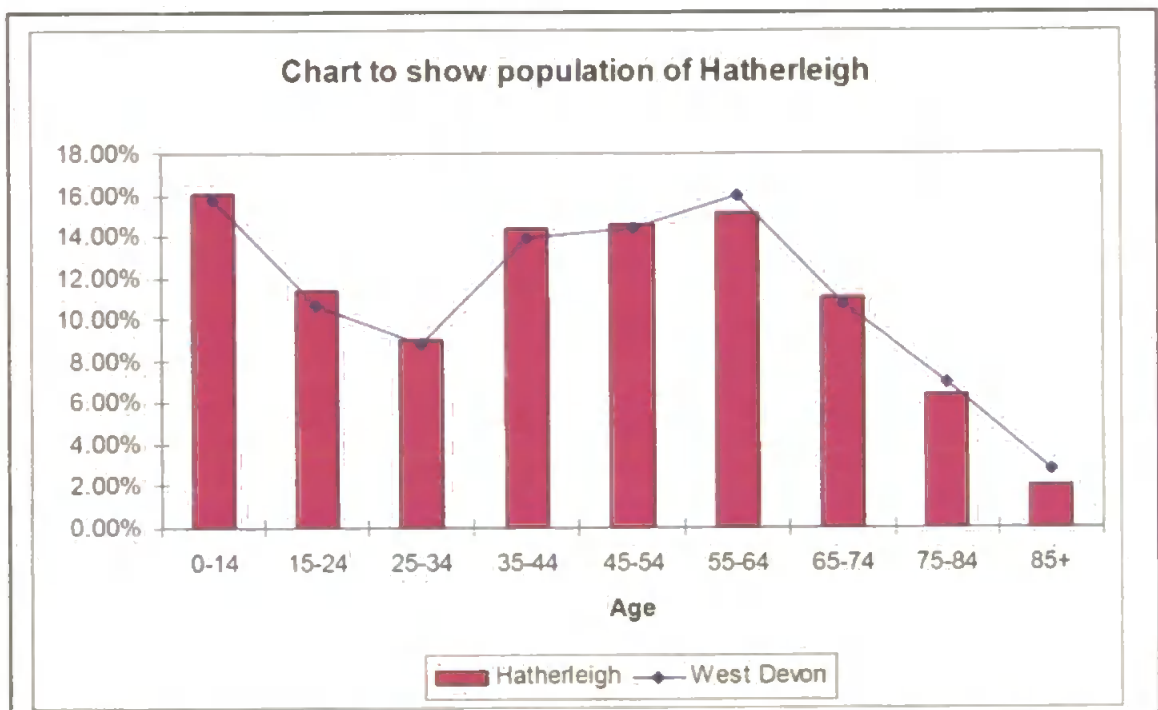


Figure 5.1: The age profile of Hatherleigh according to 2001 Census data
(Sources: West Devon Borough Council)

Table 5.2 compares the 2001 census data to the sample data for household type. It confirms the nuclear family as the predominant household type in Hatherleigh and demonstrates that the sample is consistent with the wider household profile trends for the town.

Households types	% Census 2001	(%) (N=328)
Childless couple	12	18
Single parent	8	9
Single adult	25	9
Cohabiting	9	9
Nuclear family	46	55
Total	100	100

Table 5.2: The household composition of Hatherleigh residents
(Source: Census 2001)

The low number of young adults in Hatherleigh can be explained by previous studies which have examined demographic features in rural areas. For example, Woods (2005) has argued that the out-migration of young people from rural areas is derived by factors such as limited employment, deprivation and a lack of shops and entertainment facilities. Woods (2005: 82) states that;

"Most significantly, the expansion of higher education means that large numbers of young people leave rural communities to go to college or universities and are restricted in their ability to return by shortage of appropriate graduate-level jobs in many rural areas".

In term of gender, previous studies have made links between women and rural life (Little 1991; Gasson 1992; Sachs 1994; Little and Panelli 2003; Woods 2005). Over half of respondents described themselves as living in nuclear family arrangements which echoes Little and Austin's (1996) work about rural families which noted that rural areas are perceived as providing a 'better environment' for raising children.

With regard to employment, the high levels of full-time employment (30%) can be explained by employment opportunities in Exeter, Okehampton, and Barnstaple. This is complimented by local opportunities for self-employment and examples included antique shop retailers, carpenters, farmers and hairdressers as well as some individuals who worked from home facilitated by the internet.

The age, gender, and employment profiles are now examined in relation to internet use. The questionnaire established that out of 328 respondents, 232 (71%) were internet users and 96 (29%) were non-users. With regard to household internet access, the survey indicated that 77% of respondents have access to the internet at home and of those 77%, 78% had broadband connection (Table 5.3). The high percentage of internet use and household connections reflects the importance of this medium for Hatherleigh residents.

	<i>(Are you an) Internet user?</i>		<i>(do you have) Internet in the household?</i>		<i>(do you have a) Broadband connection at home?</i>	
	Count	%	Count	%	Count	%
Yes	232	71%	251 ¹⁷	77%	195 ¹⁸	78%
No	96	29%	77	23%	56	22%
Total	328	100.0%	328	100.0%	251	100.0%

Table 5.3 internet use, household access to internet and houses with broadband connection (Source: Author's questionnaire, 2007)

Mason and Hacker (2003) suggest that there are a number of socio-economic characteristics that are related to internet use and adoption. In order to evaluate the effects of socio-economic characteristics on internet use in Hatherleigh, a thorough examination of the nature of the relationships between age, gender, employment and household type is necessary.

5.3.2 Age and internet use

Finch (1986) argues that age can be employed as a factor or independent variable to explain a particular social grouping, social process, or individual or collective

¹⁷ This number refers to the number of participants who have internet access (broadband or dial-up).

¹⁸ This number (195) refers only to the number of participants who have broadband access at home and not to dial-up internet.

behaviour. Hence, in the context of this study's results, the statistical analysis in Tables 5.4 and 5.5 present Chi-square analysis and highlight the significance of the relationship between age and internet for Hatherleigh ($P= 0.001$, Chi-Square= 128.760, DF= 6). With regard to the direction of association, Table 5.4 shows that for the age groups 12-49 years the *actual* count is much higher than the *expected* number of users. For the age group 60+ years the *actual* count is more than the *expected* count for internet non-users and the *actual* count is lower than *expected* for internet users.

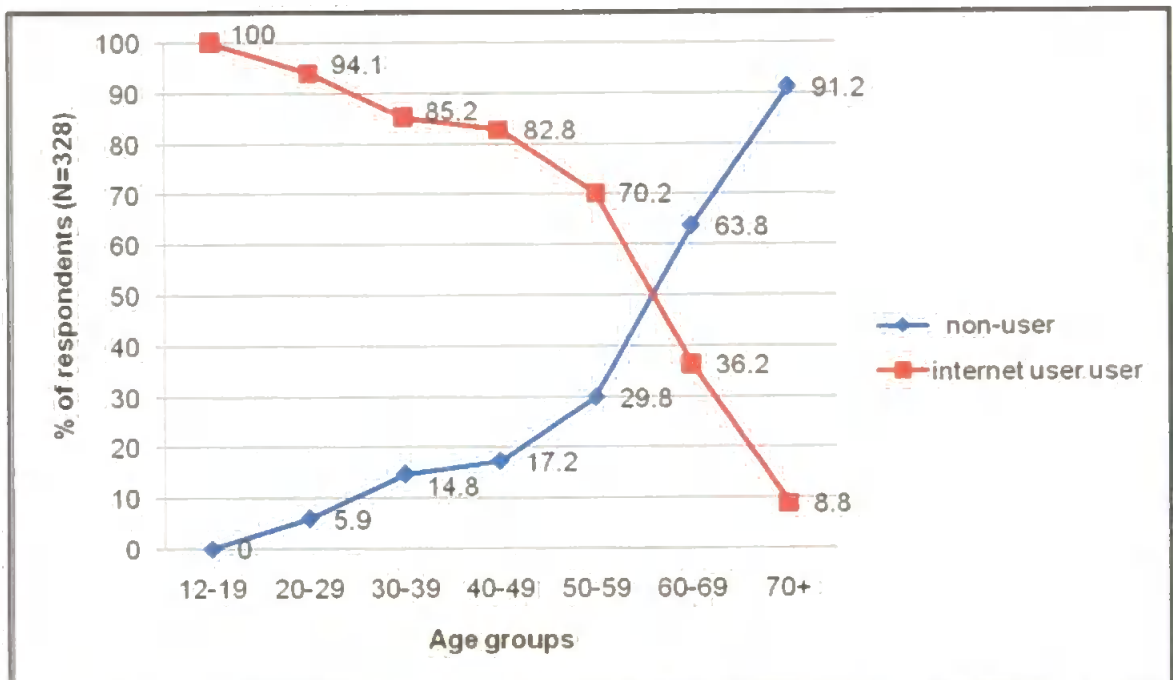
			Internet user		Total
			Non-user	User	
Age groups	12-19	Count	0	47	47
		Expected Count	13.8	33.2	47.0
		% within age group	0.0%	100.0%	100.0%
	20-29	Count	2	32	34
		Expected Count	10.0	24.0	34.0
		% within age group	5.9%	94.1%	100.0%
	30-39	Count	9	52	61
		Expected Count	17.9	43.1	61.0
		% within age group	14.8%	85.2%	100.0%
	40-49	Count	10	48	58
		Expected Count	17.0	41.0	58.0
		% within age group	17.2%	82.8%	100.0%
	50-59	Count	14	33	47
		Expected Count	13.8	33.2	47.0
		% within age group	29.8%	70.2%	100.0%
	60-69	Count	30	17	47
		Expected Count	13.8	33.2	47.0
		% within age group	63.8%	36.2%	100.0%
	70+	Count	31	3	34
		Expected Count	10.0	24.0	34.0
		% within age group	91.2%	8.8%	100.0%
	Total	Count	96	232	328
		Expected Count	96.0	232.0	328.0
		% within age group	29.3%	70.7%	100.0%

Table 5.4: Relationship between age and internet use
(Source: Author's questionnaire, 2007)

	Value	DF	P
Age and internet use	128.760	6	0.001

Table 5.5: Chi square test, age and internet use
(Source: Author's questionnaire, 2007)

The majority of internet users were between 30 and 49 years old. The findings in Figure 5.2 show that the majority of internet consumers belong to the younger and middle-aged groups. The older age groups are more likely to be non-users. The category of 70+ years was the highest for non-users at 91.2%, followed by the 60-69 year age group with 63.8%.



Note: the percentages in the figure represent the absolute percents of the age groups of users or non-users of internet.

Figure 5.2: Relationship between age and internet use

(Source: Author's questionnaire, 2007)

The interviews provided further support for these trends. Many non-users perceived their age as a barrier to using the internet. For example a male in his seventies stated that;

"The internet is nothing, oh, at our age why should we use the internet, I am now 75 years old, it is something to learn, and as you get older, you do not learn so easily, and there is a certain amount of typing involved and I am not good at typing, I have never done typing, my fingers will not help me" (Respondent 550).

This evidence suggests that conditions associated with old age such as learning difficulties and physical problems can impact on older people's ability and pre-disposition to use the internet. This was also evident that some respondents in their sixties felt the same way.

"I do not need the internet, I found there are so many other things to fill my time and interest, I would prefer to read a book and reference work that way, I have tried using the internet and failed. It is frustrated, very, very frustrating, I could not do it. At the moment I am too old for that" (Respondent 596).

This perception of the internet as not relevant to older cohorts was also held by some younger respondents. For example one 16 years old stated that;

"I think the internet is good, because, I think ... it is just there, it is always something to fall back on if you are bored or, like, if you need to research or something. I only use the internet for Amazon and things like eBay and MySpace and FaceBook, and just communicating with friends, and games if I am bored, and movies. It is for the younger audience. I do not really see adults having a reason to use the internet, unless they are doing courses and thing like that, but I do not really see any other reason why. I just think it is really good for like, communicating and social things and arranging things, but I guess as I get older I am probably not going to use it as much. I do not really see me using it much compared to what I do now, but ... I over-use it at the moment" (Respondent 152).

Middle aged respondents tended to link internet use with work purposes. For example, a participant in their thirties said *"my business is an eBay Auction shop, and so I use the internet every day in order to buy and sell on-line"* (Respondent 73). And another respondent in fifties explained how the internet benefited his business;

"We use the internet mainly from a business standpoint, by searching the world-wide for raw materials for a product that we have. So we have ended up buying two or three different products from China. We have ended up getting it all consolidated and brought together and manufactured in Poland, together with all the printing, all the leaflets and that sort of stuff and then brought into the UK before moving on direct to the export markets. So, in terms of finding those sources for the products and then being able to go out and buy them and move them around, it has been incredibly useful. In fact, the business could not have done what it has done, it could not have survived without it, and so in that respect it is an incredibly useful tool" (Respondent 4).

These findings agree to some extent with literature which has explored the impact of age on internet use with younger and middle aged people using the internet for entertainment and work purposes and older generations being less likely to use the internet and to perceive their age as a barrier (Venkatesh *et al.* 2003; So *et al.* 2005). Therefore Hatherleigh appears to be in line with other small rural towns in the UK and other advanced economic countries.

A number of studies have found evidence that explains the significant, direct and moderating affects of age on behavioural intention, adoption and use (Harris *et al.* 1996; Morris and Venkatesh 2000; Venkatesh *et al.* 2003; So *et al.* 2005). A study by Venkatesh *et al.* (2000) suggests that, in the USA, the age group which uses the internet most are 15-17 years old, followed by 26-35 year olds. Similarly, Carveth and Kretchmer (2002) found that in many Western European countries, the older demographic groups are less likely to use the internet compared to younger groups. According to their findings, in the UK 85 percent of those aged 16-24 had internet access compared to just 15 percent in the 65-74 age range and 6 percent over the age of 75 (Carveth and Kretchmer, 2002). A study by Anderson *et al.* (2002) also suggests that the demography of dial-up users is different to that of broadband users. Therefore, significant age differences are expected in terms of broadband users.

5.3.3 Gender and internet use

In terms of gender differences, Table 5.6 shows that amongst males there are more internet users (71%) than non-users (29%). Similarly, for females there are more internet users (70%) than non-users (30%). Furthermore, Table 5.7 suggests

that there were no significant differences between the gender of internet users and non-users ($P = 0.826$, Chi square = 0.048, $DF = 1$).

			Internet user		Total
			Non-user	User	
Gender	Male	Count	43	107	150
		Expected Count	43.9	106.1	150.0
		%within gender	28.7%	71.3%	100.0%
	Female	Count	53	125	178
		Expected Count	52.1	125.9	178.0
		%within gender	29.8%	70.2%	100.0%
Total	Count	96	232	328	
	Expected Count	96.0	232.0	328.0	
	%within gender	29.3%	70.7%	100.0%	

Table 5.6: Relationship between gender and internet use
(Source: Author's questionnaire, 2007)

	Value	DF	P
Gender and internet use	0.048	1	0.826 ^(N.S)

Table 5.7: Chi square test, gender and internet use
(Source: Author's questionnaire, 2007)

A number of studies have considered the role of gender in the adoption of ICT (Harris *et al.* 1996; Gefen and Straub 1997; Morris and Venkatesh 2000; Venkatesh and Morris 2000; Venkatesh *et al.* 2000; Leonard and Cronan 2005; Venkatesh *et al.* 2003; Choudrie and Lee 2004; Haines and Leonard 2007), including feminist geographers who have become increasingly interested in the ways in which technology shapes and is shaped by gender (Bray 1997, Gorenstein 2000, Wajcman 2004). Other work has revealed that gender has an important role for technology adoption and use in both organisational and household contexts. The USA-based study by Venkatesh *et al.* (2000) found that

males used the internet more than females and suggested that gender was one of the most important variables in decision-making about adopting PC technology in the home. Choudrie and Lee (2004) however, highlighted the role of housewives in purchasing decisions about broadband in the UK. Based on Table 5.6, this study argues that there is no significant difference between gender and internet use in Hatherleigh. This is in line with previous work that has noted decreases in the gender gap in terms of computer and internet access (Carveth and Kretchmer 2002; Mason and Hacker 2003). Dwivedi and Lal (2007) found that in household terms, gender is less likely to explain differences between adopters and non-adopters of broadband. A study by Carveth and Kretchmer (2002) also provides similar indications for internet users in the USA, indicating that there are approximately equal numbers of men and women using the internet.

5.3.4 Employment status and internet use

With regard to employment status, Figure 5.3 and Table 5.8 show the occupational categories for internet users and non-users. 100% of students were internet users. Respondents in full and part-time employment also had high levels of internet use (88% and 76%) and the 'registered unemployed' category showed more internet users (62%) than non-users. In contrast retired people expressed more internet non-users (83%) than users. Table 5.9 confirms a significant difference between the employment categories for users and non-users of internet ($P = 0.001$, Chi-square = 131.359, $DF = 5$).

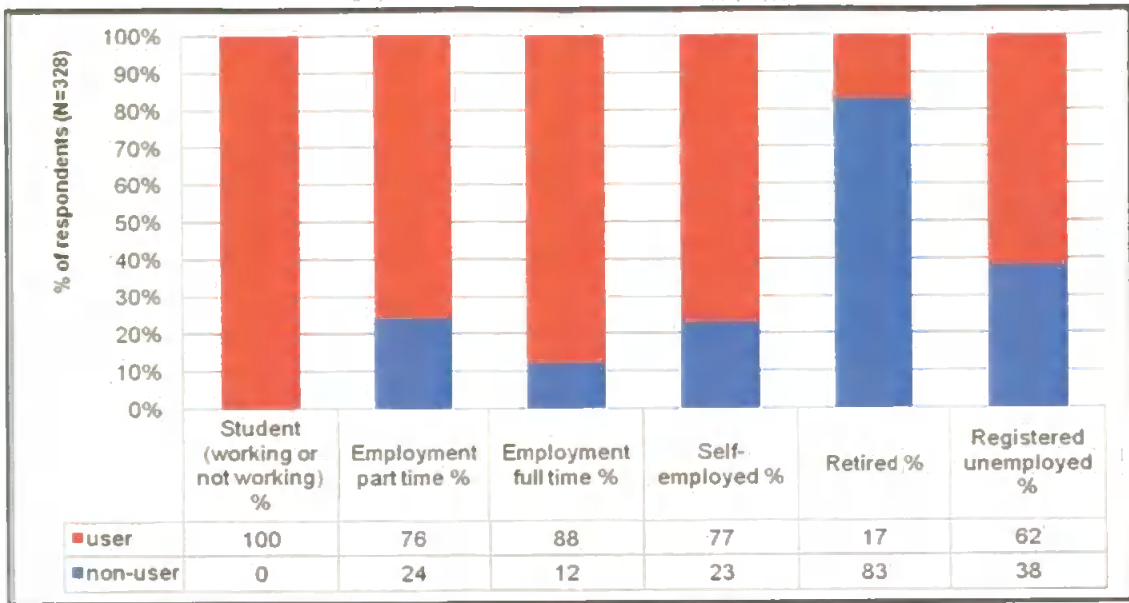


Figure 5.3: Relationship between employment and internet use
(Source: Author's questionnaire, 2007)

			Internet user		Total
			Non-user	User	
Employment status	Student (working or not working)	Count	0	53	53
		Expected Count	15.5	37.5	53.0
		% within employment status	0.0%	100.0%	100.0%
	Employment part time	Count	11	35	46
		Expected Count	13.5	32.5	46.0
		% within employment status	23.9%	76.1%	100.0%
	Employment full time	Count	12	87	99
		Expected Count	29.0	70.0	99.0
		% within employment status	12.1%	87.9%	100.0%
	Self-employed	Count	10	33	43
		Expected Count	12.6	30.4	43.0
		% within employment status	23.3%	76.7%	100.0%
	Retired	Count	55	11	66
		Expected Count	19.3	46.7	66.0
		% within employment status	83.3%	16.7%	100.0%
	Registered unemployed	Count	8	13	21
		Expected Count	6.1	14.9	21.0
		% within employment status	38.1%	61.9%	100.0%
Total		Count	96	232	328
		Expected Count	96.0	232.0	328.0
		% within employment status	29.3%	70.7%	100.0%

Table 5.8: Relationship between employment status and internet use
(Source: Author's questionnaire, 2007)

	Value	DF	P
Employment status and internet use	131.359	5	0.001

Table 5.9: Chi-square test, employment status and internet use
(Source: Author's questionnaire, 2007)

These findings suggest that employment status has a significant impact on internet use. With regard to students, who all are internet users, this can be explained by the UK government classification of e-skills as the third area of adult basic skills, alongside literacy and numeracy (Chapter 3) and the consequent embedding of e-learning throughout the education system. The following quote was typical.

"I use the internet not only for entertainment and communication, but for getting information, like ... if it is a case study in geography, to find research on, like cities and climate and things. I communicate with other friends in Hatherleigh through the internet; it is easier than going up to their houses" (Respondent 152).

Freeman (1996) has argued that the most intensive use of computers takes place outside of school hours. Therefore, it is likely that the student group in Hatherleigh are most likely to use the internet to communicate with friends, which is discussed further in Section 5.4.

For those who were employed, the largest numbers of internet users were employed full-time; this may be because the internet is used for work purposes. However, the differences between the internet use of those who worked full or part-time or were self-employed were small. This interviewee explained how he uses internet at work: *"I am a full time social worker, use internet to support clients- to access information, it very crucial to my job"* (Respondent 81).

Retired individuals and unemployed citizens were less likely to be internet users (Rice1997; Gilligan and Wilson 2003). Most of the unemployed internet users in Hatherleigh were either mothers who had gained internet skills from school or

university or individuals who had been made redundant from their jobs (Rice 1997).

These study results somewhat agreed with Burgess (1986) who argued that individuals with employment are more likely to adopt new innovations. Rogers (1995) described occupation as a correlation or precursor of innovativeness. Past research on ICT adoption suggests a positive correlation between employment and technology ownership and usage (Venkatesh *et al.* 2000). A study in the UK by Choudrie and Dwivedi (2005) also confirmed that employment drives the general pattern of ICT ownership and usage.

5.3.5 Household type and internet use

Figure 5.4 and Table 5.10 suggest that most individuals in the 'single parent', 'nuclear family', and 'cohabiting' categories were internet users, while the 'single adult' and 'childless couple' categories were occupied by more internet non-users than users.

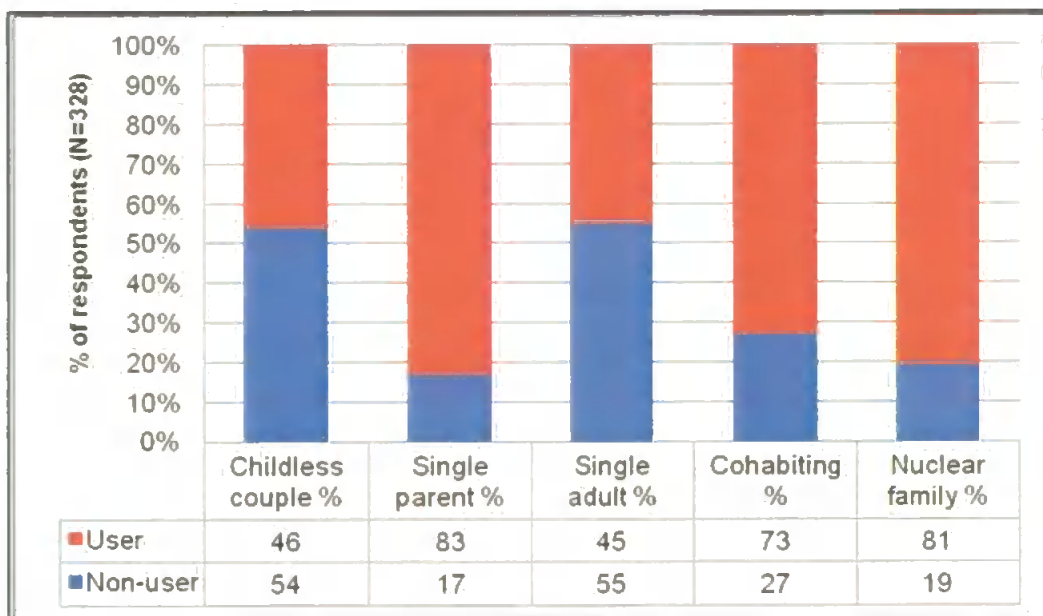


Figure 5.4: Relationship between household types and internet use
(Source: Author's questionnaire, 2007)

The Chi-square test (Table 5.11) confirms a significant difference between household type of internet users and non-users ($P= 0.001$, Chi-square= 37.959, $DF= 4$). With regard to the direction of association, Table 5.10 shows that the *count* of 'nuclear family', 'single parent', and 'cohabiting' household types was higher than the *expected* number of internet users, but that the *count* for 'childless couple' and 'single adult' household types was lower than the *expected* number of internet users.

			Internet user		Total
			Non-user	User	
Household types	Childless couple	Count	32	27	59
		Expected Count	17.3	41.7	59.0
		% within household type	54.2%	45.8%	100.0%
	Single parent	Count	5	25	30
		Expected Count	8.8	21.2	30.0
		% within household type	16.7%	83.3%	100.0%
	Single adult	Count	16	13	29
		Expected Count	8.5	20.5	29.0
		% within household type	55.2%	44.8%	100.0%
	Cohabiting	Count	8	22	30
		Expected Count	8.8	21.2	30.0
		% within household type	26.7%	73.3%	100.0%
	Nuclear family	Count	35	145	180
		Expected Count	52.7	127.3	180.0
		% within household type	19.4%	80.6%	100.0%
Total	Count	96	232	328	
	Expected Count	96.0	232.0	328.0	
	% within household type	29.3%	70.7%	100.0%	

Table 5.10: Relationship between household types and internet use
(Source: Author's questionnaire, 2007)

	Value	DF	P
Employment status and internet use	37.959	4	0.001

Table 5.11: Chi square test, household and internet use
(Source: Author's questionnaire, 2007)

These results suggest that children may be an important factor in motivating household internet adoption as families with children are more likely to use the internet. This might be because broadband is considered to be useful for entertainment, communication and educational purposes but also because young children in Hatherleigh are usually geographically remote from many forms of entertainment and so spend time on the internet chatting and playing games. Furthermore, households with children in education used the internet as an educational resource as Hatherleigh does not have a library.

"I use the internet to help my son research information for his homework in all subjects, it would be hard without the internet as we do not have a library in Hatherleigh, so the internet is our library, and I have bought a couple of things on-line for my son. We like to look up sporting websites to check on fixtures and results... etc"
(Respondent 31).

Previous research has investigated internet adoption in an individual context but few have considered collective situations such as the household. Of that which has, Dwivedi and Lal (2007) report in their UK based research that the decision to purchase or commit to subscriptions that require financial commitment, that is, paying a monthly subscription fee, requires joint decisions in a majority of households. Ofcom (2006: 64) also draws attention to the supportive role provided by family members when it comes to learning about electronic services and products. Hollifield and Donnermeyer (2003) demonstrated that one of the key factors determining whether a household adopts internet is whether the head of the household uses the internet at work. Warren (2004) argued the presence of other family members using a computer is key to getting people to use the internet for business. Also Savage and Waldman (2005) found that larger households were most likely to have a high-speed internet connection supporting the idea that having children in a household motivates internet adoption.

This section has presented the findings related to internet use and age, employment status, household type and gender and it has established associations between all of these except gender. However, the picture for age as a factor for internet use could change in the future once the 40-60 year old cohort grows older. Although the results above support current knowledge about internet adoption and use in other communities, they also reflect some specific features about Hatherleigh as a rural area. First of all, the results suggest digital exclusion through a digital divide in Hatherleigh comprising of internet users and non-users. Secondly, people in Hatherleigh were acutely aware of the impact of the internet on their lives in terms of employment, education and communication. Thirdly, the results highlight the important role families played in stimulating the need for the internet to accommodate childrens' needs.

Having established the social and economic factors associated with internet use and non-use in Hatherleigh the discussion now considers what type of internet activity people are involved in. Taking into account the relationship between internet users and different internet use will help to understand the role of ICT in Hatherleigh.

5.4 Internet use in Hatherleigh

As Chapters 1 and 2 outlined, ICT creates time-space compression in rural areas (Graham 1994; Castells 1996; Robertson 1992, 2003; Giddens and Griffiths 2006). In this context, questions have been raised about the diffusion of ICT and the internet in particular in rural areas and in turn how rural citizens construct their own

use of technology. This contributes to understanding changes to rural practices in terms of access to information, shopping and other activities.

Section 5.4 presents the data relevant to individuals' use of internet, describing where they access internet services and their levels of satisfaction with the internet. Detailed empirical analyses on different internet applications are presented.

Figure 5.5 illustrates how often respondents use the internet for different purposes. The survey data revealed that 48% of those who are internet users 'always' used the internet for email purposes. Nearly a quarter of the respondents engaged in entertainment activities such as chatting on-line, playing games, listening to and downloading music and having fun. In terms of seeking information, more than half of respondents tended to use the internet for general information with 42% using it 'often' and 15% using it 'always'. 40% of respondents would 'often' shop on-line; however 88% of respondents did not do grocery shopping on-line. The response rate for joining an on-line support group was low with 87% of respondents never having used these.

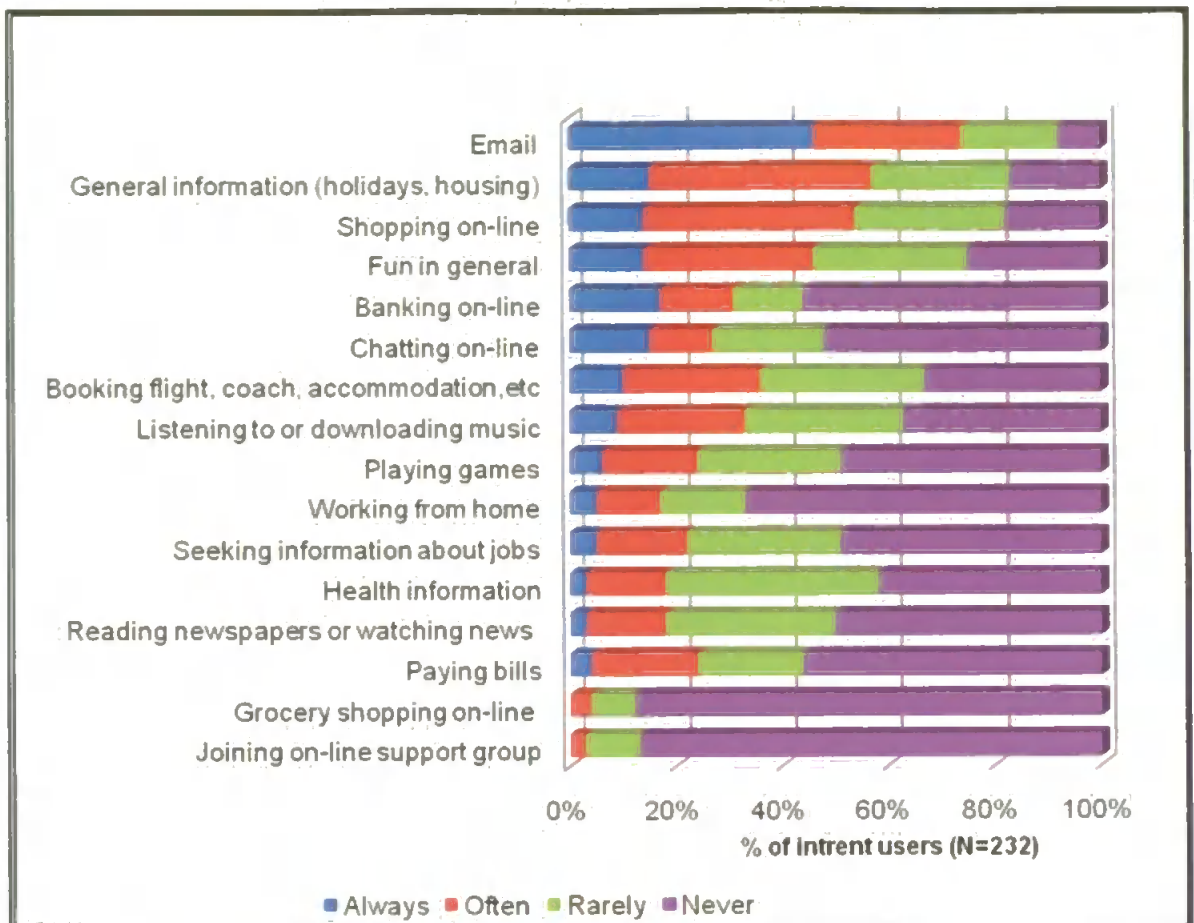


Figure 5.5: Internet use in Hatherleigh

(Source: Author's questionnaire, 2007)

In order to explain these findings and the trends apparent between age and different internet uses (Figure 5.6), the link between employment and internet use will be explained (Figure 5.7). In addition, the interviews contributed to understanding how respondents use the internet. Although the relationships between internet use and age (Figure 5.6) and employment (Figure 5.7) are difficult to be tested statistically, they present important points which reflect the role of ICT in Hatherleigh.

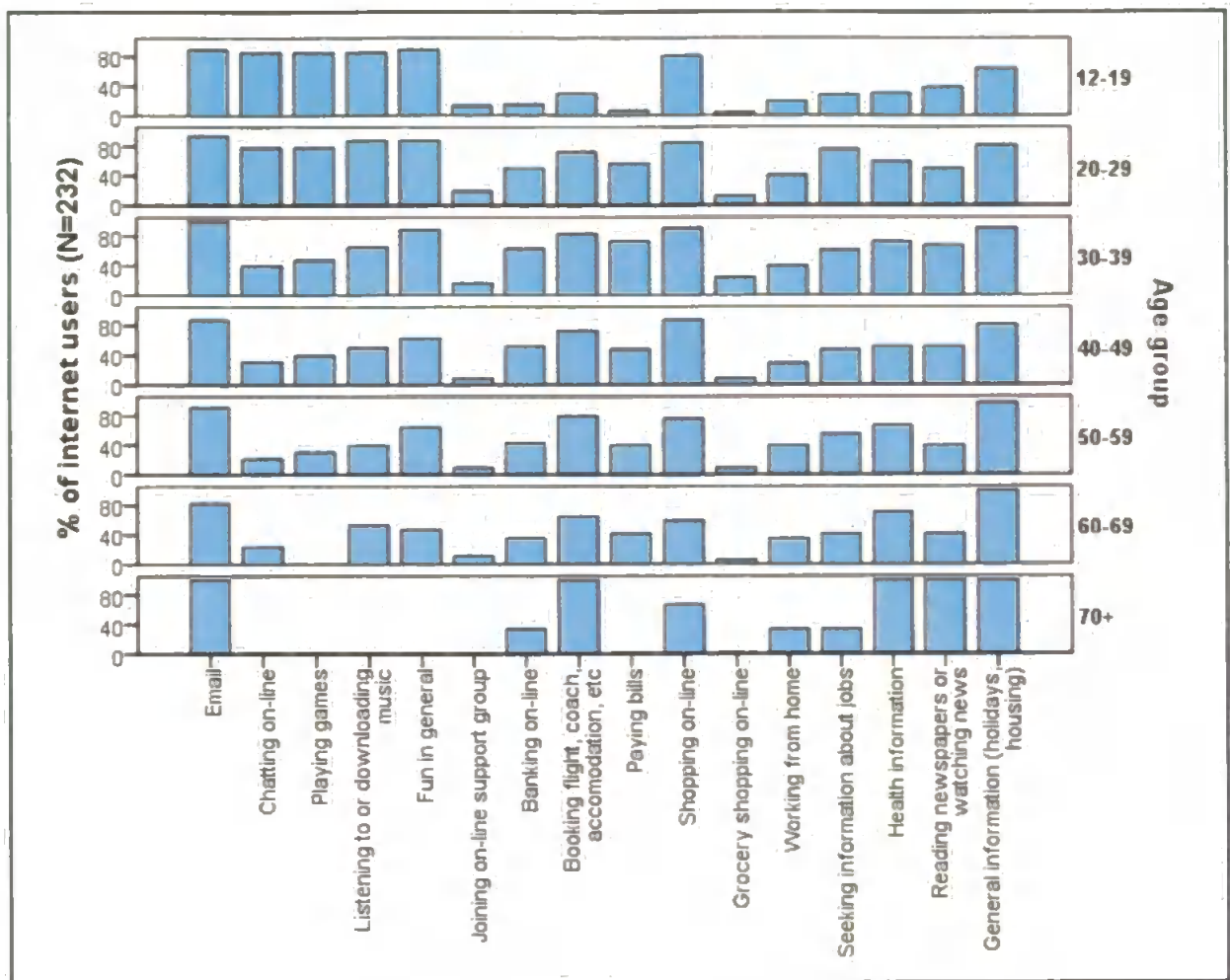


Figure 5.6: Relationship between age and purpose of internet use
(Source: Author's questionnaire, 2007)

Figure 5.6 suggests that people use the internet to have fun, chat on-line and meet people, but that younger people and students are more likely to do this. For example, a student in the 12-19 year group stated that:

"I use the internet for MSN and things like Bebo and My space in Facebook and just communicating with friends, and games and movies ... I also use it for my study like if it is a case study or something like that in geography, to find research cities"
(Respondent 152).

This response emphasised the two key ways the internet is used by the younger generation within a rural community like Hatherleigh. In doing so, young people

widen their social opportunities by increasing communication through forums such as 'Facebook', which enabled them to share ideas, exchange views and photos. Respondent 152 also talked about the internet as an educational facility, which facilitates homework and information retrieval.

Communicating through the internet was not however restricted to the younger generation, people from older age groups also used the internet for communication. A respondent in her forties stated that;

"I do know people who met new partners through the internet, and sometimes that is now a very important way of doing it, for example when a single mother or widowed mother with children try to meet someone else it is very difficult and the internet perhaps gives you an opportunity to narrow down your search to someone with the same interests, you know, you have not got to go and stand in the pub for the evening hoping to meet someone and that is so important I think (Respondent 118).

This response confirmed that people in Hatherleigh have established new ways of communicating and socialising through the internet.

Figure 5.5 (above) showed that 30% of the respondents who use the internet use it for working from home 'always', which provides evidence that people in Hatherleigh have recognised that the internet offers opportunities for jobs which are unavailable otherwise. Figure 5.7 shows that different job opportunities became available to people in Hatherleigh via the internet. For example, some people in Hatherleigh work from home as website designers, computer troubleshooters and editors.

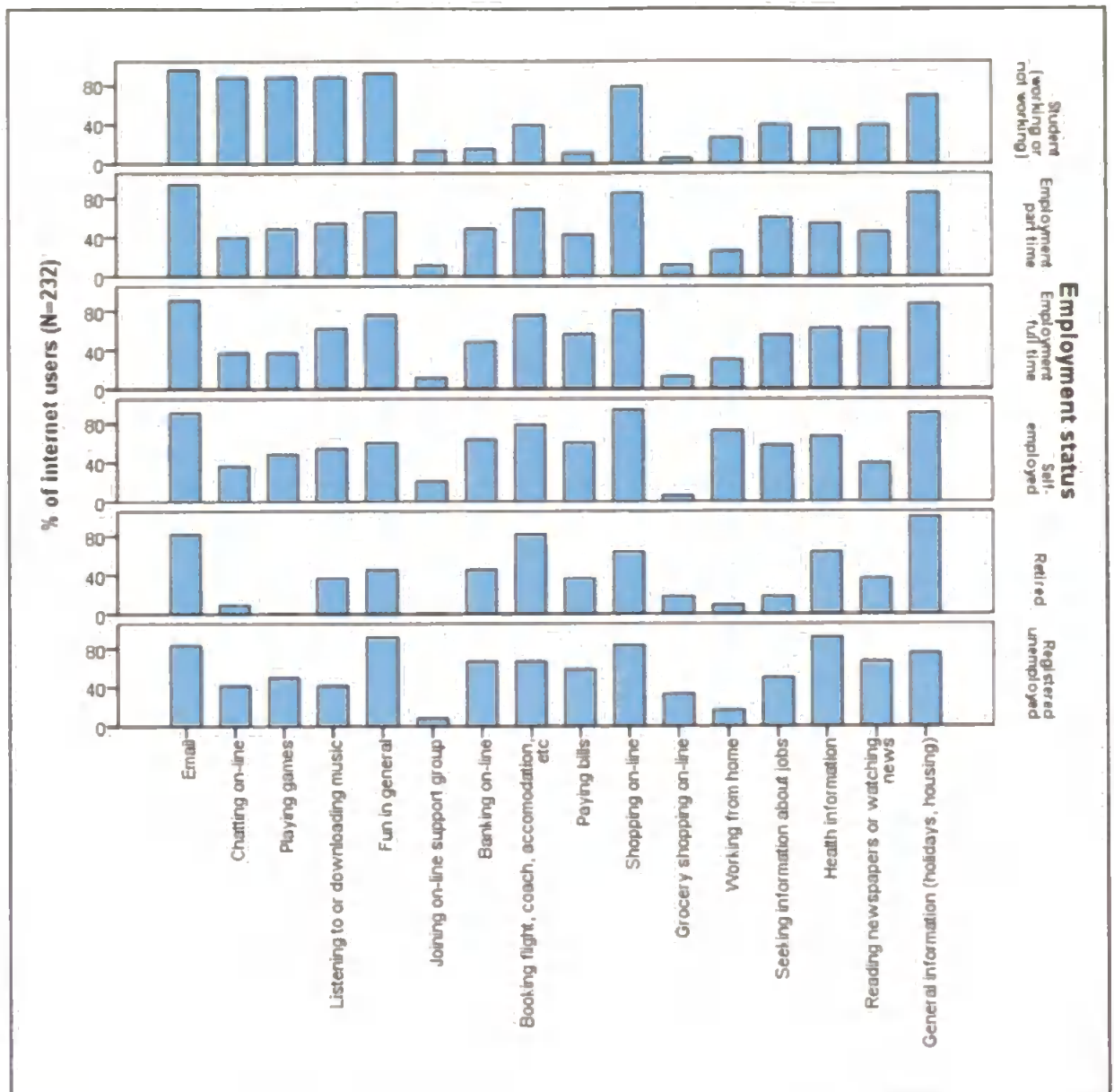


Figure 5.7: Relationship between employment and purpose of internet use
 (Source: Author's questionnaire, 2007)

Other people have set up small businesses through the internet, for example, a self employed respondent (40-49 years) revealed that the internet had helped him to set up a new business in Hatherleigh.

"My business is an eBay auction shop and so I use the internet every day in order to buy and sell on-line. I really have no time to surf the web as my business takes up all my time. I prefer to use newspapers for information as surfing the net is too time consuming. Without access to the internet it would not be possible for me to carry out my business as an 'eBay' shop" (Respondent 73).

A further example is a female respondent (40-49 years) who has a home-based contract part-time. She stated that;

"My internet use is largely job-related. I occasionally 'surf' for other information but usually it is specific e.g. holidays, school and homework revision sites, etc. I recommend it for specific and limited applications, for example, email use and finding information, it enables people to work from home, establish internet-based business and source products. It is also useful for house-based people or those without transport and good resources for school. If I had no internet I would consider moving away for work reasons" (Respondent 118).

These responses provide examples of how the internet has helped people in Hatherleigh to gain new employment and to create new forms income.

Figure 5.7 also illustrates how internet users, irrespective of age and employment type, used the internet as the main source for general information. Information about holidays and travel was especially popular.

"The internet has a wealth of information, so if you are not using it you are losing out. Due to our rural location it is of great help as it makes it easier for people to shop on-line, otherwise we have to travel a relatively long distance. I use the internet as a general information source for everything from exchange rates to cinema listings" (Respondent 149).

"The internet is very useful for finding out information that is not easily accessible elsewhere. It is also very good for shopping when you do not live near many shops and for finding out information about other parts of the world, so is useful for booking holidays abroad and working out where to visit. Recently our computer broke down and we could not believe how dependent we had become on it for on-line banking, general information and email" (Respondent 177).

Potential tourists are now able to see where they want to go and check hotel room photos, landscape, weather and other facilities from home without making a single move (Author questionnaire 2007). Figure 5.7 shows how Hatherleigh residents can browse the internet for goods information and make purchases without leaving their home which, is beneficial as normal shopping for them is time consuming and expensive due to travelling costs. In addition to the low prices and wider choices the internet offers, on-line shopping is also more economical.

"I use the internet to access any information I need and I have an e-mail for ease of communication. To find and purchase items easily, quickly and more cheaply. I use

the internet for my on-line banking and games; I have occasionally used the internet for finding telephone numbers or something. I think it is worth using as you can find pretty much everything you want to on the internet" (Respondent 148).

Using e-mail was associated with employment status. The questionnaires revealed that employed people used it for job purposes and to email distant friends. Younger users tended to email friends, while older users privileged family connections (Authors questionnaire 2007). Also, internet activity such as banking, shopping and booking all required an email address as this provides a unique digital identity.

Figure 5.7 shows that despite widespread use of the internet for the activities discussed, there was a low take-up of internet grocery shopping because the main supermarkets such as Tesco and Sainsburys do not deliver to Hatherleigh. However, some organic farms did, but these were considered expensive.

"The best benefit I could get from the internet is on-line purchasing which allows us access to products we probably could not have easy access to due to being a rural community, but it would be useful to be able to do on-line grocery shopping – Hatherleigh is outside the Tesco delivery radius as it is too rural" (Respondent 8).

This example highlighted the importance of provision as well as demand and the tensions this can cause in areas of low population density.

Figure 5.5 shows that joining an on-line support group was not common for internet users in Hatherleigh. Evidence from the study suggests that there were lots of clubs and groups in Hatherleigh (Table 5.12) and through participant observation it was established that most people in Hatherleigh were active in these community groups.

Clubs and groups in Hatherleigh		
1 st Hatherleigh guides	Ballet Club	Bowling Club
Cancer Research Hatherleigh Branch	Chess Club	Cricket Club
Gardening Club	Hatherleigh Area Project	Hatherleigh Carnival
Hatherleigh Football Club	Hatherleigh Players	Hatherleigh Silver Band
History society	Art Group	Cats protection League
Bell Ringers	Brownies	Hatherleigh Rotary
Handbells Hatherleigh	Hatherleigh festival	Rainbows
Hatherleigh Youth Club	Meeth Guild	Church
Save the Children Fund Hatherleigh	Yoga for all	Coffee morning*
Drama Club*		

*data from questionnaire comments

Table 5.12: Hatherleigh clubs and groups (Source: www.hatherleigh.net)

The questionnaire asked respondents if they had any 'active part' in the community of Hatherleigh. The results indicated that 56% of the internet users considered themselves active in the community. It is, therefore, reasonable to suggest that in this rural area, which has a low population yet a high number of activities, people are sociable face-to-face rather than going on-line to talk to neighbours and other villagers.

This section has highlighted the range of internet activities that residents of Hatherleigh participate in. E-mail is by far the most common internet activity, with all internet users claiming to be e-mailers irrespective of their age or occupation. Other popular activities were information retrieval, researching and booking holidays and facilitating employment and business. Virtually all users responded that they engaged in one or more of these activities and three distinctive trends are evident.

- Certain activities are undertaken by all people such as e-mail, on-line shopping and getting general information about holidays, housing and education;
- Certain activities increase with age and seem to be associated with employment status such as seeking health information, paying bills and banking on-line;
- Certain activities decrease with age and with employment status such as chatting on-line and playing games.

Previous literature has suggested similar results. Research carried out at Carnegie Mellon University (USA) (Kraut *et al.* 1999) documented how people used on-line services and found that people used the internet for enjoying themselves, for getting information relevant to a hobby or personal interest and for communication with friends and family. Their research noted that using the internet for other purposes such as doing school homework, job-related work and getting information about products was not so popular and only 3% of respondents purchased goods through the internet. Nie and Erbring (2000) found that email was the most popular internet activity and they also highlighted the internet's role as an information source but they found that on-line shopping and on-line transaction were still in their early stages. Suri *et al.* (2003) found an increasing number of internet shoppers were driven by low prices and the Office of National Statistics (2006) revealed that in 2006, 84% of the UK internet users used the internet for information about goods and services, 80% for email, 72% for general browsing or surfing, 42 % for internet banking, 27% for health related information and 32% for employment related purposes. These studies demonstrate the phenomenal take-up of on-line shopping at the beginning of the twenty-first

century and suggest that Hatherleigh remains excluded from some of these opportunities through lack of provision.

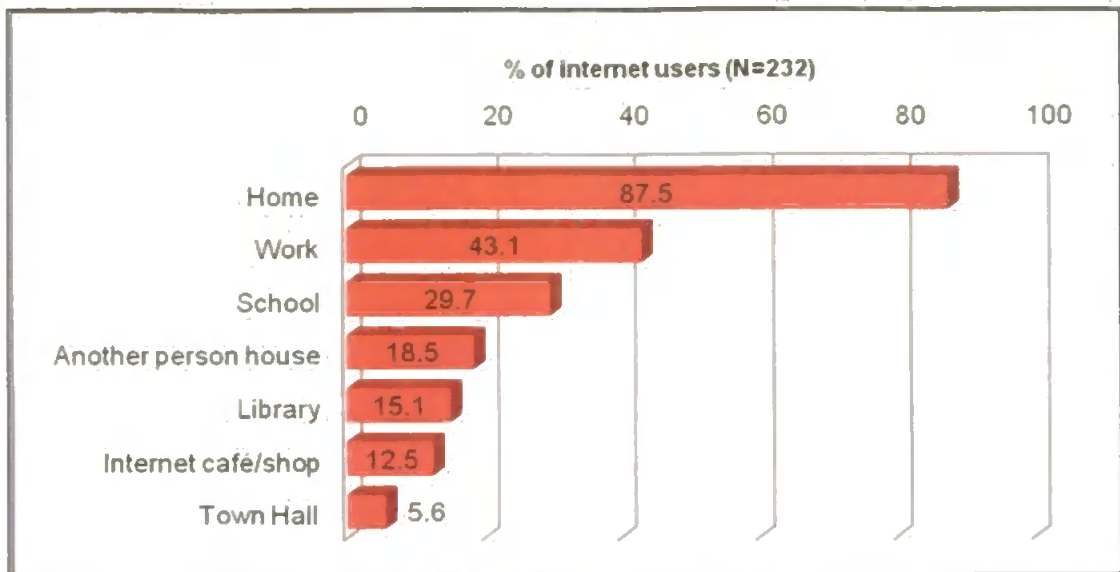
5.5 The locations of internet access in Hatherleigh

Having access to the internet in multiple locations means that it can be better integrated into different aspects of social life. Increased opportunities for access often means a broader use of the internet because different contexts offer different opportunities and stimulates different types of use such as entertainment and communication at home or learning and information seeking at work or school. For this reason internet users were asked to specify the importance of different opportunities for internet access (Table 5.13 and Figure 5.8).

	<i>Not applicable*</i> %	<i>Very unimportant</i> %	<i>Unimportant</i> %	<i>Important</i> %	<i>Very important</i> %	<i>Total</i> %
Home	6	1	6	31	57	100
Work	23	28	6	11	32	100
School, university, or college	55	14	2	5	25	100
Another persons' home		65	17	14	5	100
Public library		74	11	9	6	100
Town hall		85	9	5	1	100
Internet cafe/shop		78	9	7	6	100

*not applicable means respondents with no internet access at home, people who do not work, people who do not go to school or university

Table 5.13: Locations of internet use in Hatherleigh
(Source: Author's questionnaire, 2007)



Bars represent all respondents who answered 'important' and 'very important' for different locations of internet use

Figure 5.8: Importance of internet use locations for Hatherleigh respondents
(Source: Author's questionnaire, 2007)

Fifty seven per cent of internet users said that home is a 'very important' location for using the internet and 31% of respondents stated that it is 'important' (Table 5.13). 'Work' was the second most common locations for internet use followed by 'place of education'. Rural areas in general suffer from lack of shops and facilities (Woods 2005, McQuaid *et al.* 2004; Moseley and Owen 2008). With no internet cafe or public library, Hatherleigh residents without private access have to travel to the town of Okehampton to use the internet. All forms of transport require the expenditure of financial resources, even walking needs shoes or boots (Cass 2005) and this encourages home internet use. Also, private use lends itself to on-line shopping and banking and other activities where privacy and convenience are issues. Individuals may be reticent to communicate on-line about sensitive conditions when accessing the internet in public places (Schwanen and Kwan 2008). The Office of National Statistics (2007b) found that in 2006, 85% of UK internet users used the internet from home followed by 46% at work. The Community centre in Hatherleigh has computers with internet access but it is not

open to the public apart from families with children under 5 years old, although the wireless connection can be used by those who take a laptop. A limited number of access points is an important factor in determining internet non-use by certain disadvantaged groups such as the elderly.

5.6 How internet users obtained their computer skills

If people do not know how to use the internet that does not mean that they do not have access to the services and applications that the internet provides. In Hatherleigh there has only been limited availability of internet training courses so most people were self trained (Figure 5.9). Users tended to work things out for themselves before they asked for help. Places of work and education were popular sources of help with 40% having sought help there; family members were used as a source of help more than friends, while the least common way of accruing skills was attending an internet course.

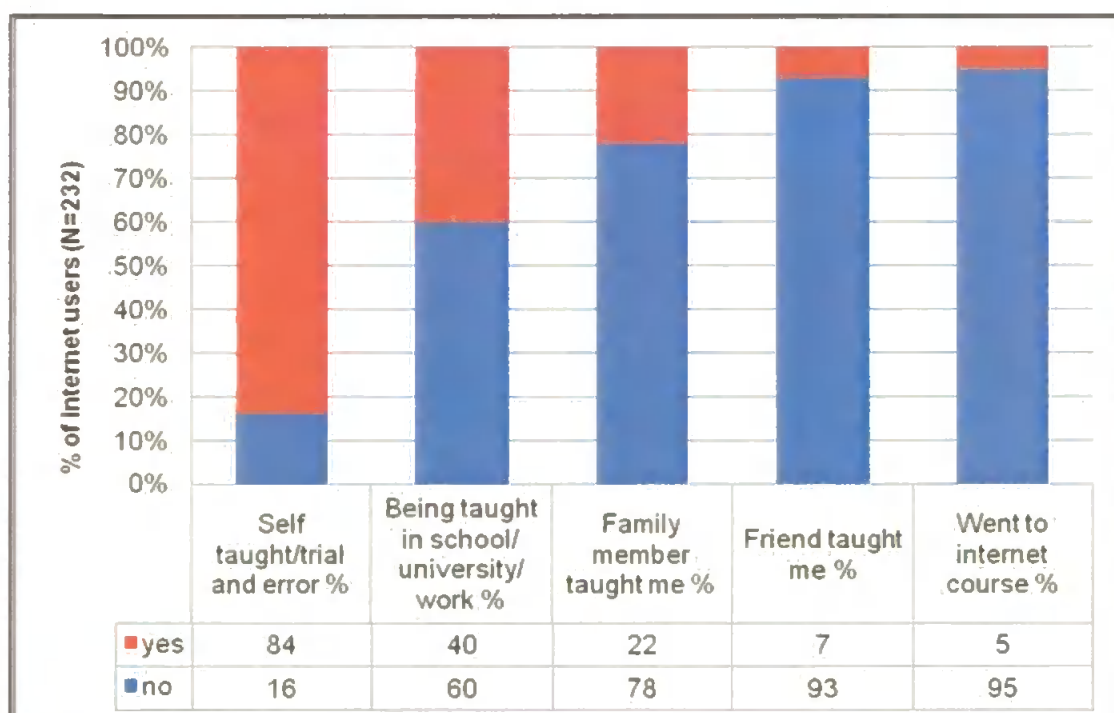


Figure 5.9: Ways of obtaining internet skills in Hatherleigh
(Source: Author's questionnaire, 2007)

The data showed that many people obtained their skills from more than one source, for example people would often try to learn by themselves before asking a family member for help.

A study by the Office of National Statistics (2007b) found that in the UK in 2006 the highest percentage of adult internet users obtained their computer and internet skills by self-study (48%) and that 45% learned through informal assistance from colleagues, relatives and/or friends. Only 30% of internet users obtained their skills through formalised education such as schools and university. However, in comparison with the UK data, this study's data showed that rural internet users depend more on their own abilities. For example, a female in her fifties said: "*I have only been on-line for two months so I am only just beginning myself... it would be useful if we had some kind of internet training facilities in Hatherleigh...anyway, my son taught me well*" (Respondent 67). It seems that the lack of formal internet training opportunities in Hatherleigh has not deterred internet use.

5.7 Satisfaction of internet users

Measuring user satisfaction with information systems has attracted widespread research attention given that it is often used as an indicator of success (Buys and Brown 2004). As with the subject of technology adoption, users' satisfaction with information systems have been extensively researched (Zvirn and Erlich 2003). The importance of satisfaction is that it is often used as a surrogate measure for information technology in both research and practice. Indeed, Delone and Mclean (2003) highlighted the importance of user satisfaction as a key component of

information system success. Therefore further analysis is required to assess the possible information technology impact affecting the social and cultural dimensions in Hatherleigh. The analysis and discussion of this subject are presented next.

In this section, participants' satisfaction about websites will be discussed. Section 5.4 showed that the internet provides an abundance of information such as general information, information about holidays, health, and employment and concluded that most respondents used the internet to obtain general information. However, participants perceived and experienced the websites they accessed differently (Figure 5.10).

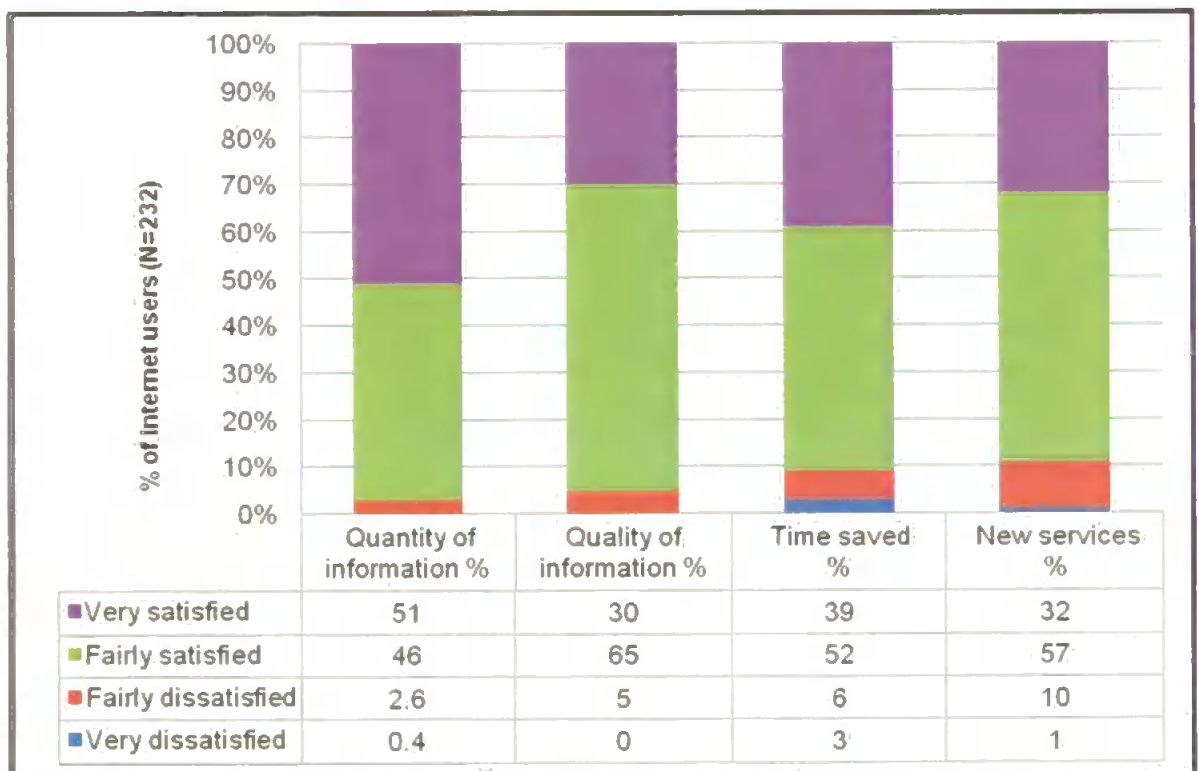


Figure 5.10: Hatherleigh users' satisfaction from websites in general
(Source: Author's questionnaire, 2007)

In terms of participants' satisfaction with the quantity of information on websites, Figure 5.10 shows that 51% of internet users were positive about the quantity of information they were offered and stated feeling 'very satisfied'. For example,

Respondent 75 was optimistic about the internet: *"Yes, I recommend using the internet, why not? It gives choice and information and so it helps you obtain a lot of information easily which you can't find easily in a rural area."* However, for the quality of information offered by websites, participants' satisfaction was not as good as satisfaction that reported for quantity of information. Only 30% of users were 'very satisfied', for example Respondent 200 stated that the *"Internet is an excellent source of information on any subject although one must be aware that the information may be biased on definitely not accurate"*. This is consistent with Respondent 121 who stated: *"A good amount of information is available, but sometimes only snippets rather than in-depth information."*

In terms of 'time saving', 52% of respondents were 'fairly satisfied' about the time they saved through using the internet. For example, Respondent 142 reported that *"In the 21st century you cannot live without the internet, you cannot buy what you want to without driving miles. Also it is easier to meet people with shared interests"*. Similarly Respondent 168 said: *"It is a great help, it saves time and it is quicker and easier to find out information."*

Satisfaction about 'new services' was also good, 57% of respondent were 'fairly satisfied' and 32% stated they were 'very satisfied'. For example, a respondent in their thirties said, *"It is good for looking things up, comparing prices and services, and getting unusual pre-sales for example eBay and Amazon"* (Respondent 222). A respondent in their forties stated that *"the best benefit is on-line purchasing, it allows us access to products we probably could not have easy access to due to being a rural community"* (Respondent 8).

Dutton and Helsper (2007) found that in the UK, 83% of internet users were satisfied with the quantity of information offered by websites, 84% were satisfied with the new services provided by the internet and 79% of internet users were positive about the internet and its capacity to save time. Only 59 % of internet users stated satisfaction about the quality of information available on websites in general. Thus it could be suggested that this study's results are in line with Dutton and Helsper's (2007) and that rural people in Hatherleigh perceive the internet similarly to other people in the UK.

As a result of the high levels of satisfaction, Figure 5.11 shows that 93% of internet users recommended using the internet and only 3% did not recommend using it, a further 4% said they would recommend using it 'sometimes'. People who did not want to recommend it stated that their reasons were to do with time consumption and security. This high response for recommending internet use reflects people's increased awareness of the internet and the services provided on-line.

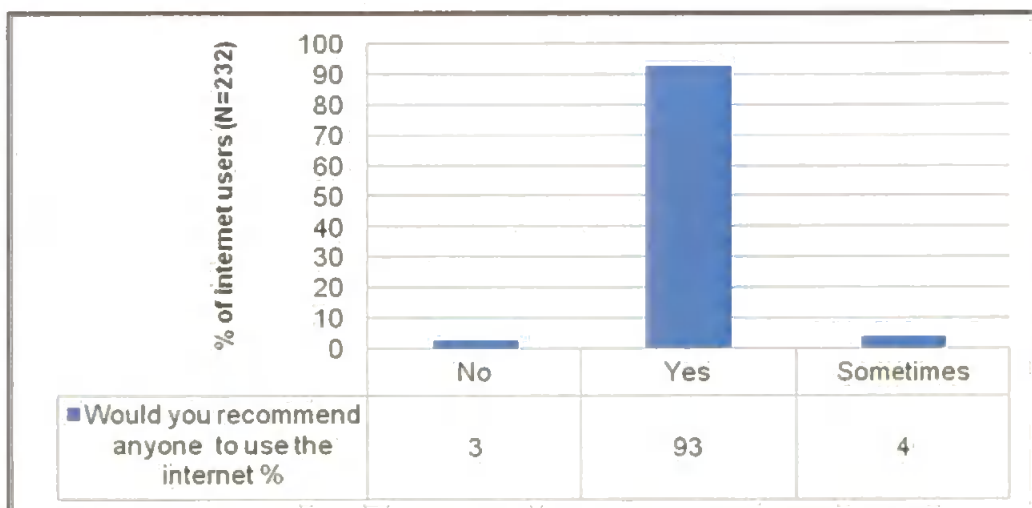


Figure 5.11: Would internet users recommend using the internet?
 (Source: Author's questionnaire, 2007)

5.8 The Hatherleigh Community Website

The previous section concentrated on individuals' internet use in Hatherleigh and examined use specifically in relation to living in a rural area. Following the emphasis of this study, particular attention should be paid to the HCW which, it was argued, represents the community as a whole to the wider world (Hampton 2007; Warren 2007). Therefore, it is important to consider the HCW and to examine its role in the town. Figure 5.12 provides an example from the HCW.

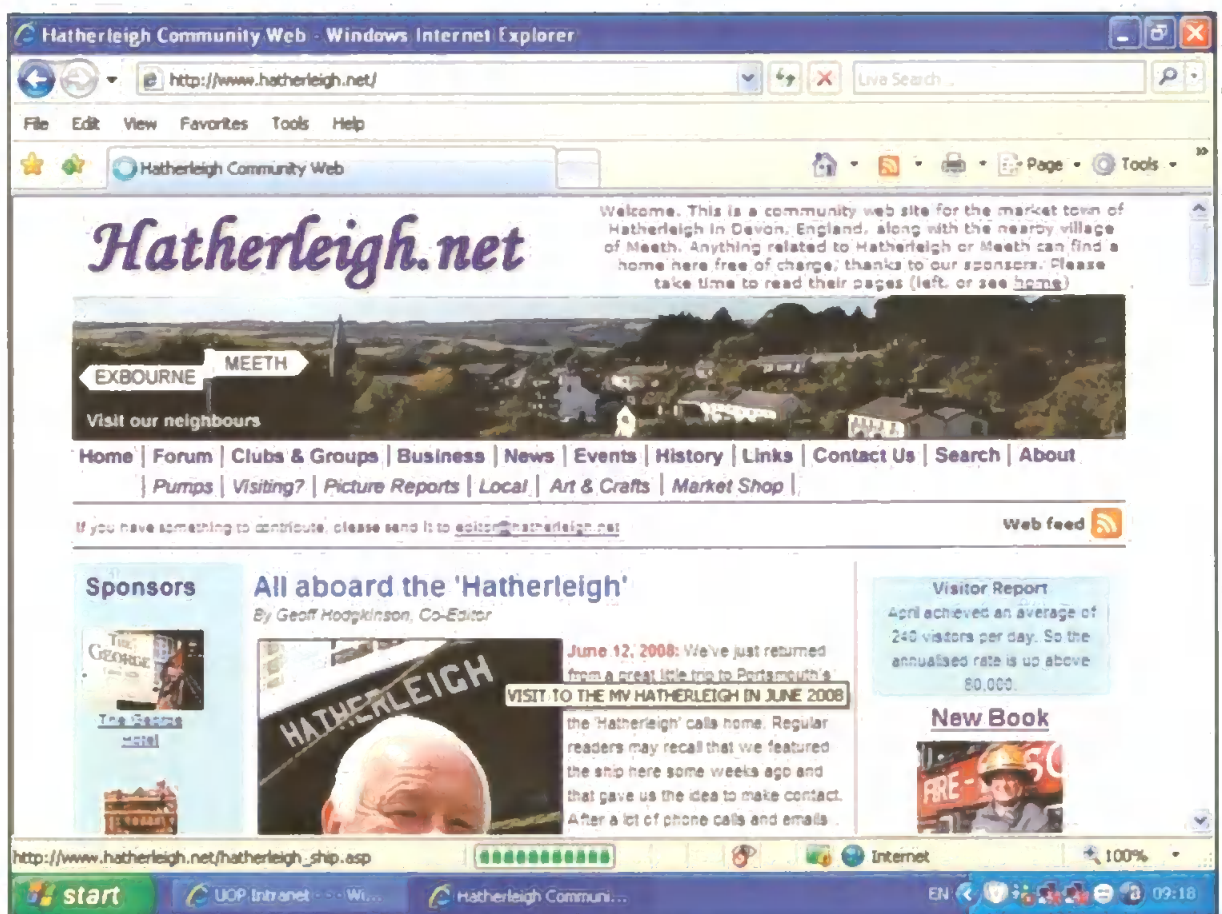


Figure 5.12: The Hatherleigh Community Website
(Source: www.hatherleigh.net)

The HCW was started by residents Neil Price and Geoff Hodgkinson in September 2005, exemplifying Warren's (2007) claim that the 'Village website' in the UK is newly emerged and for the benefit of the town and its surrounding areas (as stated

on the HCW). The website has sixteen windows¹⁹ and states that its aim is to stimulate interest in the town and to encourage people to visit. Therefore, photos about previous events are available along with a list of information about upcoming events. As a multipurpose website, it also supports various local businesses which contribute towards the economic viability of the community.

To explore the role and impact of the HCW it is important to assess how frequently it is used and to provide an evaluation of it alongside residents' satisfaction. This will provide an insight into how the HCW represents the community of Hatherleigh.

5.8.1 Frequency of use of the HCW

Figure 5.13 revealed that 44% of internet users had 'never' accessed the HCW, some of whom were not aware that Hatherleigh had its own website. Also, 40.5% of internet users accessed it 'rarely' and only 0.5 % of internet users accessed it 'always'. Attempts were made to establish association between use of the HCW and socio-economic characteristics. Despite no evidence of statistically significant relationships, it was evident that self-employed people tended to access HCW more. The reason for this trend may be that self-employed people in Hatherleigh use this website to advertise their businesses. For age, adults accessed the site more frequently than younger residents, who found it "too amateur".

Residents of Hatherleigh perceived their community website in different ways, for example, Respondent 165 stated: *"I think it is a very good site. However, I often forget to access it, I have only used it very rarely. It could be more comprehensive"*.

¹⁹ Home, Forum, Clubs and Groups, Business, News, Events, History, Links, Contact us, Search, About, Pumps, Visiting, Picture Reports Local, Art and Crafts and the Market Shop.

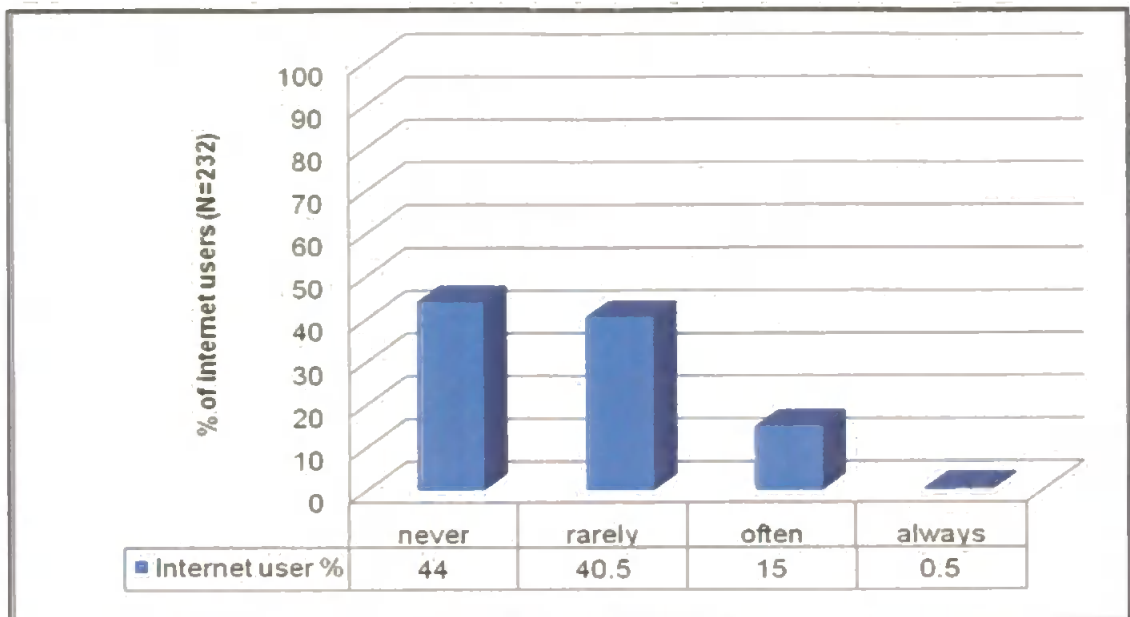


Figure 5.13: Frequency of access to Hatherleigh Community Website

(Source: Author's questionnaire, 2007)

In contrast, Respondent 4 expressed concern about the benefit of the website to Hatherleigh and felt that *"for a small community like Hatherleigh, there is less need to access the internet to find out what is going on, things tend to be very much more by word-of-mouth."* To develop a more critical understanding about use of the HCW all internet users who accessed the site were asked to report their level of satisfaction and to write comments about how they believe the HCW promotes the town.

5.8.2 Satisfaction with the HCW

The survey data in Figure 5.14 showed that most internet users who accessed the website felt 'fairly satisfied' (67%) and that 22% of them were 'very satisfied'. There was a smaller response rate for not satisfied (9% in total).

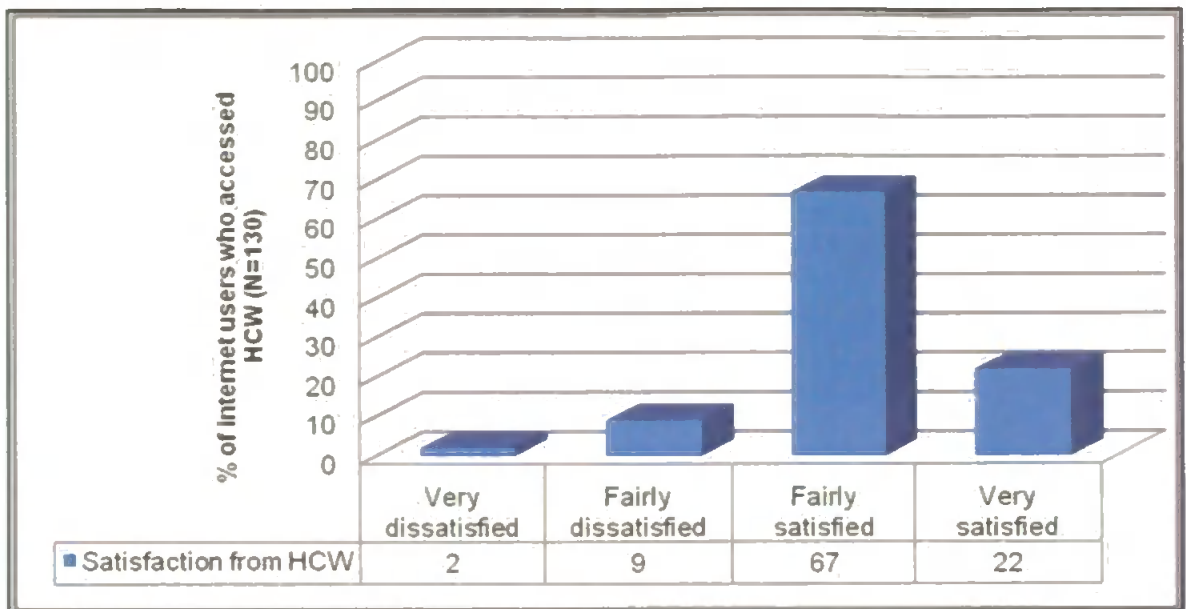


Figure 5.14: Satisfaction with the Hatherleigh Community Website
(Source: Author's questionnaire, 2007)

With regard to features of the HCW, Figure 5.15 outlines that most internet users who accessed the HCW found it 'well set up' (69%). Users acknowledged that the site was informative and easy to use. For example, Respondent 12 stated: *"The Hatherleigh Community Website is well set up, I could find all the information I needed easily and quickly. I have only browsed the site out of general interest rather than searching for specific information"*.

Furthermore, respondents reported that the HCW targeted both an international and local audience and promotes tourism, local information and local business information. *"It is a good tool to open Hatherleigh to the world, bring visitors and tourists into the town"* (Respondent 23). Thirty per cent of internet users who accessed the HCW found it 'useful to inform citizens about what is going on in the town'. Respondent 73 stated that *"the Hatherleigh website provides excellent information about the town, events, people and local businesses"*.

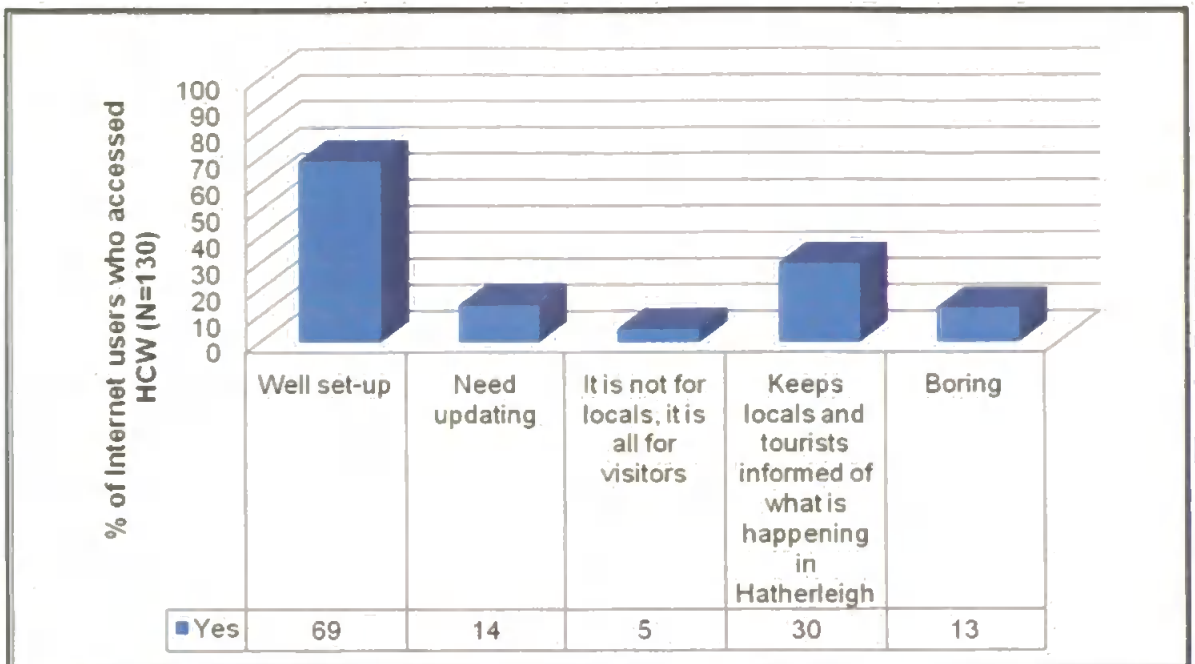


Figure 5.15: Different opinions about the Hatherleigh Community Website
(Source: Author's questionnaire, 2007)

Other respondents emphasised the flexibility of using the site, for example, Respondent 89 stated: *"I use it to look up information on local events and I can do this at my convenience"*. A Hatherleigh new-comer found the HCW to be a good local information facility. *"If I have any queries about Hatherleigh because I am very new to the area, I log onto the website. That is where I found local surgery and vets information from"* (Respondent 124).

These responses demonstrate that respondents felt the HCW was important in two ways. The HCW links Hatherleigh's residents to a network of shared local news, photos and local events and it provides an account of Hatherleigh which can be reached by a national and international audience which encourages tourism in Hatherleigh. This supports Warren's²⁰ (2007) claim about the positive role provided by community websites. In his study about the 'village website' in the UK,

²⁰ Warren's (2007) study targeted 134 village website's webmasters in the UK but did not look individually at a single village website.

he found that 84% of respondents felt that village websites provided local information and that 32% felt that it attracted tourists to the area.

By contrast, other users agreed that the site had a 'good lay-out' but in terms of information, it was boring and out of date. A female in her fifties stated that:

"The Hatherleigh Community Website is well set up, it tells me what I already know, it is more useful for visitors than locals. There could be more details about groups etc... more times and dates for meetings. Maybe an e-mail newsletter would be good to let you know what is happening and when" (Respondent 86).

The younger generation did not find it very interesting. A teenage female found it boring: *"The Hatherleigh Community Website has a good layout but there is nothing on there to make you keep coming back onto the site, it could do with games for children that involves Hatherleigh, like quizzes"* (Respondent 79).

Similarly, another respondent found the HCW disappointing, for instance, a male in his twenties stated that:

"I was very dissatisfied, it is very bland, it does not contain lots of details about Hatherleigh. I do not think it gives people who are considering coming to Hatherleigh a lot of inspiration, overall it does not give out the best of Hatherleigh and is also not suitable for young people" (Respondent 203).

These responses demonstrate that although respondents reported different attitudes about the HCW, they held consistent levels of satisfaction about its functions. The site seemed to work better with business and this may be because the site is sponsored by many of them. Criticisms included the need for increased and better quality local information with more attention given to the needs of the younger generations.

There is a dearth of studies which can provide comparable findings; studies about village websites are somewhat limited in the UK as they are a recent phenomenon (Warren 2007). This prompted investigatory visits to several other local town

websites²¹, using the following dimensions for comparison: scope of feature, attractiveness, accessibility, ease to navigate, local events, tourism and business directories. It seems that the HCW competes favourably, as it is well set-up and easier to navigate than many other websites. The HCW is the only one which offers a forum to enable users to discuss subjects in relation to different local issues or for visitors' feedback. However, none of these websites including the HCW offer a chat room or free email address or entertainment that might attract younger individuals.

Data from the questionnaires, interviews and participant observation suggest that access to the HCW was not comprehensive and that there is potential to increase its value for people in Hatherleigh. The following list reflects the suggestions residents made to improve the website.

- Create greater awareness of the site as a research tool;
- Encourage residents to participate by inviting users to add stories, articles and jokes;
- Target all sectors of community and maintain a balance between business, social groups and clubs;
- Target all generations, because the younger generations' interests are distinct from those of older groups;
- Make the site the primary tool for all local information by connecting the site to government websites.

²¹ Colyton (East Devon), Modbury (South Devon), and Chagford (West Devon), all of them are market towns located in Devon with a population of under 2000 inhabitants.

5.9 Conclusions

This chapter has analysed internet use in Hatherleigh. Following Castells' (1996) theory of 'the information age', this has focused on the interlinkage between ICT and societal change. Castells has claimed that ICT affects society and particularly rural areas, referring to the positive impacts that ICT time-space compression brings. Robertson (1992) and Walsham (2001) argued that ICT has already had a substantial impact on global space-time compression and in particular, on increased awareness in society about global issues.

This chapter has presented an analysis and discussion of the key social factors which characterise internet users and non-users in Hatherleigh. Examining rationales for using the internet has exposed how it has engendered various societal changes in Hatherleigh. The data demonstrates that people in Hatherleigh understood the beneficial opportunities that internet technology offered them and the community involvement which was necessary to gain a broadband connection supports the work by Wilcox (1996), who argues that the information society emphasises people's desires and needs to utilise ICT. Furthermore, the Chapter shows that there has been a significant response to the availability of broadband in Hatherleigh. However, this was affected by factors such as age, gender, employment and household type, indicating different perspectives about and use of the internet. There was also evidence of a 'digital divide' or 'ICT exclusion' between internet users and non-users (Section 5.3). The analysis showed significant differences between age, employment status, and household type and internet users/non-users although there was no relationship evident by gender. This reflects previous studies (Rogers 1995; Castells 2004; So *et al.* 2005; Ofcom

2006; Selg and Svensson 2008) which posit that ICT adoption is underpinned by socio-economic factors.

Section 5.4 discussed how email, getting general information and shopping on-line were the main internet uses in Hatherleigh and that email, shopping on-line and general information about holidays, housing and education were used by all age and employment categories. It became further clear that the internet has changed some aspects of rural life, in particular communication and business. Respondents identified the internet as an important tool for new job opportunities which restructure the sphere of production in rural areas (Dabinett 2000; Castells 2003).

The analyses revealed most internet users in Hatherleigh were 'self taught' and that 'home' was where most internet access took place. This suggests that the lack of formal internet training in Hatherleigh was not a barrier to use. The chapter also analysed respondents' satisfaction with websites generally. From this it was understood that most of the Hatherleigh internet users perceived increased awareness of the internet and the services provided on-line through different websites.

Finally, respondents were not only aware of the need for modernisation, but were able to promote Hatherleigh within the 'global village' by having a community website (HCW) which represents Hatherleigh and promotes local tourism and business. Although most internet users were satisfied with the set-up of the HCW, this website failed to be the primary tool for Hatherleigh residents seeking local information (this is discussed further in Chapter 7) and this may mean that further action is needed to engage people.

These findings, therefore, suggest that:

- Hatherleigh is similar to other small rural town in the UK and abroad with regard to ICT access and use;
- Internet use in Hatherleigh is similar to that reported in other parts of the UK;
- The 'remote rural' location of Hatherleigh means that there are certain significant advantages to residents in using the internet to replace the lack of services such as lack of public library, and to counter the geographical remoteness from shops and employment opportunities.

The investigation of ICT adoption in Hatherleigh has shown that residents are aware of the benefits of using the internet but that there is a sector of the population that do not use the internet, which effectively excludes them from services and opportunities. This raises questions about ICT inclusion and exclusion which is discussed in Chapter 6.

Chapter 6: ICT inclusion and exclusion in Hatherleigh

6.1 Introduction

Chapter 5 established that there were two distinct groups of internet users and non-users in Hatherleigh. These groups provide an example of what has been termed in previous studies as the 'digital divide'. Chapter 5 identified that people in Hatherleigh used the internet mostly for email, seeking information and shopping on-line and that, in general, people were satisfied with the internet. However, it has been argued by numerous authors that problems faced by people in remote areas can be ameliorated by new technological transformations linked to ICT (Graham 1994; Castells 1996; Woods 2005; Moseley and Owen 2008). However, this relies on the widespread public adoption of internet services, which as yet, does not exist in Hatherleigh. Therefore, the introduction of ICT to rural areas adds a different dimension to the debate, namely that of 'ICT exclusion', which calls for greater understanding of the inter-linkages between ICT and its use in rural areas and specifically considers the rationales of non-users.

This Chapter will assess the second objective of this thesis which is to investigate patterns of ICT inclusion and exclusion in Hatherleigh. It provides in-depth analyses of the ways in which ICT can help overcome or reduce barriers associated with distances and isolation (Clark 2000; Woods 2005; Moseley and Owen 2008) and provides insights into the characteristics of ICT inclusion. It also explores the rationales of internet non-users, developing a typology of non-use

through which it becomes clear that some groups in Hatherleigh are likely to face further ICT exclusion in the future.

In order to carry out this analysis, the Chapter analyses users' perspectives about the impacts that the internet has on their lives. Participants were asked to evaluate five statements (see below), the results from which contribute to a deeper understanding of how rural people perceive benefits from ICT inclusion. Section 6.2 presents the data about impacts the internet has on residents of Hatherleigh in terms of reducing isolation, providing services for young people, enhancing communication, expanding services, impacting on migration and improving overall quality of life. Section 6.3 then presents data about internet non-use, exploring different rationales, and using these to develop a typology of non-use which can inform strategies to promote ICT inclusion. Finally Section 6.4 provides the conclusions.

6.2 Impacts of the internet

Chapter 2 discussed how ICT can help people in rural areas to overcome or reduce barriers associated with distance and isolation. Chapter 5 highlighted the impact of internet use on social relations for people in Hatherleigh and how new forms of communication, information seeking and employment opportunities offered by the internet benefited residents who were otherwise geographically remote. In considering how to evaluate the impact of the internet some authors have suggested that the extent to which it is integrated into people's lives should be considered (Katz and Rice 2002; Livingstone and Bober 2003). From this perspective, assessing the user experience is essential and this is mirrored in the

evaluation of other technological products and services (Wilson and Sasse 2004). Building upon these ideas and in accordance with previous literatures (Table 2.1) the following hypotheses will be considered (the questionnaire data for which are presented in Figure 6.1 and the discussion in Sections 6.2.1- 6.2.5).

1. ICT helps rural people feel less isolated (Cross and Nutley 1999; Strover 2001; Woods 2005; Tookey *et al.* 2006).
2. ICT helps young rural people to communicate (Sibley 1995; Valentine and Holloway 2001; Lægran 2002; Schafer 2008;).
3. ICT improves services in rural areas (Clark 2000; Schmied 2005; Moseley and Owen 2008).
4. ICT helps rural people to remain in their towns or villages (Boyle and Halfacree 1998; Cloke *et al.* 1998; Hugo and Bell 1998; Millard 2005; Schmied 2005).
5. ICT raises the quality of life in rural areas (Clark 2000; Malecki 2003; Woods 2005; Tookey *et al.* 2006; Schwanen and Kwan 2008; Moseley and Owen 2008).

6.2.1 'The internet helps me feel less isolated'

Isolation is just part of the reality of rural communities worldwide (Nutley 1999), however, isolation is not solely geographical as groups within society can feel isolated, for example the old and the young (Cross and Nutley 1999; Strover 2001; Woods 2005; Tookey *et al.* 2006). Figure 6.1 shows that 44% of internet users 'agreed somewhat' with the statement that 'the internet helps me feel less isolated', and 28% 'agreed' they felt less isolated because of the internet.

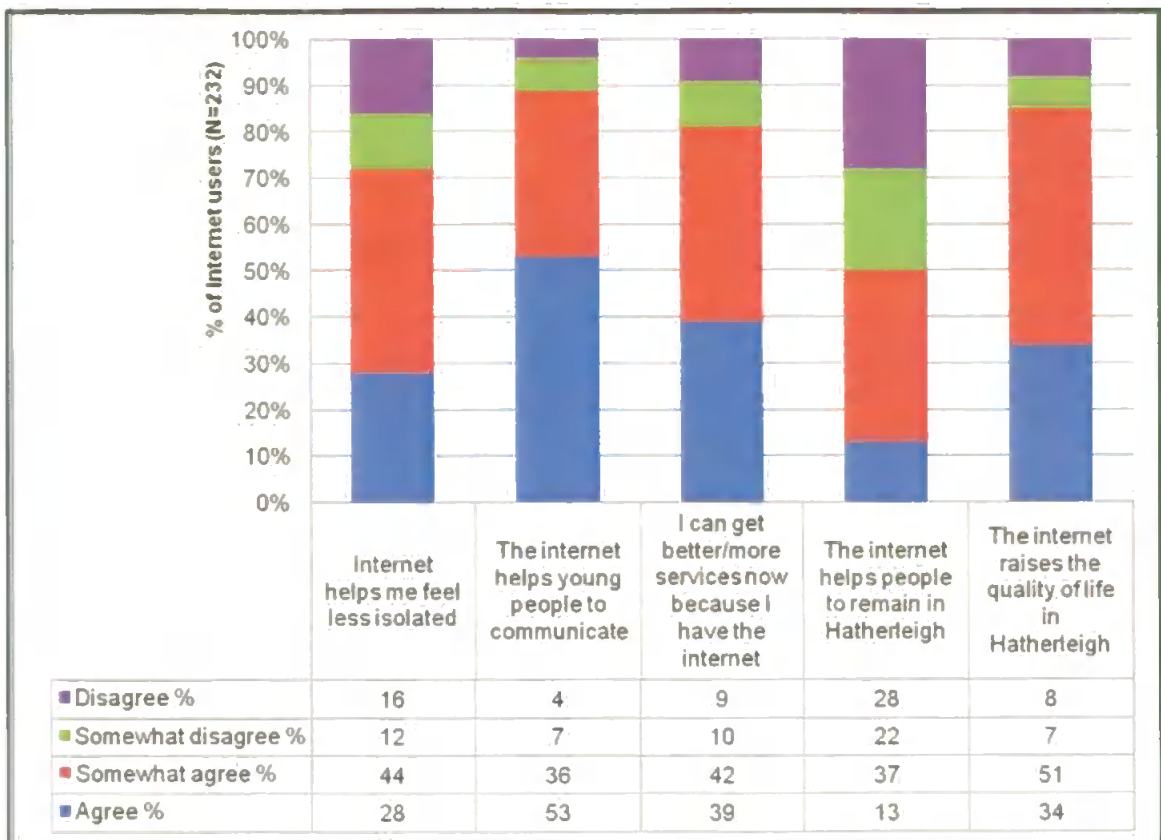


Figure 6.1: The impact of the internet on people in Hatherleigh
 (Source: Author's questionnaire, 2007)

This is in line with Woods (2005:106) who argued that *“in the late twentieth century, the possibilities offered by new telecommunication technologies were eagerly exploited as a tool for overcoming rural isolation”*. The interviews also support this, as participants reported that without the internet they would be isolated from family and friends, and would have limited chances to communicate with them so participants maintained established connections through the internet.

“That’s the only thing about the internet. I use my internet for friends and family. They all live in Kent, or places like London. That is the only reason I’ve got the internet. Otherwise, I’d go out and do things myself” (Respondent 187).

The internet was described as essential for people to maintain connections with distant relatives and is representative of Cross and Nutley's (1999), Woods' (2005) and Tookey *et al's.* (2006) understanding of the internet increasing communication

possibilities. Participants reported that they were also able to initiate new social relationships through internet services, expanding personal connections:

"I think the internet has totally renewed my life and interests. As a big music fan I have found out when bands are touring, have made many new friends and music via My Space and The Microsoft Network (MSN). As a middle aged single woman, I have found the internet has enabled me to have a social life which I otherwise would not have had. I would not go out to pubs etc on my own, the internet has let me get to know people over a long period and to chat to them or on some occasions meet them at gigs and therefore feel less isolated" (Respondent 124).

This response emphasised how the internet helped to increase the quality of individuals' social lives and fulfil personal relationship needs, confirming work by Katz and Aspden (1997), McKenna and Bargh (2000), Strover (2001) and Kraut *et al.* (2002), who all observed how internet use could have positive effects on social identity and commitment among otherwise isolated people. The phenomenon of an internet-motivated renewal of social connections is also observed by Tookey *et al.* (2006) who argued that in rural Scotland, the introduction of broadband renewed different social activities and reduced the sense of isolation experienced by many rural communities which, in turn, maintained the viability of remote and rural communities.

6.2.2 The Internet helps young people to communicate

Chapter 2 discussed how previous literature found that rural young were more likely to express a sense of amenity deprivation (Sibley 1995; Woods 2005). Figure 6.1 supports this showing that 53% of internet users 'agree' and 63% 'somewhat agree' that the internet helped young people in Hatherleigh to communicate.

The interviews also lent support to this hypothesis. Participants claimed that young people in Hatherleigh use the internet to increase their quality of life in a rural area by widening their communication with other people who shared the same interests. Chatting on-line, games, music and other internet facilitated entertainment made young people feel less isolated. For example one mother stated:

"For my children, yes, they use the internet far more than I do, so I think for them it does help. It makes their lives easier because of being able to chat, communicate with friends and entertain themselves which is something ... I think as a rural population, we are quite used to not using things like that" (Respondent 150).

Similarly, Respondent 38 referred explicitly to the experience of living in a rural and remote area as problematic prior to internet availability in Hatherleigh:

"I just think the internet helps the children, because, again, it is so... because it is so rural and because all their friends are so spaced out, for instance, friends of my son can live thirty miles away, that is the school catchment area, so you are not going to be able to see your friends in the evening, so socially he can just go on to MSN and have a chat to his friends which, to me, is normal. But I would not do that, because I will pick up the phone. But then that is because I am used to having a phone" (Respondent 38).

This understanding was confirmed by Lægran (2002:157), who argued that ICT eliminates "*the friction of distance in question of location and social interaction*" for rural young people.

The importance of the internet for young people in Hatherleigh was also seen in comparison with other rural areas, for example, a participant referred to their daughter's friend, who lives in Northlew, another village in Devon which does not have broadband (see Figure 4.3, map in Chapter 4).

"My daughter's friends who live in Northlew are looked upon as being so poor because they cannot have internet access, so she cannot contact them through any of the social networking sites, and that stopped her from going there and spending a few days, because she feels she will be completely out of contact with her other friends. So certainly I would say the teenagers and the younger generations around here look on Northlew as the worst place to go because it is out of the loop. In that respect Hatherleigh is great" (Respondent 9).

This response indicated that young people who do not have access to internet broadband may face considerable social disadvantages, and this highlights a broader theme about the importance of internet availability as a decisive factor in where families decide to live. This corresponds with Schmied (2005:149) who argued that young families choose to live and settle in rural areas in Germany because improved ICT facilitates “*actual and/or virtual commuting and therefore reduce the need for urban living*”.

6.2.3 'I can get better/more services now because I have the internet'

Chapter 5 identified different types of internet use in Hatherleigh. Figure 6.1 shows that that 39% of internet users 'agreed' that the internet provides them with access to better and expanded services, and 42% of internet users 'somewhat agreed'. Moseley and Owen (2008) argued that accessing services such as education, shops, banks, entertainment and health advice that meet peoples' needs is difficult in rural areas if a car is not available, and poor public transport is also a problem in rural areas (Woods 2005). Public transport in Hatherleigh was inconsistent. Although there was supposed to be a daily bus service, personal observation established that in many cases the bus would not turn up, and if it did there was no guarantee there would be a return service. Participants often referred to internet services as providing opportunities that made their life easier than before. The increased opportunities of working at home, on-line shopping and reduced need to travel were among other benefits offered by the internet:

"The internet does provide new services, because I mean, for instance, Hatherleigh is 35 miles to the nearest station, so you can book your train tickets on-line and things like that ... I use the internet for shopping, I use it to find information for work, I was looking on something the other day regarding lower case keyboards, so it's just... yes, of course it does, it makes life easier, it means I do not have to go to a shop, or any shop so I don't have to drive anywhere to find it" (Respondent 150).

Internet users also referred to collective benefits made available through the internet to the town, and many participants expressed the opinion that Hatherleigh was no longer remote and inaccessible. Respondents observed that the internet improved social services in the town and recognised that the internet played a role with regard to social activities and tourism in Hatherleigh. For example, a female in her thirties said that:

"The Internet attracts people to the town, you know, the Sunday car boot and the Tuesday market. I mean, it's quite famous. And then there's the one-offs, like the festival and the carnival, which are brilliant, absolutely brilliant and the festival during the summer for a whole week, it is just superb, and it's superbly organised, and it's good fun, you know, and I suppose then the town is full and people do come to stay for that week because they know about the festival from many sources and also through the internet. All the rooms in the town will be filled, I think people probably use the internet to book their bed and breakfast and search for details on-line before visiting a location" (Respondent 89).

This response exemplifies the links between economic and social benefits. For example Respondent 4 argued that the internet could not influence Hatherleigh socially without also influencing it economically. He said that the *"Internet draws people to the town ... it is a bit chicken-and egg. Really, if people do not come to the town and spend money then the money is not invested in the town to make it more attractive"*. Participants, thus, demonstrated a pragmatic understanding of internet services:

"It does bring in things, I mean economically it's got to bring more money into the area, it's got to bring certain things in because people can outsource them. We have got little tiny companies here and if the internet was not there they would not be able to advertise, it is as simple as that. Yes you have got to have a website to advertise. Yes...and jobs around here probably depend on it now far more than they used to, for example I have a friend of mine whose company is an animal feed and so he uses it to advertise further afield than, you know, just the local farmers down the road. That is because he's changed jobs, from being a full-time farmer and now he has, like, three cows and a couple of horses, and has decided to diversify and go into animal food stuffs, which, at this precise moment in time is very expensive anyway, so he's sort of

using the internet to do his business on. So he gets benefits from it" (Respondent 150).

According to these statements, participants' perceived that the internet improves services in Hatherleigh, which supports the literature in Chapter 2 which suggested that rural peoples' ability to work from a distance and to communicate with customers, clients or employers is enhanced by internet availability (Clark 2000; Schmied 2005; Moseley and Owen 2008).

6.2.4 The internet helps people to remain in Hatherleigh

As discussed in Chapter 2, rural studies have given attention to the migration flows in and out of rural areas. Migration has been driven by factors such as job opportunities (Schmied 2005; Woods 2005), and welfare (Hugo and Bell 1998). In this context, Figure 6.1 above shows that 13% of internet users 'agreed' that internet services helps people to stay in Hatherleigh, and that 37% 'somewhat agreed' with this statement. It is likely that the people who agreed that the internet helped people to stay in Hatherleigh are influenced by the facilities offered by the internet. For example Respondent 19 referred to a friend's town which did not have broadband access and stated that he would not live in a town that lacked broadband access.

"I know a friend who lives in Belstone who does not have broadband internet access, and I know that those who have not used it before do not really miss anything but for me, I cannot imagine myself living there, it is impossible" (Respondent 19).

This response reflects how internet provision has become a factor in selecting whether or not to live in a particular place. Similarly, Respondent 2 described how she had moved away to live and work and that when she returned to Hatherleigh internet connectivity featured highly in her decision to stay in the town:

"It is quite strange to have moved. I was brought up in Hatherleigh, moved away for 20 years and then came back. It is quite strange to come back to somewhere twenty years on and it has not moved on that much. I have been all over the world. So I have seen all these amazing things taking off, lived in Germany for quite some time, so you can imagine technical details in Germany were well ahead of Britain, and then you come back over here... I actually lived up north for a while, and then I came back to Devon, and I can honestly say in twenty years it has hardly moved on which is quite nice, but at the same time, it is not that great because there are still things which are very central to living here, but they do not seem to be able to actively access this big wide world outside and I think that, again, it is an issue which the internet can ameliorate, you see it is important to me and I could not stay here [Hatherleigh] if there was no broadband" (Respondent 2).

Even though some participants perceived the internet as central to their decision to stay in the town, this was not so for all residents. For example, Respondent 230 who works from home as a web designer stated that:

"I like the community here, I have never been anywhere else, it is a very nice place to live... I work from home at the moment, but if there was no internet I would not leave Hatherleigh, I would work at the Co-op, the supermarket down the road, or I would just find somewhere else to work, that is all" (Respondent 230).

Although there was evidence of conflicting attitudes about the importance of internet access as a deciding factor in choosing to live in Hatherleigh, it was apparent that the internet has aided the mobility of rural residents (Cloke *et al.* 1998; Hugo and Bell 1998; Boyle and Halfacree 1998; Millard 2005).

6.2.5 The internet raises the quality of life in Hatherleigh

Chapter 6 has so far established that the internet affects users' lives by decreasing feelings of isolation, improving communication and individual services. Participants reported that the internet contributed to an overall increase in their quality of life. The questionnaire revealed that 34% of internet users 'agreed' that the internet raises the quality of life in Hatherleigh and that 51% of internet users 'somewhat agreed' with this statement (Figure 6.1). Respondent 81 perceived that the

internet increased quality of life in different ways for different groups in Hatherleigh:

"The internet is important for the town, it benefits young people and the elderly who may have been isolated but who can now access social support, work, transport, information and shopping. Hatherleigh looks like a more attractive place now to live and to visit" (Respondent 81).

This response highlighted the relationship between the individual benefits the internet can provide and the overall quality of life for residents of Hatherleigh. This is in line with previous studies such as Clark (2000:19) who argued that:

"People no longer need to commute to the cities. Many jobs can now travel to the workers using today's technology – revitalising traditional rural communities...and there is a determination of more and more people to achieve a better quality of life, avoiding the stress and pollution of commuting, and playing more active roles day to day in their communities."

It also became apparent that the internet had benefits beyond those solely for individuals. Internet users also reported that small business in Hatherleigh made use of the internet to improve the economic quality of life in Hatherleigh:

"The internet is important for the town, due to our rural location it is of great help. It enables business to reach a large number of customers and advertises the town facilities and services, increasing tourism. Hatherleigh is getting up-to-date now" (Respondent 84).

This response drew attention to the importance of the internet in promoting Hatherleigh businesses to a wider market. In this context, the insights gained through participant observation highlighted that many individual small businesses in Hatherleigh have their email address on the community website or in the Parish Pump. However, there are also several businesses which do not make use of email but do advertise on the HCW and in the Parish Pump (which is also available electronically). It is suggested that these businesses are benefiting from the internet, albeit indirectly. The reason for these businesses not having their own

internet domain may be that small businesses often lack the financial means, skills and awareness necessary to maintain an on-line presence (Warren 2008).

In line with other research on ICT in rural areas (Cloke *et al.* 1998; Clark 2000; Strover 2001; Schmied 2005; Woods 2005; Moseley and Owen 2008) the data demonstrates how participants' valued internet access for improving different aspects of their lives relevant to living in a rural area. This discussion suggests that internet access has had a significant impact upon the community of Hatherleigh in five key dimensions: reducing isolation, incorporating opportunities for young people to communicate, improving services, retaining the population and improving the overall quality of life. Internet access and use has changed patterns of everyday life in the town, particularly through developments in communication, economy and the social sector. The HCW plays an important role in the promotion of local business to a national audience and this is representative of broader trends where the internet is an increasingly important tool for promoting and distributing tourism services (Walle 1996; Moseley and Owen 2008).

In terms of household adoption of broadband, households enjoy access to content located elsewhere (Scottish Executive 2002) and internet users, by using the internet for shopping, banking and communication, were able to access a range of services which 'renewed' aspects of their lives made challenging by Hatherleigh's remoteness.

Chapter 5 highlighted a division in the community between internet users and non-users. Sections 6.2.1- 6.2.5 have discussed benefits perceived by internet users, but the context of internet non-use is also relevant to developing clearer

understandings of the characteristics of internet exclusion, therefore Section 6.3 now addresses non-use.

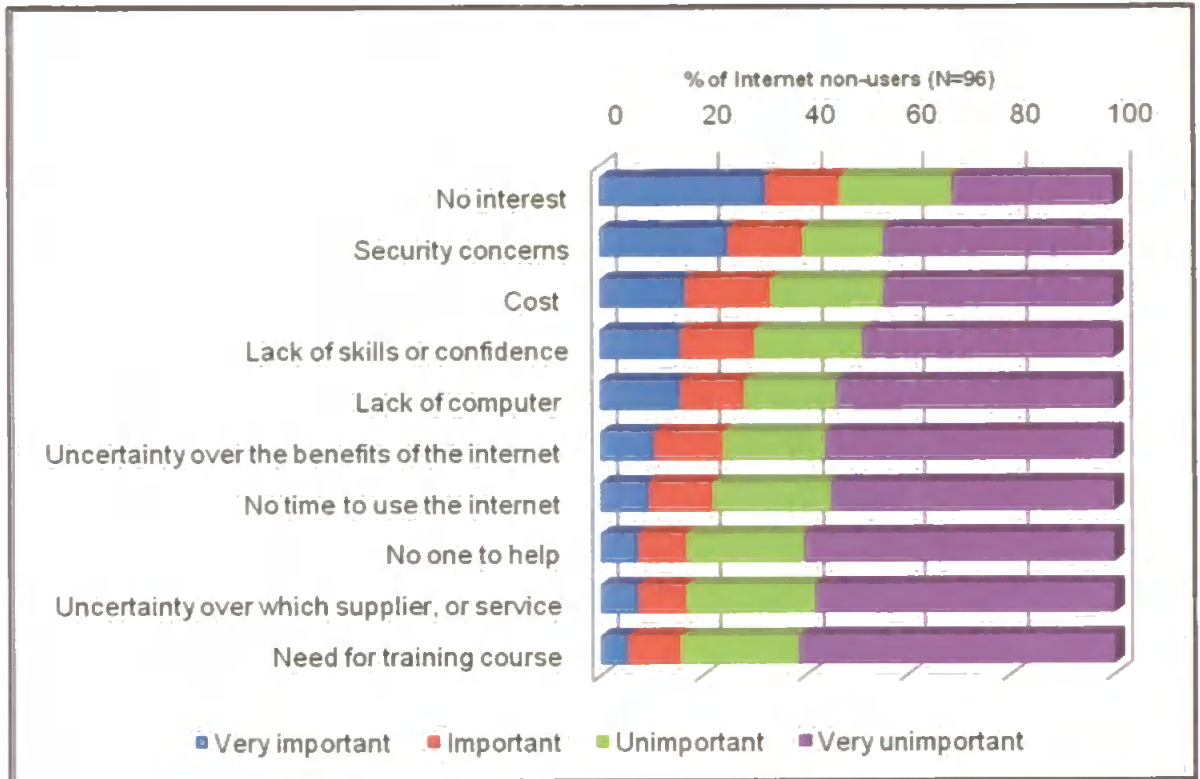
6.3 Internet non-use

In the case of infrastructure and access availability, the circumstances and rationales for non-use of internet are of interest. Chapter 5 discussed how, for participants in this study, internet use is associated with a variety of demographics: age, employment and household type. It highlighted that the majority of non-users belonged to the older generation in retirement or were unemployed, and that many were in a household without children (childless couple or single adult). The next section builds on these trends and attempts to probe more deeply into the reasons why 29% this study's respondents do not use the internet.

6.3.1 Rationales for non-use

Non-users in Hatherleigh were asked why they did not use the internet. It became apparent that this was a difficult question to answer, as in the majority of non-use cases the participant had no experience of the internet. The questionnaire data (Figure 6.2) indicated that the most frequently cited response was that respondents were 'not interested' (32%). Other non-users were concerned about security (25%), and 'cost' was another 'very important' reason (17%) alongside lack of computer ownership (16%). Some felt that they lacked the necessary skills to use computers or the internet (16%) and a number of respondents were uncertain about the benefits of the internet (10%). Other non-users said that they

had 'no time' to use the internet, and 'no-one to help' or 'need for training course' were other less cited reasons. In order to gain more insight about these rationales, these categories are now discussed in turn.



Number of internet non-users (N=96)

Figure 6.2: Rationales for non-use in Hatherleigh
(Source: Author's questionnaire, 2007)

'No interest'

Punie (1997) argued that 'no interest' has become a common justification when people are asked about technology use and that this applied to different social groups. In this study the question was framed specifically in relation to the internet, and 32% of non-users stated 'no interest' as their rationale for non-use. For example, a forty year old respondent said, "Generally not keen on computers, I do not want or need the internet" (Respondent 568).

In some cases having no interest in the internet was based on experience, but in other cases 'no interest' was based on assumptions. For example, a man in his seventies said that *"the internet isn't for people like me, I am an old man"* (Respondent 533). Other people held strong views about the internet which deterred them from using it, for example a forty year old female said:

"I have very mixed feeling about the use of the internet. Many people would say it is a good thing, I would however, say it is dangerous. Society in general has become much worse since the introduction of some modern technology, especially computers" (Respondent 531).

In a similar vein a male in his sixties felt that the *"Internet is just for business"* (Respondent 587). Although no statistical association was evident between 'lack of interest' and any demographic features, the elderly, females, retired people and childless couples were more likely to report no interest. These findings are representative of the wider literature. The Oxford Internet Survey (2007), for example, showed that between 2005 and 2007 there was an increase in individuals who reported lack of interest as a justification for not using the internet.

Security concerns

Forty per cent of non-users said that concerns about on-line criminal activity and pornography influenced their decision not to use it, but 45% reported that these activities were not influential. For example, an eighty year old male said, *"It is a shame that there is so much rubbish on the internet that is detrimental to family and community life, such as pornography and gambling, credit card theft and fraud"* (Respondent 590).

This response emphasises non-users' concerns over safety and controversial content on-line. A number of non-users talked in interviews about fears for childrens' safety as contributing to their reticence to use the internet. In many

cases these users were unaware of strategies such as technical solutions and identity safeguards which offer protection on-line. People reported not having the internet because they believed that chat-rooms made their children vulnerable:

"Well the only thing I worry about is about bad people who get on the internet and lie to you, especially for kids. I mean, my daughter might be using this computer and someone decides to takes advantage of her because she does not know what she is doing. That is the only thing I am afraid of" (Respondent 531).

The literature has also suggested that security concern influences internet adoption (Jarvenpaa and Tractinsky 1999; Harris and Schwartz 2000). This lends support to the empirical evidence here, which clearly indicated that the majority of non-users, and particularly those over 60 years old, did not use the internet because of security reasons. A study by Choudrie *et al.* (2005) in the UK found that people over 50 did not feel comfortable with on-line services. In this study, 50% of non-users aged 60+ years reported that security was an important reason for non-use. However, a study by the Office of National Statistics (2007a) found that there was a decrease in the percentage of people who did not use the internet in the UK because of security concerns from 12% in 2003 to 7% in 2006.

Cost

For 17% of internet non-users, the cost of the internet was a 'very important' reason for non-use and a further 17% reported cost as 'important'. The rest stated that cost was 'unimportant' or 'very unimportant'. The cost of internet services has been much discussed in recent years. For examples, Bauer *et al.* (2005) examined broadband diffusion across 30 OECD countries and found that the main factors influencing broadband adoption were cost conditions of network deployment and the preparedness of the nation. However, people who do not use the internet stated that the cost of services was not limited to the cost of the connection and

also involves computer equipment and, in some cases, a training course. Strover (2001) found that in the late 1990s households in rural America were less likely to own a computer and have internet subscription than their urban peers.

A male in his seventies reported that cost was a decisive factor for non-use. *"My computer has broken down, I cannot afford to have my computer repaired at the moment and if I did I cannot afford the broadband fee. Perhaps when the fees come down I might buy a new one"* (Respondent 543). This response exemplifies how the cost of an internet connection has two components, one which is the cost of the computer and the other which is the ongoing internet subscription.

In other cases, the household may have an internet connection and some family members may be users but other members are excluded either due to privacy issues or family members being reluctant to let others use their computers. For example a female non-user in her sixties explained how her seventy year old husband had control over the computer:

"Yes we have a computer and the internet; we use to communicate with our kids who live in America. I do not know how to use it but my husband does. I asked him many times to show me how to do it but every time he has tried to teach me, he has not let me touch the mouse or the keyboard or even sit on the chair in front of the screen. Oh, he is selfish" (Respondent 563).

Thus, it became clear that cost is an important reason for non-use in Hatherleigh which is important when considering that there is limited public access to internet services. In this context, cost may limit future opportunities for non-users in Hatherleigh to go on-line, unless improvements are made to facilitate public access.

Uncertainty over the benefits of the internet

Ten per cent of non-users reported that 'uncertainty over the benefits of the internet' was 'very important' and 14% said it was an 'important' factor determining non-use. The remainder did not feel that uncertainty was relevant. This is in line with Warren (2004) who found that the initial adoption of ICT amongst UK farmers presented many difficulties, including their perception of the relative benefit of using ICT, educational factors and preference for using newspapers, television, the fax and phone. It was, however, also evident that many internet non-users knew people who were users (Table 6.1) and participant observation and interviews revealed that within Hatherleigh internet users shared their on-line experiences with friends, family members and neighbours. Non-users frequently referred to their friends' (internet users) ability to buy cheap goods through the internet:

"The internet is good for advertising, shop goods, hotels, opening and closing times etc. All my friends shop on the internet and get lots of bargains, it saves time, energy and money on shopping for goods. I do not see why you should get it cheaper off the net than in the shops. I do not have the money so that is it" (Respondent 561).

	How many people do you know who use the internet?	
	<i>Count</i>	<i>%</i>
<i>None</i>	2	2%
<i>Some</i>	55	57%
<i>Most</i>	35	36%
<i>All</i>	4	4%
Total of internet non-user	96	100%

Table 6.1: Non-users' network of internet users
(Source: Author's questionnaire, 2007)

These findings suggest that uncertainty about the benefits of the internet was not well substantiated as a justification for non-use and that overall, cost was a more important factor.

No time to use the internet

Nine per cent of non-users said that 'no time' was a 'very important' reason and 13% said it was an 'important' reason not to use the internet. The interviews revealed that many people had busy lifestyles which they perceived left little time for using the internet. For example a female in her seventies said, "*I do not have time, I am too busy; I have many other interests, for example, animals, music, I also work in the chapel and support local activities*" (Respondent 580). This response was representative of broader trends in Hatherleigh where it was common for people to be involved in church activities and to keep animals. Many non-users were also involved with child care. As there is no nursery provision in Hatherleigh, it was grandparents who helped with grandchildren. A sixty year old female said "*I do not think I can use the internet, for me no, no, no time, I play piano, and I am a babysitter to my two grandchildren. Their mum works in Barnstaple, and dad works in Exeter, they have to. So you see I am too hectic and too busy to learn new things*" (Respondent 539). In addition to this there was evidence of numerous popular social activities in Hatherleigh that did not require the internet (Table 5.12).

Other reasons for non-use of the internet

Figure 6.2 also presents data about the impact of the 'need for training', 'no one to help' and 'uncertainty over supplier' as constraints on internet use in Hatherleigh. It was sometimes difficult for people, especially the elderly and retired, to make the

necessary connections with family or friends which could support them in using the internet, and it was difficult for them to travel in order to seek internet training. Furthermore, many non-users described themselves as reserved, shy, inhibited and quiet (Kraut *et al.* 2002), so it was not easy for them to ask younger people to teach them how to use the internet or to seek out internet training in Okehampton²². A female in her sixties said, *"I would like to use the internet but I can't go for a training course with lots of young people around, I would prefer it if there was training course for people of my age, that would be much more helpful"* (Respondent 520).

This section has explored the rationale for internet non-use in Hatherleigh and has provided insights about ICT exclusion in this rural area. The main justifications for non-use were 'no interest' and worries over security and cost, which has in previous research been the main reason for non-use (Geroski 2000, Strover 2001). The impact of cost may decrease in the future due to the increasing affordability of broadband services and computer equipment. It is also of note that in cases, broadband is available in a household, but family members who are internet users exclude other members on grounds of ownership. Although reasons for internet non-use are similar in other locations, non-use is important in rural locations such as Hatherleigh because the internet is perceived as an important solution to economic and social issues associated with geographical distance, and people who are not using this technology are therefore likely to remain excluded (Warren 2007). It also became clear that non-users often held specific rationales which led to the development of a typology of internet non-use. The typology aims

²² The nearest city where they can attend an internet training course

to represent the range of non-users' experiences and to further understanding about ICT exclusion.

6.3.2 Typology of internet non-use

Golding (2000) argues that developing more sophisticated empirical understandings of disparities within engagement with new technologies is a pressing task for social science in the early 21st century. This section therefore builds upon the rationales for internet non-use in Hatherleigh and to further empirical understanding about ICT exclusion.

As discussed in Chapter 2, recent empirical studies have begun to cast light on the nature of internet non-use. For example, the Pew survey of USA internet use has identified groups of 'evaders' 'drop outs', 'intermittent users' and the 'truly unconnected' (Lenhart *et al.* 2003). Similarly, Wyatt *et al.* (2002) developed four categories for non-users: 'resisters', 'rejecters', the 'excluded' and the 'expelled'. Other studies have also hinted that distinct groups of 'non-users' of computers exist from people who have never used a computer through to those who make minimal use of them (Cabinet Office 2005). These hierarchies of computer non-use have been shown to be complicated by the fact that patterns of non-engagement vary between technologies (Rice and Katz 2003; Anderson 2004).

In this section Wyatt *et al.*'s. (2002) categories will be used to make distinctions between internet non-users in Hatherleigh. The Wyatt classification was chosen as it reasonably covers all dimensions that might have a link with internet non-use. Wyatt *et al.* (2002) suggested that some people might choose not to use the internet and that this choice does not always reflect a position of disadvantage. Their four categories of non-use are:

- 1) **The resisters.** Those who never used the internet because they do not want to;
- 2) **The rejecters.** Those who have used the internet but then stopped because they found it boring or expensive;
- 3) **The excluded.** Those who have never had access but would like it;
- 4) **Expelled.** Those who had internet access previously but have involuntarily lost it through, for example, leaving formal education or changing jobs.

(Wyatt *et al.* 2002: 37)

In order to analyse non-use rationales in relation to these categories, some statistical analyses were undertaken. The relationship between 'previous internet experience' and 'expectation to use the internet in the future' was explored (Tables 6.2 and 6.3). Table 6.3 shows a significant relationship between previous internet use and respondents' intention to use the internet in the future (Chi square = 5.474, DF=1, P= 0.019).

			<i>Would you like to use the internet in the future?</i> (voluntary decision)		<i>Total</i>
			no	yes	
Have you ever used the internet? (previous internet experiences)	No	Count	34	13	47
		Expected Count	28.4	18.6	47.0
		% pervious internet experiences	72.3%	27.7%	100.0%
	yes	Count	24	25	49
		Expected Count	29.6	19.4	49.0
		% pervious internet experiences	49.0%	51.0%	100.0%
Total	Count	58	38	96	
	Expected Count	58.0	38.0	96.0	
	% pervious internet experiences	60.4%	39.6%	100.0%	

Table 6.2: Relationship between using internet before and expectations to use internet in future (Source: Author's questionnaire, 2007)

	Value	DF	P
<i>Previous internet experiences and voluntary decision to use the internet in the future</i>	5.474	1	0.019

Table 6.3: Chi-square test, using internet before and expectations to use internet in future (Source: Author's questionnaire, 2007)

This relationship was discussed in interviews with non-users. In some cases, respondents who had previously used the internet and had found the experience beneficial reported that they would use it again if there were fewer barriers to use. For example, a non-user in his forties had used the internet before and wanted to use it again but reported that cost was a decisive barrier: *"I used the internet a little bit when I lived with an ex-partner. If I had the internet now it would help me to access information quicker and faster and keep me up-to-date with relevant information. I could probably also save money by making purchases on-line, however; at the moment I cannot afford to buy one"* (Respondent 586).

In contrast, some non-users had used the internet and found they did not benefit from using it. A respondent in sixties stated that *"I used the internet before when I worked in the primary school here in Hatherleigh, honestly I found myself unimpressed by computers and the internet, you can have too much of a good thing"* (Respondent 588).

With regards to people who had never used the internet before, they were divided between people who would like to use the internet in the future and people who do not want to use the internet at all. For instance, a female in her sixties (Respondent 520) described how she wished to use the internet, but she could not afford a computer. She was upset when her son bought a new computer and gave his old one to his eight years old to play with, as she felt she would have benefited

from having it. Other non-users had no previous internet experience and no plans to use it in the future as they were uninterested and unwilling to use the internet (Respondents 524, 546, 580). Therefore, according to the classification devised by Wyatt *et al.* (2002), Hatherleigh internet non- users can be clustered as presented in Table 6.4.

	<i>Never used</i>	<i>Used in former times</i>
Voluntary (do not want to use the internet in future)	'Resisters' do not like or do not need 35%	"dropouts" 'Rejecters' do not like or do not need 25%
Not voluntary (want to use the internet in future)	'Excluded' Cannot use for reason out of own control 14%	'Expelled' Involuntary loss of previous internet access 26%

(Number of internet non-users=96)

Table 6.4: Typology of internet non-users of Hatherleigh

(Source: own data; adapted from Wyatt *et al.* 2002)

The numbers in the table above were calculated manually based on Table 6.2.

Table 6.4 shows that 35% of non-users in Hatherleigh are 'resisters' which means that they never used the internet before and that they do not wish to do so in the future. Table 6.4 also shows that 25% of non-users are 'rejecters'. In terms of an internal digital divide that means that more than half the people who do not use the internet in Hatherleigh do not wish to. This disinterest in the internet had a negative impact on non-users' inclusion in the digital sphere, and for their participation in social activities made accessible through the internet. Table 6.4 also shows data for 'excluded' (14%) and 'expelled' (26%) groups and it is suggested that ICT exclusion in Hatherleigh could be decreased by providing support to these groups who experience problems with cost and access.

Several respondents claimed that they benefited from using the internet through an intermediary. However, Wyatt's *et al.* (2002) classifications do not include this form of internet access, which suggests that this relationship deserves further exploration. In order to explore this, the relationship between 'has anyone ever used the internet to help you?' (getting on-line services indirectly) and 'would you like to use the internet in the future?' will be discussed. Tables 6.5 and 6.6 show that there is a significant relationship between these two variables (Chi square= 5.148, DF=1, P= 0.023). Table 6.5 explains the direction of this association and reveals that for non-users who were helped to benefit from the internet, the *actual* count is higher than the *expected* number of non-users likely to use the internet in the future. For non-users who have not received indirect benefit from the internet, the *actual* count is lower than *expected* number of non-users who are likely to use the internet in the future. Therefore, the non-users who were helped by internet users to obtain benefit from the internet such as making purchases and looking for information are more likely to use the internet in the future.

			<i>Would you like to use the internet in the future?</i> (voluntary decision)		<i>Total</i>
			No	Yes	
Has anyone ever used the internet to help you? (getting on-line services indirectly)	No	Count	32	12	44
		Expected Count	26.6	17.4	44.0
		% getting on-line services indirectly	72.7%	27.3%	100.0%
	Yes	Count	26	26	52
		Expected Count	31.4	20.6	52.0
		% getting on-line services indirectly	50.0%	50.0%	100.0%
Total	Count	58	38	96	
	Expected Count	58.0	38.0	96.0	
	% getting on-line services indirectly	60.4%	39.6%	100.0%	

Table 6.5: Relationship between 'getting on-line services' and 'voluntary decision to use the internet in the future'
(Source: Author's questionnaire, 2007)

	Value	DF	P
<i>Getting on-line services indirectly and voluntary decision to use the internet in the future</i>	5.148	1	0.023

Table 6.6: Chi-square test 'getting help from internet user' and 'expectation to use the internet' (Source: Author's questionnaire, 2007)

Table 6.5 shows that the non-users who had experience of someone using the internet on their behalf were equally divided into two groups of 26 respondents. One group reported that they will use the internet in the future and the other reported that they will not, while most non-users who had no experience of indirect use of the internet reported no plans to use the internet in the future. Therefore, a typology can be suggested which accommodates this new knowledge about internet non-use (Table 6.7).

	<i>No indirect access</i>	<i>Some indirect access</i>
<i>Voluntary exclusion</i> (do not want to use the internet in future)	'Resolute' 33%	'Ignorer' 27%
<i>Non-voluntary exclusion</i> (want to use the internet in future)	'Neglected' 13%	'Converter' 27%

Table 6.7: Typology of internet non-users with regard to getting on-line services indirectly through help from others (Source: Author)

Four groups of non-users were identified for this new typology: resolute, neglected, ignorer, and converter.

Resolute: those non-users who believe that "you do not miss what you have never tried" (Respondent 530) and who felt that "I can live perfectly well without it" (Respondent 546). These individuals are confident that they do not need the

internet and that it will not benefit them. These individuals were normally retired with a busy social life. A female in her sixties said:

"Why I should bother myself by using the internet, I can read and write and use the telephone, I have always managed to contact any business I require. Honestly, I do not know enough about it to give an intelligent answer, the internet seems to be the way forward for the young generation, but this means we shall lose the ability to spell and do mathematics. In addition, I am a church member, a member of the History Society Club, a member of the Moor Management Committee, past president of the Hatherleigh Silver Band, I help with coffee mornings for various charities, e.g. Shelter Box, Bible Society...etc so there are too many things I am involved in, so you see I am quite happy with my life" (Respondent 591).

Similarly, another respondent in sixties claimed that;

"The internet, it does not bother me at all. There are just so many other things that fill my time and interests; we do not need it here in Hatherleigh. Whenever you get a major change in structure and the way information is passed, I think there will always be a generation that will be on the edge of it, and I am just on the edge of it. The next generation will treat it naturally. The next generation, who are computer-literate and have no trouble using it and the information that is open to them. It will probably skip my generation, and I am sure there are many like me here in Hatherleigh who will hardly have ever used the computer" (Respondent 596).

Neglected: These non-users want to be on-line but are susceptible to barriers such as cost, support and access. This group of non-users is willing to use the internet if these barriers are overcome and they are provided with the necessary facilities. For example a respondent in their thirties stated, *"Many things advertised in magazines and on the television only give a website address and you feel disadvantaged if you cannot access this information that may be of interest and of benefit to you" (Respondent 523).*

Ignorer: This group of non-users has internet users in their social network who act as intermediaries and help them to access benefits from the internet such as purchasing goods, email, information and even entertainment. Thus, this group of non-users ignores to use the internet by themselves. A male in his thirties stated that the *"internet is good for booking holidays, purchasing, and price comparing but my partner finds information for me, I do not have time and I found it too frustrating for me to do it by myself" (Respondent 570).* Other people in this group

felt they were too old and had no time to learn new skills. For example a female in her sixties said *"I like the internet because I feel it would help access information quicker and faster and to keep me up-to-date with relevant information, but at my age it is not easy to learn a new thing particularly the internet which is too complicated for me to understand"* (Respondent 549).

Converter: This group accesses the internet through another individual, usually a family member and are motivated to use the internet themselves, but experience difficulties such as computer ownership, cost and lack of confidence. For example, a mother in her forties said that *"a lack of skills or confidence is the big factor but my daughter is patiently trying to teach me"* (Respondent 569). Other non-users were unable to go on-line for reasons like cost and no access to a computer but reported that without these limitations they were willing to adopt internet technology.

"I am involved in many activities in Hatherleigh and I also have our garden to look after. My two children live just around the corner and my wife and I look after their kids, they have got computers, I have watched them playing with it, I am a nosy kind of person, I always want to know everything ... but unfortunately we cannot afford to buy a computer" (Respondent 521).

This discussion establishes that the largest proportion of non-users are resolute and that these respondents are likely to experience further exclusion in the future. Warren (2007) suggested similar conclusions and warns that non-users are more likely to suffer relative disadvantage by not being able to participate in new and additional services accessible to internet users.

This typology maybe useful when considering strategies to encourage internet use. For example, it may be easier for the 'converter' group to be convinced to use the internet because they already have clear ideas about benefits the internet

offers. The 'neglected' group is the smallest group of non-users, but with some external help these individuals are also willing to use the internet. Meanwhile, illustrating to the 'ignorers' group that losing their intermediary internet helpers (e.g. children who left for University or friends who moved away) might put them at risk of not being able to benefit from internet services, and might drive them to consider active internet user in future.

There was an example of an ex-converter in the sample. An 82 year old non-user who lived in Hatherleigh with his seventy year old wife used to have his children and friends using the internet on his behalf, but he now uses the internet alone and can do so now because he was offered a laptop:

"The internet is a great thing, it is a way of being in contact with all sorts of information around the world. Before, when I wanted any piece of information I would go to children or friends for help ... I always wished if I could use the internet by myself ... the reason I am using the internet now, really and truly is because my son gave me a laptop, which I would not afford to buy otherwise. Now, I am very pleased, I do get a lot of information, when I want it I can go there and find things out from the internet. I do use it to look up certain things which I cannot readily get to hand because we do live in a rural situation, and if I want to go and see what is on at the theatre or something I would go to the internet to look it up and if I wanted to find out something about whatever it may be, for example, we went around Rosemoor Garden, we looked it up on the internet to find out certain things about it before we went there. We do use the internet for things like that" (Respondent 590).

These findings suggest that internet non-users in Hatherleigh display different intentions which can contribute to understanding differential ICT exclusion. The categories developed by Wyatt *et al.* (2002) are useful in understanding both passive and active resistance (Bauer 1995) as well as the rationale used by drop-outs (Katz and Aspden 1997). The results indicates that Hatherleigh non-users are more likely to be 'resisters' and to use rationales such as "*I am old and a Luddite*" (Respondent 590) and to feel excluded from internet use by virtue of relevance and age. However, about a quarter of non-users were in the 'expelled' group because of the lack of public internet facilities in Hatherleigh.

The study suggests the existence of different patterns of ICT exclusion within Hatherleigh and reveals that some non-users access the internet through the use of an intermediary. There is, therefore, potential for strategies which can specifically address the needs of each category of non-user in order to address ICT exclusion in this and other rural areas.

6.4 Conclusions

This chapter has investigated patterns of ICT inclusion and exclusion in Hatherleigh. Analysing how internet users perceived and experienced internet use showed that many were able to use the internet to overcome geographical challenges associated with living in a rural and remote environment. As already indicated in Chapter 2, ICT affects different aspects of rural life. Participants identified that the internet helps them feel less isolated, helps young people to communicate, provides better services and helps people to remain and prosper in a rural context. Participants were familiar with the individual benefits provided by the internet but were also aware of the impacts the internet had for the community as a whole. Participants' understanding of emerging internet opportunities corresponds with previous research on ICT in rural areas which outlined that without adequate connections to, and use of, ICT, rural communities may not be able to fully participate in the emerging information economy (Huggins and Izushi 2002; Strover 2003; Woods 2005).

In parallel to opportunities and benefits available to internet users in Hatherleigh, non-users may be at risk of exclusion. Internet non-users provided different

rationales for not using the internet of which lack of interest, concerns about security and cost were the most prohibitive.

Instances where non-users gained access to and benefits from the internet through intermediaries were explored. It was shown that in this context, non-users could be categorised into four groups: resolute, neglected, ignorer and converter, which demonstrates that non-users are not equally disadvantaged. This typology was beneficial in identifying 'resolute' non-users as the largest group of non-users and those who are the most likely to remain excluded from ICT.

Chapters 5 and 6 have explored patterns of ICT adoption, ICT inclusion and exclusion in Hatherleigh. The study has established that people in Hatherleigh have made good use of the internet for certain activities including shopping, employment, planning holidays and banking. Having established these trends, Chapters 7 and 8 turn to participants' use of governmental and non-governmental services in order to address the main aim of this thesis; to analyse the impacts of ICT availability and use for e-governance processes in rural areas in the UK.

Chapter 7: E-governance: local information, services and on-line interaction in Hatherleigh

7.1 Introduction

Chapters 7 and 8 will focus on the third objective of this thesis which is to assess the potential contribution of ICT to e-governance processes in Hatherleigh. Chapter 2 described how e-governance in this study refers to the use of ICT to improve the delivery of information, services and interaction between citizens and stakeholders (Okot-Uma 2001; Millard 2003; Odendaal 2003). Chapter 4 then highlighted the importance of both local and national scales in this study's analysis of e-governance, and suggested that the internet provides opportunities for local people who live in remote communities to press claim and engage with policy stakeholders at local-national scales (Staeheli 1994). Thus, in Chapters 7 and 8, specific emphasis will be placed on how residents use the internet for accessing on-line information and services and to engage with policy stakeholders within the *locality* of Hatherleigh (Chapter 7) and *beyond* the locality of Hatherleigh on a regional and national scale (Chapter 8). Figure 1.1 (Chapter 1) will be used as a framework to evaluate e-governance processes in the study area.

During the analysis it became evident that ICT does contribute to the process of e-governance as illustrated in Figure (1.1) but that this process is subject to numerous barriers. In addition, it will be shown that people in Hatherleigh had different experiences of e-governance processes. Although the use of the internet for accessing on-line information, services and interaction with policy stakeholders (e.g. local councillors) was not highly pronounced in the context of local e-

governance (Chapter 7), it was evident to a higher degree on a regional and national level (Chapter 8).

This Chapter focuses on how internet users in Hatherleigh perceive the internet's role in improving accessibility, efficiency and options in the delivery of *local* information and services. The analysis will also consider the interaction between people in Hatherleigh and local stakeholders through email, e-forms and e-voting.

Thus, the present chapter will address the following questions:

- How does the internet improve the delivery of information and services in Hatherleigh?
- How does the internet improve local interaction between citizens and stakeholders in Hatherleigh?
- What are the barriers hindering the implementation of local e-governance in Hatherleigh?

In order to address these questions, it was necessary to investigate the existing methods of local information and services delivery in Hatherleigh to establish participants' current preferences for local e-governance processes and stakeholder interaction. It became clear that the delivery of information and services through the internet was still work in progress and that participants' preferred more traditional methods of information and service delivery. In addition, even in cases where the internet was understood as a means for local on-line interaction, this was not normally adopted for communication between citizens and local stakeholders.

7.2 Preferred access to local information and services in Hatherleigh

Chapter 5 demonstrated that the majority of internet users used the internet for resourcing general information, for example about holidays and housing. However, participants developed alternative strategies to gain information pertaining to government and NGOs. It became clear that participants preferred to use offline, traditional media to be informed about, and to interact with, the local authority and associated agencies. It became evident that both internet users and non-users in Hatherleigh often felt that the delivery of local information was not sufficiently enhanced by the internet.

How participants used the local newspaper²³, Parish Pump²⁴, informal social networks and ICT to gain information and services offered some indication as to the relative importance of ICT for local information, services and interaction. Figures 7.1 and 7.2 present the data for internet users' and non-users' preferences for sourcing local information and services. For both groups, reading the local *newspaper* and *Parish Pump* is a crucial part of staying up-to-date with local information and services.

For internet non-users (Figure 7.1), *newspapers* and the *Parish Pump* occupied 'first choice' for 61% of non-users. This group felt that they had grown up with these media and argued that they were sufficient to meet their information needs. Nearly half of internet non-users (42%) reported that *word-of-mouth* was the 'first choice' for accessing local information, followed by *neighbours* (26%). Additional

²³ The local papers are the North Devon Journal, the Okehampton Times and the Western Morning News.

²⁴ The Parish Pump newsletter is produced monthly for and by the people of Hatherleigh. It is delivered free to the residents of the Parishes of Hatherleigh, Meeth, Exbourne and Jacobstowe and it is available electronically on the Hatherleigh community website www.hatherleigh.net.

sources of information such as leaflets, the radio, and posters were also used by internet non-users in Hatherleigh to get information about local issues and services. The use of television, social networks, the telephone and books were less frequently reported.

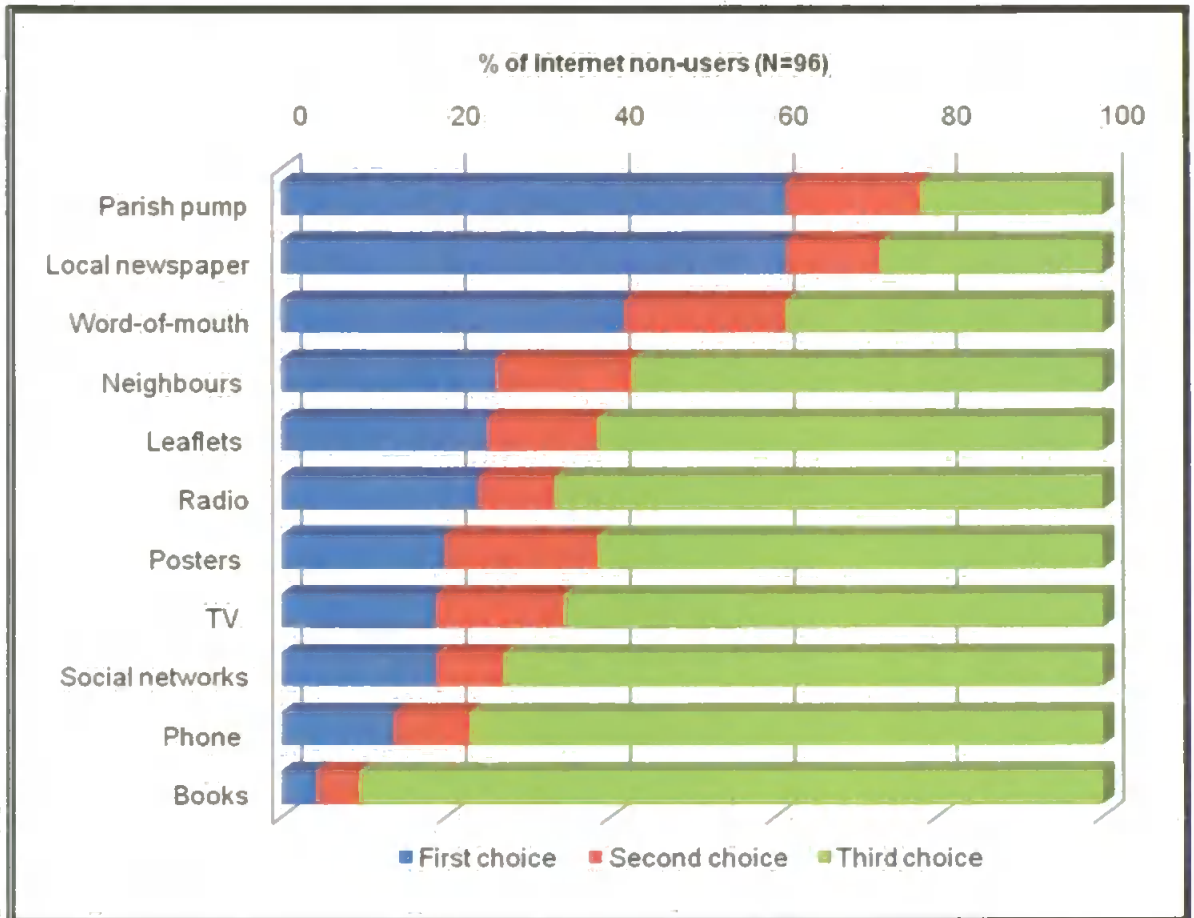


Figure 7.1: Access to local information and services by internet non-users
(Source: Author's questionnaire, 2007)

Figure 7.2 demonstrates that internet users also prefer offline, traditional media for local information and services. Figure 7.2 suggests that 53% of internet users preferred *newspapers*, 51% preferred the *Parish Pump* and 38% favoured *word-of-mouth* (38%) to access local information and services. In comparison, 23% used the *internet* to find out about local information and news. Social networks,

leaflets, neighbours, and posters were also used to a lesser degree by internet users to access local information and services.

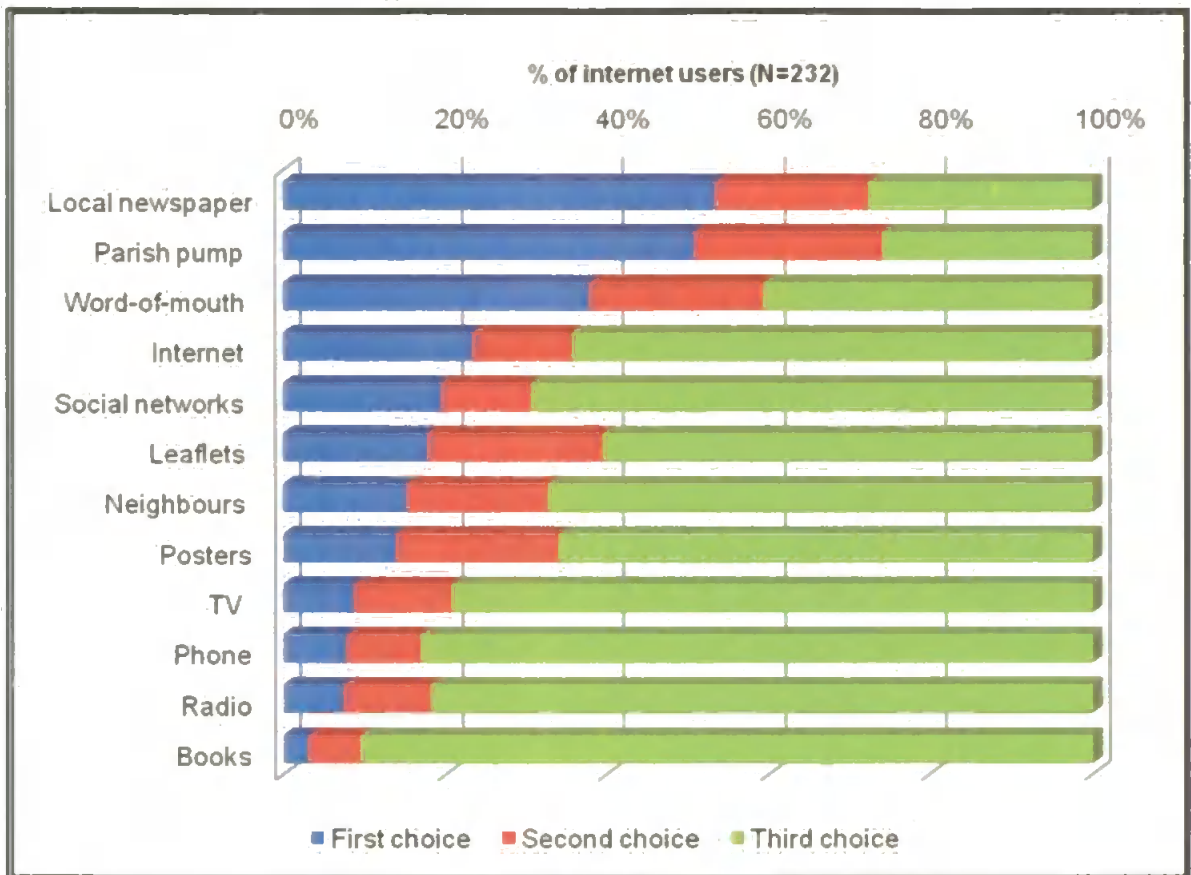


Figure 7.2: Access to local information and services by internet users
(Source: Author's questionnaire, 2007)

Therefore, it is suggested that offline media play an important role in providing local information and services in Hatherleigh. This is in line with Hindman *et al.* (2001) and Hindman (2004) who argued that historically, in the USA, the local community newsletters and magazines generally have been at the forefront in advancing the community's social and economic needs.

The interviews supported these findings, as participants repeatedly highlighted how the *Parish Pump* provided a wide range of local news including details about church activities, trips, announcements about other local events and about

business advertisements. Figures 7.3 and 7.4 present examples from the *Parish Pump*, and Figure 7.3 provides information about events.

Pastor Pat Legg-Bagg, The Vine Church, Hatherleigh.




<p>Sunday school and youth groups SUMMER OUTING Trip to Paignton Monday 18th August. Coach is leaving for Paignton at 9.30. Visit the Zoo, shops or beach. If you would like to join us contact Ruth Morris on 810710 for more information. <i>All children must be accompanied by an responsible adult.</i></p> <p>St. Boniface Annual Concert Local artists back by popular demand Wednesday September 3rd, Hatherleigh community centre, 7:30pm Ticket £7 inc wine and nibbles Superb raffle Tickets available at Salar Gallery</p>	<p>HATHERLEIGH CHURCHES TOGETHER YOUTH GROUP AUGUST CALENDAR (all events are in Old Schools 7pm-8:30pm unless stated otherwise)</p> <p>3rd August – Hungry? 7th August – Holiday Club (age 5 – 11 yrs) Methodist Church 11am – 4pm bring a packed lunch (to book: Call Sandra Trenaman 810459) 10th August – Fun afternoon 3 – 5:30pm Woodhouse Farm (by kind permission of Jim and Mary Hindson) Games in the woods, BBQ and Celebration with short service to end Holiday Club 17th August – Mirror, Mirror? 24th August – Bush Conference 7pm at Bow 31st August – Don't Bite Back!</p> <p>For further details please contact Kevin Down on 01837 811035 or 07886927111 (mobile) kevinddown@googlemail.com</p>
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August 2008 Hatherleigh, Meeth, Exbourne, Jacobstowe and Monkokehampton 3

Figure 7.3: Examples from the Parish Pump (Source: www.hatherleigh.net)

Figure 7.4 provides an example of local business advertising. Respondents reported that they eagerly awaited the arrival of what was often referred to as the 'little magazine', demonstrating its popularity amongst the local community.

In addition to the Parish Pump, participants also utilised local social networks to exchange information and to access services. Participants highlighted the importance of informal social networks that have been recognised elsewhere as characteristic of rural communities (Bjarnason and Thorlindsson 2006).

<p>M R Hutchins BUILDING CONTRACTOR</p> <p>TEL: 07828 436737</p> <p>All types of Building/Renovation work undertaken Good quality service</p>	<p>Alan Brimacombe</p> <p>thatcher</p> <p>Tel 01647 231033 Mobile 07980 620603 5 Cross Meadow, Spreyton, Crediton, EX17 5DX</p>
<p><i>Natural Beauty</i> Donna Hicks <i>Beauty Therapist</i></p> <p>Telephone Home: 01837 810848 Mobile: 07855478998 4a Bridge Street</p>	<p>BYTES COMPUTER MAINTENANCE</p> <p>BYTES</p> <ul style="list-style-type: none"> • Prompt Reliable, Low cost Service • Free Assessment, No Fix—No Fee. • Repairs, Upgrades, Broadband, Macs, Networking, Training <p>Tel: 01363 82842 MOB: 07906 298739 Email: help@bytescomputers.co.uk</p>
 <p>Dartmoor Tiling Professional Tiling Services</p> <p>Wall & Floor Tiling Under Tile Heating Waterproof Tanking Free Quotations</p> <p>01837 52013 07729 460746 www.dartmoortiling.co.uk</p>	 <p>Ross Pamell TREE SURGERY HEDGE CUTTING WOOD CHIPPING UP TO 8 INCHES</p> <p>Also logs and wood chip for sale</p> <p>Stone Cottage Hatherleigh</p> <p>Tel 01837 810700 Mobile 07971261466 Email r8rop@aol.com</p>
<p>NORMAN LOCK & SON Family owned Funeral Directors BLACK TORRINGTON, BEAWORTHY DEVON EX21 3QD TEL 01409 231281/231513 Pre-paid Funeral plans available Private Chapel 24hr Personal service</p> <p>Members N.A.F.D. Memorials</p>	 <p><i>Isabella Whitworth : textile artist</i> Painted and dyed silk scarves and shawls For local outlets, courses, workshops and exhibitions see www.isabellawhitworth.co.uk Phone 01837 811771</p>

4 Hatherleigh, Meeth, Exbourne, Jacobstowe and Monkokehampton August 2008

Figure 7.4: Local business advertising in the Parish Pump
 (Source: www.hatherleigh.net)

Respondents reported that exchanging information about local events and issues was commonly done through word-of-mouth. *"In this community, a lot of information passes by people talking, in the shop, in the pub, and the church"* (Respondent 596). Another respondent commented that, *"I work full-time so have no time to read any newspapers, so I depend on people who I meet in the pub to be informed about local news"* (Respondent 22).

Building on experiences gained through participant observation, Hatherleigh residents enjoy social contact. Table 5.12 demonstrated that Hatherleigh has numerous events, groups, clubs and activities which provide opportunities for residents to meet and talk. Also, during fieldwork, people would spend around an hour on their doorsteps talking with the author about their life, or the community, or other topics. In addition, it was observable that people exchanged news in the churches and in the two pubs. The value that respondents put upon face-to-face communication echoes Yarwood's understanding of rurality.

"Most of us feel that there is difference between urban and rural areas, we place certain values on the countryside and sometimes behave differently in the town than the country. For example, we may say 'hallo' to people we pass on a country walk (Gilg 1996), but would not do this on a walk in the city centre: we would probably get some very strange looks if we did" (Yarwood 2002:11).

The preference for offline, traditional media as the main source for local information and services has been illustrated by Hindman *et al.* (2001) who confirmed that in the USA, rural communities were more likely to use newspapers for local information than urban communities, and they acknowledged a connection between residency in rural areas and the widespread preference for traditional sources of information and services. However, participants were aware that the internet could contribute to local information provision:

"With regards to public or local information, to be perfectly honest, most of it comes out via the local newspapers, the Parish Pump or through direct information sheets from the council. Obviously for me that is enough, if we wanted to go and get more information then we could, via the web, because everywhere has got it, I appreciate that. It just does not ... I seem to have missed the need for it" (Respondent 559: internet non-user).

Internet users also shared this perception that although the internet can support traditional offline methods of information provision, it cannot, however, serve as a replacement for them.

"Sometimes you find that the internet is not as good as it should be, but on the whole it is good ... Sometimes the internet is sufficient, but sometimes I use it to get the initial information and then I will follow up with a phone call, perhaps to ask a specific enquiry ... often the internet does not give you a contact person and it does not give you a contact name and email address, it will instead give a generic email address, but sometimes you do not want that, I suppose I want to write or email a specific person" (Respondent 118).

Previous work by McQuaid *et al.* (2004) investigated potential uses of the internet for job seeking in a remote rural town in Scotland, UK. They found that although jobseekers were more likely to use the internet to look for work, traditional methods of job seeking remained important and that social networks in particular, provided a means of sharing information about jobs in a remote community.

7.3 The role of the internet in improving local information and service delivery in Hatherleigh

Internet access does not always engender participation in on-line activities (Millard 2006). This is evident from Figure 7.2 in which the *internet* was the 'first choice' for getting access to local information and services for 23% and 'second choice' for 13% of respondents.

As Chapter 5 noted, age, employment status, and household type impact upon people's internet use. However, there is a clear need to unpack these variables and the relationships between them in order to establish their significance for using the internet for local information and services. Chi-square analysis revealed no significant relationships for internet users' age ($p=0.066$), gender ($p=0.717$), employment ($p=0.285$), or household types ($p=0.831$). Therefore, the statistically significant associations between age, employment, household type and internet use were not replicated for using the internet to source local information and service delivery. This result can be explained in part by local information and

services delivery being met by offline media, but there is evidence to suggest that barriers to internet access may also be relevant and this will be discussed later in the chapter.

These findings support the conclusions of a number of previous studies highlighting the breadth and the depth of the 'digital divide' (Choudrie *et al.* 2005). Servaes and Heinderycks (2002) suggested that low internet adoption among disadvantaged groups can be highlighted not only by a lack of awareness, but also by obstacles associated with physical access to the internet and gaps in the skills required to exploit ICT. Also, McQuaid *et al.* (2004) found that there were no relationships evident between internet access, gender, income and using the internet for job seeking.

If the internet is to provide services for disadvantaged groups including those in remote communities, problems of skill gaps (McQuaid *et al.* 2004; Di Gennaro and Dutton 2006) and home internet access (Kuhn and Skuterud 2000) need to be addressed. Therefore Spearman Correlation was used to test for correlations between 'internet use for local information and services' and 'internet users' skills' and also 'internet use for local information and services' and 'home as location of internet use'. Table 7.1 presents the results.

	Internet use for obtaining local information/services	
	Spearman value	P
Internet skills	0.139	0.035*
Use internet at home	0.220	0.001**

*Correlation is significant at the 0.05 level (2-tailed), **Correlation is significant at the 0.01 level (2-tailed).

Table 7.1: The relationship between skills, use of internet at home, and internet use for local information and services
(Source: Author's questionnaire, 2007)

Table 7.1 shows that both 'home as a location for internet use' and 'reported internet skills' appear to be significantly associated with 'internet use for local information and services'. Those respondents who reported their internet skills as 'expert' or 'advanced' were more likely to use the internet for local information and services, which suggest that *proficiency* in internet use is a determinant for using the internet for this purpose (Figure 1.1). Home internet access was also strongly associated with using the internet to access local information and services, suggesting that *flexibility* was another important determinant. These results were supported by the interviews:

"We have moved from traditional media onto the internet. I mean the more that's available electronically the easier it is, in my case, to access it. I am a copywriter and editor and author, I am working from home ... So I would say that 90% of the information I require I obtain through the internet. Also for local public services we look on-line, for instance we check out the bus timetables on the internet" (Respondent 165).

Internet access and using the internet for local information and services, therefore, appears to be associated with factors related to *proficiency* of internet skills and the *flexibility* of internet access at home. Perhaps, more importantly, these findings suggest that people in Hatherleigh who invest in home internet facilities are those who are more likely to access local information and services on-line. However, it should be noted that accessing internet-based local information and services remains the activity of a minority of people in Hatherleigh.

These findings are supported in the wider literature. For example, the study by McQuaid *et al.* (2004) found that highly skilled people are more likely to use the internet for job seeking, and the same study concluded that the people with high domestic use of the internet increasingly used the internet to look for jobs. Similar results were also found in a USA based study by Kuhn and Skuterud (2000), who

argued that having internet access at home facilitates seeking information and services on-line.

An interview with the HCW editor about the role of the site as a tool for local information and services delivery revealed that despite going on-line in 2005, the HCW is still in the early stage of becoming a well-used resource for local information and services:

"The Hatherleigh Community Website is good because it gives people not only in Hatherleigh but everywhere all the dates of everything that is happening in Hatherleigh ... news ... events...and activities. It also provides information about business, the surgery and jobs around here. But as a whole, the people here in Hatherleigh do not yet rely on it ... and I think that is because they are not used to it ... they might well over time though ... maybe!"
(HCW's editor 2008).

The interviews revealed that for the 23% of internet users for whom the *internet* was their 'first choice' for local information and services, the internet was perceived to improve accessibility and efficiency and increase options for local information and services.

In respect to improved *accessibility* to local information and services, some internet users felt that the internet improved their chances of finding local information and services, particularly those who had been identified as having restricted social networks. For example, internet users who were newcomers to Hatherleigh found the internet useful for finding local information: *"if I have any queries about Hatherleigh as I am very new to the area, I log on to the website, i.e that is where I found out about the local surgery and vet"* (Respondent 124).

Furthermore, some participants recognised the benefit of getting previously unavailable services. Respondent 18 referred to information about housing

developments in Hatherleigh and reported the benefits of the internet for updating this type of information. The following quote exemplifies how the internet offers the capacity for improved *efficiency* in delivering information and services:

"I think it would be easier to get more up-to-date information, regarding housing developments, recycling, benefits ... etc. You know, previously you might have had a leaflet that was a year out-of-date, whereas the internet is kept up-to-date by the service providers, whether it is the government or an agency; it is usually much more reliable. Sometimes you find it is not as good as it should be, but I think it is going to be much better in the future, people are getting better at providing up-to-date information because they realise more people are using it" (Respondent 18).

Other respondents also perceived the internet as a useful tool for accessing local bus timetables, activities, news or photos (Figure 7.5), indicating that the internet was perceived to increase *options* for local information and services.

"There is quite a lot on Hatherleigh.net, whether a lot of people use it or not. But I think that it is quite a good resource. There is a lot of detail about the carnival, the festival in the summer, timetables, there are lots of photographs, and the Parish Pump on-line" (Respondent 30).

Other respondents also valued the internet as a source of local information: *"I like seeing local photos on the internet, they [the HCW] always put up photos of any event, and I love looking at those, yes, and the internet does give you up-to-date local information, so that is positive, yes"* (Respondent 155). These responses emphasised the importance of the internet for providing different sources of local information and services which mirrored the increased options for delivering local information and services. For example, although bus timetables were available in hard copy at the post office, they are now also available on-line via the HCW.



Figure 7.5: Photos of different activities in Hatherleigh available on the HCW. (Source: Author based on www.hatherleigh.net)

In contrast, the interviews revealed that some internet users were not receptive to the internet's potential for improving local information and services delivery: *"The internet has not honestly made any difference. I mean the obvious things we need in terms of local stuff; it tends to be easier to talk to someone, a local councillor rather than to use the internet, so ... it really has not made any difference"* (Respondent 31). Respondents who were sceptical of the potential impacts of the

internet for local information and service provision reflected a resistance to change others have noted as characteristic of rural communities (Margetts and Dunleavy 2002). For example, Choudrie *et al.* (2005) found that citizens were more comfortable with traditional, offline methods of communication with Borough employees rather than using on-line services.

This contradictory evidence indicates that care needs to be taken when assessing patterns of e-governance in rural areas, as internet access and use does not signify its use to access local information and services. In addition, it is important to document and understand patterns of local on-line interaction between citizens and stakeholders in order to enhance insights about e-governance in Hatherleigh and beyond.

7.4 On-line interaction between citizens and stakeholders in Hatherleigh

Although some participants recognised beneficial impacts of the internet for local information and services, many also argued that internet availability did not necessarily indicate good local on-line interaction. Participants often referred to examples of their own experiences with stakeholders which reflected the categories present in Figure 1.1 such as openness and flexibility, accountability and transparency and democratic participation.

For example Respondent 187 referred to her own experience of participating in local on-line interaction and demonstrated that, in this case, the internet had limited impact. However, she was able to make suggestions for how the internet could have improved the facilitation of this process:

"They are doing a play park, down in Island Park, which is a park you [interviewer] will have driven past, which is just a green, and I looked ... I tried to look on our site, because, as they announced, you are allowed to pick what sort of park you think is going to be the best for the community. There was nothing on it. But you had to go down to the community centre, fill in a form, sign your name, put your address and pop it into a little envelope ... in the end there's been no response, there's nothing been put in the community centre, nothing to say, 'we've done ... we've counted up what people think', on the internet or in the Pump ... and nothing ... they let you think you are a responsible citizen, because you are filling out this silly form ... you know I think we should have been able to do it on the internet, honestly it would be easier for them and for us, but I had to go down the community centre to fill it in" (Respondent 187).

This response suggests that, in this instance, the internet could have provided enhanced *accountability and transparency* through the provision of an on-line form. Other participants reported opportunities for local citizens and stakeholders to engage in on-line interaction:

"I think the people here in Hatherleigh are well involved with local issues, because ... for example, the community centre has a family film night ... I think they gave people the opportunity to email and say what film they would like next. Or, I think there was a choice of two, and you could email and say which you would like to have. I mean, that is just a small example. But, potentially, I suppose because of the way clubs, societies, the town council, etcetera, are run ... it tends to be through meetings, so if you want to say something, you go to the meeting, or you write a letter which is then discussed at the meeting, and ... doing things electronically is, well, at the moment, the internet is not so much part of the way all these organisations run" (Respondent 118).

While this quote acknowledges the potential the internet has to increase local on-line interaction and enhance *openness and flexibility* between citizens and stakeholders in Hatherleigh, it also demonstrates that for wider local issues, the internet's role was limited. Participants referred to the preference for face-to-face engagement in governmental and NGOs process.

An interview with the local councillor revealed further agreement about limitations of the internet for enhancing local on-line interaction:

"I think that in respect of the local view, the internet at the moment has a very small role. For example, there was a government proposal to close a certain number of post offices ... but they did not say which ones ... So, of course, all the post offices were very concerned: and the process ... I mean some individuals might have emailed or they might have written to central government, but they [Hatherleigh's residents] have never emailed me. Some might have written me a letter but mainly we discussed that

face-to-face ... There was a petition in the post office for people to sign, which is a very common form of process. And then, I, with other key residents and stakeholders were sort of talking to people about it, campaigning to keep the post offices open... And they have now made the decision, which ones are closing and which ones are staying open and Hatherleigh is staying open ... But I would have thought ... I mean, people might have used the internet to find out more about the process, more about the consultation, and what was being proposed and why. But for many people, they would have just gone in and Madeleine [the post office manager in Hatherleigh] in the post office would have said "there is a proposal to close the post office, will you sign the petition?" And they would have just signed it, and that would have been the end of it. Things like that are very much, sort of, outside the internet, really. So ... if the internet is going to be part of a new constituency for local issues here in Hatherleigh ... I would say it might be in the future but we cannot guarantee it" (Hatherleigh Local Councillor 2008).

The councillor suggests that although the internet could contribute to broadening people's exposure to different viewpoints and to *democratic participation* through e-voting on local issues, currently these opportunities were underutilised. Citizens in Hatherleigh instead preferred traditional forms of interaction. Therefore, the future of local on-line interaction was ambiguous and there was no indication from the councillor of a clear strategy to enhance it among the population.

Although the current pattern of on-line interaction is somewhat inconsistent and limited, some participants had positive views about the potential for the internet to facilitate on-line interaction about local issues:

"The internet can have a huge influence on on-line interaction about local issues. For example, a lot of people are not happy with the amount of housing development in Hatherleigh and Okehampton and despite meetings, despite comments, there is not a willingness to listen to local people on that sort of issue and I think there is a feeling that they can make use of the internet by having an exhibition on-line and asking for people's views" (Respondent 118).

This quote suggests that on-line interaction needs to be stimulated by policy stakeholders to effectively encourage broader use amongst citizens. Dedicated on-line environments for this purpose could provide information about particular issues and a forum for discussion. However, it is also necessary that citizens demonstrate understanding and an appreciation of on-line interaction as being able to enhance local interaction between citizens and stakeholders.

"I think that we are living behind the times here in Hatherleigh, I think we could all ... we could have a complete revolution and have a much bigger say ... I would say... I would like to think well... it would probably be a pain in the backside for those that ultimately have the responsibility for formulating the decision, but yes, I think it could. The reality is that "too many chefs spoil the broth" but somewhere in there I think it could work, somehow. Why don't we just have an artificial intelligence that could gauge the public mood through the internet and make our decisions for us? It is scary. But this is what should happen in the future" (Respondent 165).

It became clear in the interviews that although there was a perception that current forums for local interaction were limited, participants expected the internet to improve on-line interaction about local issues in the future. This supports previous research on political participation, for example, Gibson *et al.* (2002) concluded that on-line interaction in the UK was limited by the preference for more traditional forms of interaction. Similarly, in Di Gennaro and Dutton's (2006) analysis of on-line and offline engagement in the UK, offline interaction dominated over on-line interaction between citizens and policy stakeholders.

7.5 Barriers to the implementation of local e-governance in Hatherleigh

Chapter 2 discussed how the relationship between ICT and governance is underpinned by different factors (Fountain 2001; Rakodi 2001; Cloete 2002; Odendaal 2003; West 2004). The interviews with internet users and key local stakeholders in Hatherleigh revealed that participants had complex understandings about how the internet influenced the delivery of local information and services and facilitated on-line interaction. In order to understand the nature of barriers to these activities, two dimensions will be considered here: *individual* and *institutional* standpoints (Rakodi 2001; Cloete 2002; Odendaal 2003); (see also Chapter 2). Barriers associated with an individual standpoint are those which prevent the individual from using technology to access information from

government or NGOs websites. Barriers resulting from institutional standpoints consider the institution's provision of governance processes, including information and services delivery and interaction with citizens (Fountain 2001; Odendaal 2003; West 2004).

In this context and accordance with the results from the questionnaire and interviews, the following dimensions were reported by participants;

Individual standpoints	Lack of need, lack of personal awareness
Institutional standpoints	No funds, lack of strategy

7.5.1 Individual barriers

Lack of need

The questionnaire results indicated that for 64% of internet users, the *internet* was the 'third choice' for local information and services (Figure 7.2). In the interviews, internet users argued that living in a rural area like Hatherleigh meant that there was '*no need*' to use the internet for local issues largely due to the efficiency of face-to-face communication (Section 7.2). Internet users were aware of the information and services that were on-line but, in many cases, had little need to access them:

"The Parish Pump, I always read this and I love reading it. I know it is available electronically, but as much as I think the internet is good, I do not want to do everything on the internet. I want to walk down the road and talk to someone. I mean, I still like writing letters, I do not write them very often, but I do not want the electronic age to take over everything. I want to be able to use it when it suits me, but other times I want to talk to people or pick up something and read it" (Respondent 13).

"I am really not sure what to do with the internet for local things. To be honest, locally, I quite like going down to the local bank and talking to someone there and talking about something. I mean, I will ring up, you know, and talk to people about bills, I like a bit of face-to-face contact so I do not know if I want to do everything through the internet ... I am not sure, I am not sure what improvements could be made to such local things" (Respondent 130).

Lack of need was instrumental in determining the value placed on on-line information and service delivery. This view was generally shared by participants and ties in with Fountain's (2001) understanding of the relationships between ICT and governance which concluded that the prevailing precedent of social behaviour might restrict technology's ability to integrate information and services.

The *nature* of the community was also seen as an important factor. Many residents demonstrated a preference for exchanging information through word-of-mouth rather than on-line interaction:

"You cannot do anything here in Hatherleigh without somebody knowing about it and, frankly, you cannot even think about doing anything here without somebody knowing about it ... it is a small community. It's a quiet place, and the other thing is most people know each other ... even if you do not know their names, you know who they are and you know where they live and who their parents are ... People do know everything ... so the internet has no influence at that point" (Respondent 30).

Similarly, another respondent referred to Hatherleigh as a small rural community in which people favoured traditional ways of communication:

"I think it is the place, a small rural community like this will always value face-to-face communication and the traditions, that's what people love about Hatherleigh, they do not want it to be an urban city, so I think people will always cherish the traditional way things have been done, and if the internet can help that and you know, I think the Hatherleigh net is good but it will never replace committees and meetings and gatherings, and I do not know that I want it to really" (Respondent 13).

In the same vein Respondent 150 made explicit the link between the rural context of Hatherleigh and the implications of this for local on-line interaction:

"I think that as a rural population, we are quite used to not using things like that, because we rely on the area to give us what we want, because of where we are. I think if we were a city, it would be slightly different, but we are fairly stuck out in the sticks, here, and I do not feel that actually gives us anything extra, because I think it was there 'in situ' already and I think it is just an added bonus, it means we can access things which are further afield, but I do not feel that the internet has given us any greater access to local things because they were there, and they had to be there, otherwise we could not survive as a community" (Respondent 150).

These responses suggest that traditional access to information and services and face-to-face local interaction were perceived as providing for local needs and

enhancing quality of life. The *efficiency* of the local media was also perceived to decrease people's need for on-line information and services. For example, some respondents referred to the local newspaper for local information rather than going on-line:

"I have never...never...never looked on the internet for something local such as rubbish collecting timetable, I have never even thought of going on there to look at it because it is in the local paper. So for instance, like on Monday it is bank holiday Monday, it will be in the local paper that things have changed. So I think the people who live in more rural communities still access their information how they used to, because it was always there" (Respondent 150).

This data highlights that participants did not perceive the internet as a preferred method for accessing local information, services and interaction. This finding supports other work which has demonstrated how the characteristics of rural communities in maintaining their own networks are relevant to how the internet is utilised (Wilcox 1996). Wilcox further argued that the revival of the community is not sufficiently considered in research about internet use in rural areas.

Lack of personal awareness of available local on-line services

Participants made it clear that they had minimal need to use the internet for local issues and they also demonstrated little awareness about local information and services on-line. Some participants were even unaware of the HCW: *"The Hatherleigh Community Website, I have never heard about it, no one has told me, which is strange ... but if I knew then I would definitely go and had a look"* (Respondent 221). In the same vein, although the Parish Pump was available electronically on the HCW and could be downloaded free of charge, some respondents were unaware of this. Respondent 27 said *"the Parish Pump is on-line? Oh, I had no idea, but that is really great for me if I have lost the magazine, which I do regularly"*. Although this response did not indicate a preference for on-

line information, it provides an example of how the internet can improve the delivery of local information.

Many participants were unaware about existing opportunities to improve local on-line interaction. For example, some participants were unaware that the HCW offers opportunities for citizens to contribute news and information by emailing or writing a letter to the website's editors. An interview with the HCW editor confirmed that local people were not actively engaged in these processes:

"People here in Hatherleigh are not involved with the website as they are supposed to be. We [editors] keep asking them to help us and send the latest local news, any articles, whatever... it seems that me and Geoff [the other editor] have to do all the work ... but there are four to five people who send us something from time to time" (Hatherleigh Community Website's editor, 2008).

When asked about non-participation in the HCW, participants reported lack of knowledge about how to participate and insufficient promotion of this facility:

"I do not know [about participation in the HCW], this is probably my fault, I could probably go on there, but then they have not sent out a letter saying, 'if you want to join us and add news or information this is the email or written address', I think it is their [website's editor] fault as well" (Respondent 4).

There were further examples of participants choosing to access local information and services delivery offline. Although many local businesses had email addresses on the HCW or in the Parish Pump, most participants did not notice them and would not consider emailing a business:

"I do not know if there was an email address ... I would never... I would not even look at that. I would read the name, but I would not even notice that there was an email and I would not have thought of contacting them like that. For example, at the moment I want some building work done and one of the things I was going to do today was to look through the Parish Pump and look for local builders and plasterers, but I would not naturally have considered emailing them, I just want to pick up the phone and talk to them... But perhaps ... I think it is a process that takes time, does it not. And also, it is just a start ... things are changing over time" (Respondent 150).

This suggests that the on-line delivery of information, services and interaction will take time to be recognised and utilised by participants. However, even in cases

where participants saw the benefits of on-line interaction, they were not always aware of local provisions for doing so. For example, whilst some internet users complained that there were no on-line environments dedicated to discussing local issues, this facility was in fact available through a forum on the HCW:

"I think the town website could service us [Hatherleigh residents] better ... So I would like in some way to have a forum, for instance, to be able to say, 'this is not something I feel would be appropriate and ideal for Hatherleigh and for the following reasons' ... discuss local issues, for instance, the CCTV cameras, double yellow lines in the town, parking, house building, you know, then this is the way you can do it on that Hatherleigh website ... But I am not sure ... I suppose there are local people that I could talk to, but it would be nice to have that input going into some kind of formal forum for our website, for instance, or indeed, even the local council [West Devon Borough council] if they have a site, I do not know if they have..." (Respondent 4)

When this respondent was told about the provision for interaction on the HCW, they indicated that their lack of awareness was due to the providers not promoting this resource efficiently:

"The forum is available on the Hatherleigh website? Oh ... Well, I am not aware of it, I had no idea ... I think they [local stakeholders] should be saying something. I would say that the local authority should be doing something, which is getting to people and saying, 'these are the local issues, if you want to make some sort of comment with regard to, for example, community centre, CCTV, or whatever'" (Respondent 4).

It became clear in the interviews that the lack of personal awareness of available local on-line services is a barrier to enhancing local on-line information, services and on-line interaction. Therefore, the success of local e-governance will depend on increasing awareness of the facilities that are available on-line amongst the local population. These findings support previous research, for example, Choudri *et al.* (2005) argued that barriers such as diffusion need to be considered when deploying electronic services at the local level. In addition, McQuaid *et al.*'s (2004) work about the relationship between ICT and services for jobseekers in rural Scotland found that the difficulties jobseekers experienced when using ICT for job seeking were mainly to do with limited knowledge and awareness. Thus, considering individual barriers, *no need for and lack of personal awareness* of on-

line local services have been identified as important for future strategies for improving e-governance processes in Hatherleigh.

7.5.2 Institutional barriers

In the previous section it was evident that many participants felt that the responsibility for promoting local on-line engagement lay with organisations and institutions. However, the interviews with both participants and stakeholders established barriers to this which included lack of funding and a lack of organisation.

Lack of funding

Funding was highlighted as a key issue for institutions. An interview with the Vice-Chair of the HAP²⁵ about the potential of the internet to improve information and service delivery and on-line interaction with citizens, revealed that the HAP does not have a website due to insufficient funds:

"The internet has not improved the information delivery to citizens because obviously the HAP does not have its own website, so there is no information available on-line and we [HAP] still depend on paper ... the main reason is no money, we need people to set it up, keep it updated ... etc" (Vice-Chair of the HAP, 2008).

While this quote demonstrates that the HAP did not have an on-line presence, the Vice-Chair reported that the internet remained important to the organisation's activities:

²⁵ HAP was set up in April 2001 with the principal aim of addressing the social and economic consequences of the Foot and Mouth Disease (FMD) outbreak in the Hatherleigh area of Devon. The South West Regional Development Agency (RDA) and West Devon Borough Council funded the project with additional funding from a range of other organisations including Devon County Council (DCC), and the Arkleton Trust.

"Only in the sense of finding information, or researching, yes, it is very good for research ... so, for example, we [HAP] have decided to push a "free plastic bag area" an area free of plastic bags would be great. We [HAP] are using the internet to research other areas that have done that as there is information out there, which is good, to follow their example..." (Vice-Chair of the HAP, 2008).

To improve the function of the HAP, its members developed alternative strategies for facilitating internet use, including using domestic internet access to undertake research on behalf of the project. However, there was no provision for interaction between the HAP and citizens on-line. An interview with the Chairman of the Hatherleigh Area Business Forum produced similar findings:

"The Hatherleigh Area Project is the market and coastal town initiative²⁶ for Hatherleigh. That committee is being re-energised, and it is not an elected body of people but is made up of some elected people on the town council and other people who put themselves forward. So it's not a democratic body. But they do hold budgets, they do make decisions, so they are a local organisation providing services. The community centre provides the services, so ... I was talking to the new manager of community services about their website and what they wanted to put on it, and of course it's all down to budgets. They would like to be able to have an on-line booking form so you can book any of the numerous rooms they have there and also to find out information about what's on at what times. Clubs, activities, entertainments, social things, social events, stuff like that. So that's one thing in the pipeline that is not available at the moment. With a big building and a big resource, for not just Hatherleigh but for the area as well, because of course it's the Hatherleigh Area Community Centre, so that takes in a good several thousand people, thousands of people. But there is no service on the internet that is available at the moment, other than providing a telephone number to phone somebody who sits in front of a computer and then types it in manually. So that's presently missing. On the other hand, we have the children's centre which was Sure Start²⁷, the Sure Start children's centre, and that was, again, government money, and they've got a website, and that provides all the information about their groups, about their staff, the itinerary and the services available and things" (Chairman of the Hatherleigh Area Business Forum 2008).

The Chairman of the Hatherleigh Area Business Forum also argued that the allocation of funding and resources hindered the management plan for increased ICT investment and opportunities for information, services and interaction on-line.

²⁶ The Market & Coastal Towns Initiative (M&CTI) is a Regional Development Agency led programme that looks at the regeneration of the wider Hatherleigh area. Its emphasis is on using consultation as a gateway to funding. Both involve consultation, capacity building, the development of long-term plans and a co-ordinated response from agencies and, in the case of M&CTI, funders.

²⁷ Sure Start is a government programme which aims to achieve better outcomes for children, parents and communities by increasing the availability of childcare for all children; improving health and emotional development for young children; supporting parents as parents and in their aspirations towards employment (<http://www.surestart.gov.uk>).

These findings suggest that investment in ICT and an on-line presence should be given priority when allocating funds to local initiatives in rural areas, to promote the digital inclusion of rural people in local e-services. This supports a study on e-governance in the UK, which found that many key stakeholders were frustrated with the lack of funding for e-government initiatives at local authority level (Choudrie *et al.* 2005). In the study, local efforts were constrained due to insufficient and short-term funding which restricted the implementation of a strategic plan for local e-governance. In addition, the same study found that, in cases, funding for local organisations was not the only obstacle to using ICT within the institution, but that staff members often resisted ICT-induced changes to roles and responsibilities and were disinclined to foster new way of working.

Lack of organisation of local information and services

Even in cases where funding and internet access were available, information was not always delivered comprehensively. Inappropriate or insufficient strategic organisation of local information can impact the effectiveness and usefulness of e-governance. Reffat (2003) argues that an information management framework is necessary to make use of various information and records, which many agencies do not do sufficiently in their rush to enable internet services. In the context of Hatherleigh, the interviews revealed that e-services currently available on the HCW are limited to general and business information (Chapter 5). In the interviews, participants reported that attempts to access local services on-line were often unsuccessful:

"I phoned up the local authority for some information about local childminders ... because I am going back to work, so I needed to know, and I wanted them to send me a list, a list of people to phone, but they said no, go on the internet for that ... they gave me their website, 'have you got the internet? Here is our website, go on there and you will find it', instead of giving me the information on the phone ... as soon as they have given you their website ... they explain where to go, sort of. I told myself, 'It

is pretty easy and good'... but, when I tried to use the internet to find local childminders ... I found one person, and that was really rubbish, really ... I was not satisfied about that ... But then I went on to look for home-to-home care ... with the elderly, and I found loads" (Respondent 187).

Several other respondents also reported the lack of organisation of local information and services:

"From my personal perspective, I think the internet does not improve the service here in Hatherleigh ... I have tried to look at things like...stupid things like rubbish collections, when there is a Bank Holiday and things. Because I know ... over Christmas and Easter everything changes and sometimes they are two days late and sometimes they are one day late. I have never seen anything...but I have never actually found anything useful ... I have never found it. You know, I work with software, so in theory I should be quite good with the internet ... I will try now again to look at our rubbish collections on the internet ... I typed in Hatherleigh, and it said 'sorry, your request is not processed'" (Respondent 30).

This quote demonstrates that, in cases, respondents were willing to use the internet for local information and services, however, there were often deficiencies in the provision of local information and services available. This is consistent with the literature (Layne and Lee 2001; Choudrie *et al.* 2005) that has identified that, in the UK, electronic services and links provided by councils were often inadequate to meet citizens' needs. It was repeatedly pointed out in the interviews that ICT and particularly, the internet, may fail to achieve its full potential if there is inadequate attention to the provision of local information and services. The local providers in this case include the HCW and the West Devon Borough council (see also Chapter 8). In addition, several participants suggested it would be useful to have one site which contains comprehensive local electronic services relevant to the locality, further highlighting the importance of the organisation of on-line material:

"I think because we live in a very rural area here and it is sometimes very difficult to get information and services across to people. The internet will be quite effective in doing that ... but what I would like, I'd like an actual site per town, so you know every bit of information from that town is on that site. I am sure it's not hard to do, is it? Just to put 'your bins are not getting collected this week due to Bank Holiday'. Just updated

things ... also bus timetables, housing, leisure ... etc ... I like to know things when I want to know them" (Respondent 187).

At present, information about services can be found on private websites, for example, the local bus time table is available on the *First Group* website²⁸ and other services are available on the West Devon Borough council website, for example information about waste and recycling. However, this means that users have to navigate to a number of different websites to find out about local services.

In this context, the HCW was identified as having the potential to provide an essential focus for information about the town; however, it was clear that there was a desire for it to be more comprehensive and representative of the community:

"The internet is very important for Hatherleigh at this stage, as it will be in a few years down the line ... There is a community website, but it's run to make money, and I think that's the downside, because they seem to be focused on their agenda rather than the community's agenda. Although the community website does give information, does provide a point of focus, but it does not provide a hands-on service or the sort of real services people here in Hatherleigh need, and because of that I do not think that many people use it, and I do not think it's particularly well done. But I think in a few years' time, when either the local authority or a more community-based group get something together then that will be good" (Respondent 19).

7.6 Conclusions

The aim of this Chapter was to assess the current patterns of local e-governance in Hatherleigh. In so doing, it has attempted to provide an insight into local e-governance processes and to identify how these have improved the delivery of local information, services and local on-line interaction between citizens and stakeholders. The Chapter has identified barriers to the implementation of local e-governance in Hatherleigh and demonstrated that participants have conflicting understandings of the relevance of the internet for local e-governance. As indicated in Chapter 6, participants identified internet availability and use as critical

²⁸ <http://www.firstgroup.com/ukbus/southwest/devon/timetables/>

to decreasing the spatial disadvantages brought about by their rural context. However, although participants referred to features of the internet that facilitate life in Hatherleigh (shopping, chatting, researching holidays and seeking information, (Chapter 5), they identified the internet as less important for local information, services and on-line interaction between citizens and stakeholders.

The Chapter highlighted two activities relevant to e-governance processes; looking for local information and services, and on-line interaction. The majority of participants preferred traditional offline methods of gaining information and services within Hatherleigh. Chi-square analysis revealed no association between age, gender, employment or household type and seeking local information and services on-line, which conflicts with a previous study by Di Gennaro and Dutton (2006). Furthermore, there was evidence to support the idea that controlling for other factors such as, participants' 'internet skills' and 'using the internet at home' had a significant impact on the use of on-line local information and services. This evidence suggests that growing internet proficiency and flexibility could potentially increase local on-line interaction amongst participants. Although these findings suggest that factors influencing the use of the internet for local information, services and on-line interaction reinforce digital inequalities within the population, it also offers the potential to broaden the consortium of active internet users in Hatherleigh. This is in line with other research findings on the internet and network society (Casttels 2005; Hampton 2007), the internet and political participation (Di Gennaro and Dutton 2006), and the internet and job seeking (McQuaid *et al.* 2004). It is, therefore, likely that efforts to increase levels of e-literacy in internet users and the facilitation of flexible access to ICT could contribute to an expansion of on-line local engagement.

Nevertheless, some participants valued the internet as a key dimension to current and future local services in Hatherleigh. In this context, the internet was seen to improve *access*, *efficiency* and increase *options* to local information and services. It became evident that although participants were often aware of opportunities for local on-line interaction, these were not always utilised. For example, participants referred to very limited use of the internet to email local stakeholders or to use e-forms or e-voting. However, there was a consensus that on-line interaction would have a bigger role in the future and be able to contribute to participants' sense of empowerment.

The Chapter establishes that a lack of internet skills and home internet access were not the only factors which affected the use of local on-line information, services and interaction. There were also individual and institutional barriers (Table 7.2).

The evidence suggests that current issues affecting local e-governance in Hatherleigh are associated with people's lack of need for, and awareness of, available local on-line services. Participants however highlighted that the *nature* of the community in Hatherleigh along with the *efficiency* of the preferred methods of communication reduce the need for using the internet for local information, services and interaction. Therefore, it is suggested that attention should be given to current preferences for information, services and interaction alongside consideration how to best increase the efficiency of on-line information and services provided by local organisations.

	Barriers	Description of the barriers	Suggested future solution
Individual Barriers	<i>Lack of need</i>	local level of information transformation is associated with face-to-face contact because of: <ul style="list-style-type: none"> • The nature of the community • The <i>efficiency</i> of the existing local media 	Attention should be given in the future to individuals' enquiries about local services along with increasing the efficiency of information and services provided by local sectors
	<i>Lack of personal awareness of available local on-line services</i>	<ul style="list-style-type: none"> • Participants declared no awareness about the availability of HCW. • People were aware of the availability of the local website but not aware of the services provided by the website such as electronic Parish Pump and HCW forum. 	<ul style="list-style-type: none"> • Increasing rural people's awareness of what local services they can get on-line. • Keep rural people updated with details of all new local electronic services.
Institutional barriers	<i>Lack of funding</i>	<ul style="list-style-type: none"> • Local institutions do not have enough resources to set up a website to provide information and news. • The allocation of funding and resources hinders management plans for more ICT investment. 	ICT investment and electronic services should be given priority in funding local initiatives that work in rural areas in order to ensure the digital inclusion of rural people in local e-services.
	<i>Lack of organisation of local information and services</i>	<ul style="list-style-type: none"> • Services that are currently available electronically on the website are predominantly limited to general and business information. • Local information and services provided through local websites are inadequate to meet local citizens' needs. 	Attempt to ensure the comprehensive provision of local information and services through one site (i.e. the HCW)

Table 7.2: Barriers to implementation of e-governance at the local level
(Source: Author)

Furthermore, the interviews revealed that some barriers affecting the implementation of e-governance in Hatherleigh were embedded within local institutions and organisations. These barriers were a lack of funds and a lack of effective organisation of local information and services.

For some institutions such as the HAP, the lack of sufficient funding constrained the ability to provide on-line services. This constraint could be mapped against e-

governance in the local context. For other institutions, such as the HCW, services that are currently available on their websites are limited to general information and services which are not necessarily representative of local interests. In this respect, expanding the involvement of citizens to ensure the HCW best reflects local concerns may enhance local e-governance process.

Chapter 8 will now present the data for participants' engagement with e-governance on a regional and national scale. This enables a broader discussion of e-governance, involving interaction with official government websites and on-line contact with stakeholders beyond the immediate locality of Hatherleigh.

Chapter 8: Assessing ICT and e-governance beyond Hatherleigh: opportunities and limitations

8.1 Introduction

Chapter 7 focused on the ways in which Hatherleigh citizens use the internet to access local information and services and undertake interaction with local stakeholders. The Chapter showed that participants made minimal use of the internet for these activities and instead preferred more traditional media such as word-of-mouth and the telephone to make these local connections.

Following the claim by Staeheli (1994) about the importance of the local to national scale in investigations of e-governance, the present Chapter will continue the discussion started in Chapter 7, but will focus on regional and national scales of e-governance. Accordingly, the chapter addresses the following questions:

- Does the internet improve the delivery of information and services at the regional or national scale of e-governance?
- Does the internet improve the interaction between Hatherleigh residents and government or NGOs?
- What are the barriers preventing full implementation of regional and national e-governance in the context of Hatherleigh?

8.2 Information and service delivery at regional-national level of e-governance

This section explores internet users' understanding of the potential opportunities made available through the provision of government and non-government organisation (NGO) information and services on-line. Firstly, the impact of socio-economic factors (age, gender, employment and household type) are analysed before the role of internet skills to access government websites is considered.

8.2.1 Socio-economic factors and skills to access government websites

Millard (2005) argued that the internet holds great promise for providing free and equal public access to government information. In this context, the questionnaire asked respondents how often they used the internet to access information from government websites. As Figure 8.1 illustrates, only 6% of internet users *always* accessed government websites, 30% accessed it *often*, while 44% of respondents *never* used government websites.

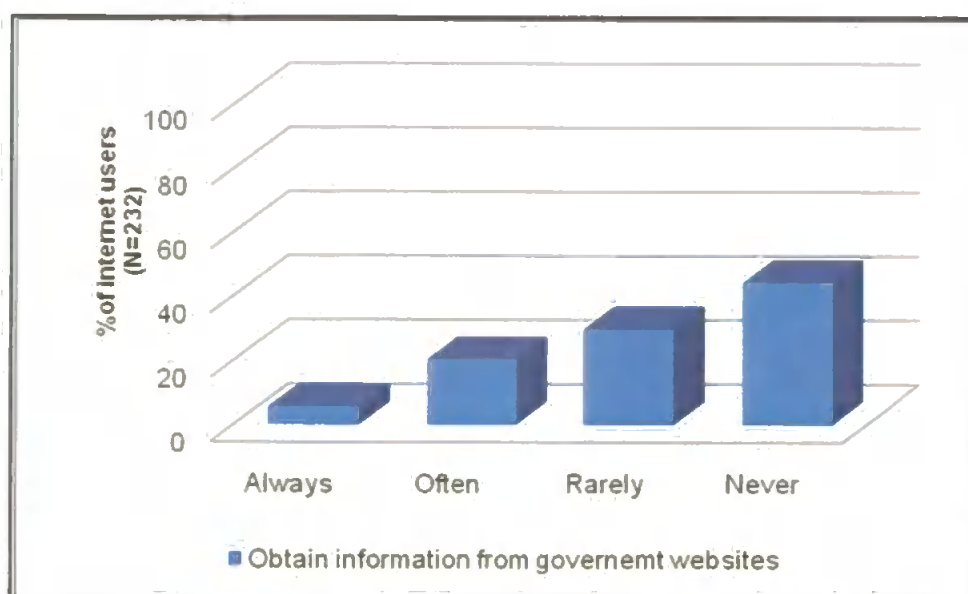


Figure 8.1: Information obtained from government websites
(Source: Author's questionnaire, 2007)

Chi-square analysis revealed that accessing information from government websites was not significantly dependent on gender ($p=0.864$) or household type ($p=0.791$). It became clear however, that respondents aged between 30 and 39 years old were more likely to obtain information from government websites than other age groups (value=40.531, $p=0.001$, $df=5$). Similarly, obtaining information from government websites was significantly dependent on employment status ($p=0.001$, value=29.061, $df=4$). Respondents who were employed fulltime or self-employed were more likely to obtain information from government websites than other individuals. These findings correspond with those presented in Chapter 5 which showed that middle aged and employed participants in Hatherleigh reported higher levels of internet use. The questionnaire data suggested that respondents sought information from government and NGO websites for work reasons, and this was supported by the interviews:

"I work for Barnardos, we run a children's centre in Okehampton and the internet is very useful to find up-to-date numbers of childminders, where childminders live and what is out there as far as toddlers groups, pre-school ... local services for families ... I am constantly accessing information for work in that way" (Respondent 13).

This may suggest that individuals who work for government and NGO agencies are those who are most likely to access government and NGO websites. This may also suggest that older individuals may be reticent to be involved in e-governance since they are approaching or enjoying retirement and, therefore, less in touch with the corporate work environment (Howard *et al.* 2001). The results support Millard's (2006) and Choudrie *et al.*'s (2005) findings that in the UK employed people accessed government websites more frequently than other groups. The findings about age correspond with a wealth of previous studies (Reddick 2004, 2005; Eastman and Iyer 2005; Millard 2006) which all found that middle aged people are the most likely to access government websites.

8.2.2 Internet skills and accessing government website

Previous research has shown that levels of internet skills determine the ability of individuals to use e-government resources (Vassilakis *et al.* 2005; Reffat 2006; Hedestig and Söderström 2008). The questionnaire data supported these studies and found that participants who rated their internet skills as 'expert' or 'advanced' were more likely to have obtained information from government websites. The Spearman Correlation Test revealed a significant relationship between using the internet to obtain information from government websites and participants' internet skills ($p=0.001$). This is consistent with previous findings on internet use for seeking information from government websites. Reffat (2006), for example, argued that in Australia, a lack of computer skills prevented people from accessing government websites. Other research carried out by Di Gennaro and Dutton (2006) about the internet and political participation in the UK found that highly skilled internet users were more likely to use the internet for political information. Considering, however, that the internet is becoming increasingly important as a method for people in rural areas to access government and NGO information and services at regional and national scales, those who lack internet access or skills are disadvantaged (Reffat 2006, Warren 2007).

8.2.3 The delivery of on-line regional or national information and services to Hatherleigh

Having viewed the relationship between socio-economic factors, skills and accessing government websites, the following sections address how internet

users' perceived the on-line delivery of information and services from regional and national sources.

Improved accessibility to information and services

The internet offers the potential for access to government information and resources that might not be easily available otherwise (Millard 2006). In the context of Hatherleigh the questionnaire data revealed that 61% 'somewhat agreed' and 17% 'agreed' that the internet makes government services more accessible (Figure 8.2).

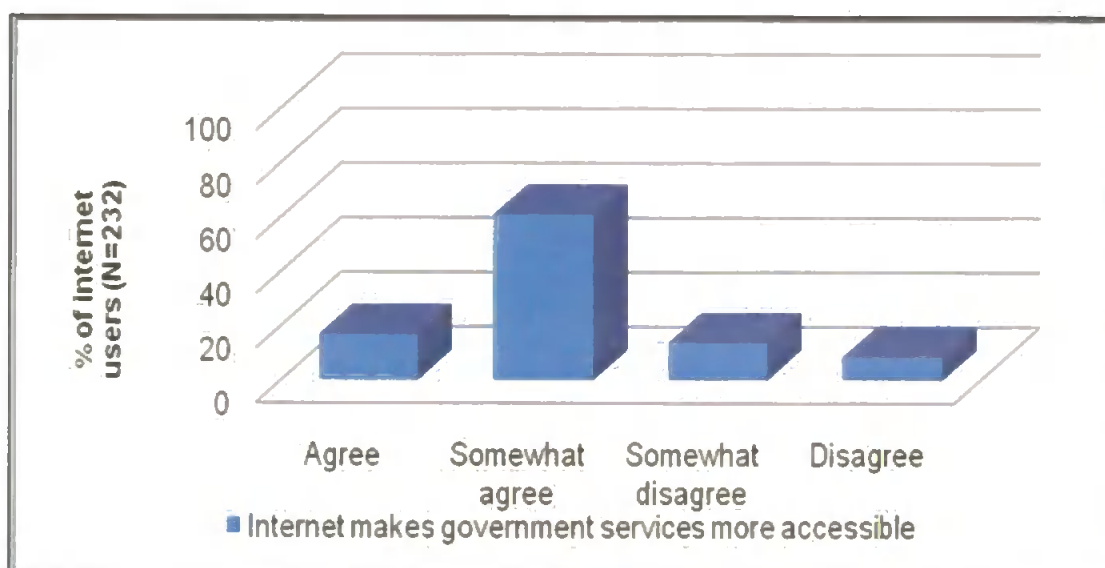


Figure 8.2: Does the internet make government services more accessible?
(Source: Author's questionnaire, 2007)

The interviews revealed that participants often perceived themselves to be geographically disadvantaged due to living in a remote, rural area and that because of this, the internet was deemed an appropriate method for accessing public information and services such as government websites and the local council's latest news [West Devon Borough Council] and policy web pages:

"The internet is a terrific thing, I believe it would be potentially a very good tool, especially in a rural community where not everyone drives ... we can access a lot of information about public services through the internet that we cannot locally. It helps me, for example, when I have wanted to find out about the new policies that West Devon Borough Council are looking at and implementing. I accessed the Council's site and that gave me up-to-date information. You can do that when you want, you are not on the phone for a long while waiting to be put through to someone, so that is absolutely useful" (Respondent 9).

This response emphasised improved accessibility to regional or national information that the internet offers people in Hatherleigh by providing them with relatively inexpensive, real-time access to consistent, up-to-date information and services. The internet therefore provides people in rural areas with access to regional, national or international information and services, with which they can create knowledge and adapt to continuously changing service conditions at a considerably faster rate than was possible in the past:

"Because of the internet, rural people in Hatherleigh can get access to information that five or ten years ago they would never have been able to get hold of in a month of Sundays without a huge amount of effort. It is incredible the things you can find out from around the world, your local area and beyond and in all sorts of things, whether it's local, national, or even international business, government or personal. It is just completely wide open, you can find out about all sorts of different people, strangers and non-strangers, it's just all there" (Respondent 19).

This quote demonstrates how increased accessibility to information and services enhances knowledge and learning in rural communities. This was supported by an interview with a public stakeholder from West Devon Borough Council:

"There is no doubt that the internet has tremendous benefits for the Council and for rural people here in Hatherleigh. The Council has already set up a number of services to make it easier for people to contact the Council and obtain information, such as information centres in libraries, a new telephone helpdesk in Social Services and the council website. In addition to the communications strategy as well ... I think for rural areas it became more important. From a personal point-of-view, it is making services more responsive so I or we [Hatherleigh residents] do not get passed from one place to another when we need information, have a problem to solve or require a service" (Hatherleigh Local Councillor 2008).

This councillor was optimistic about how the internet could contribute to improving information and services for people in Hatherleigh and other rural areas. Although the Local Councillor felt that the internet had limited benefits with regard to local

information and services (Chapter 7), they valued the options for increased accessibility brought about by the internet. The quote suggests that the internet offers a forum for information flow between the Council and citizens and provides a vehicle for organising information. This is in line with other studies on e-governance (Markoff 2000; Raney 2000; Odendaal 2003) and services in rural areas (Traunmuller and Wimmer 2001; Moseley and Owen 2008) which note that ICT improves service delivery and responsiveness to rural citizens.

Improved efficiency

Millard (2006) notes that pre-internet, rural populations could spend a significant amount of time and money in order to access government services. The interviews demonstrated the extent to which the internet positively impacted on individuals' ability to access a range of resources:

"I use the internet to do everything; I use it to find out information about local and national events, both from local and national authorities like government or any other agencies. The internet provides me with great opportunities that I did not have before. For example, I use West Devon Council or Devon County Council and I think going on-line is pretty good because they deal with a very rural area here, and it is sometimes very difficult to get information across to people, but the websites are quite effective in doing that" (Respondent 118).

This quote is useful as it recognises the benefits of e-governance to meet peoples' needs in rural areas and recognises issues of spatial disadvantage, suggesting that, in cases, participants were making effective use of the internet to access regional and national information and services. The respondent carried on to describe the internet as one tool within a toolbox of media with which to conduct interaction with local, regional and national stakeholders:

"Getting public information is a combination, really. Probably if I am talking about Hatherleigh and Okehampton, the local area, the internet would not be useful and it would be the 'Parish Pump' and the local paper. If you are talking about West Devon Borough Council, then it would be a combination of internet and the newspaper ... and if you are talking about Devon or regional or national organisations, that is when I would use the internet more" (Respondent 118).

This highlights how ICT can facilitate decentralised access to services and reduce the cost and time citizens previously had to invest to access these resources. Although respondent 118 was the only participant that described the supplementary role of the internet in such precise terms, the majority of respondents shared an understanding that internet use in rural areas connected *efficacy* and *scale*. Participants perceived that the value of internet use lay not in its application to the local social context but to the sub-regional, regional, and national context.

An interview with the Chief Executive of the CCD which works with rural communities, revealed support for the idea that the internet improves the efficient delivery of information and services in rural areas. This stakeholder referred to the ways in which ICT has transformed the working practice of the CCD offices and made rural areas more *reachable*:

"When I came here [CCD] which is a long time ago, that is 16 years ago, we did not have the internet, we did not have email, and we did not even have computers. We wrote everything by hand, the secretary took them away, you found a mistake and typed them again, posted stuff to rural people or drove to them, it took ages. Now the internet, emails, and computers have sorted everything out. It means a number of things, for example, we do not have to do so much driving around the countryside because we can deal with things electronically" (Chief Executive of the CCD 2008).

This response emphasises the potential of the internet to streamline and rationalise organisational activities, reducing paperwork and bureaucracy. By providing access to government information and services directly through the internet and other electronic communications, the internet can save citizens and institutions time and money, can promote equity in service delivery and improve

the ability of government and NGOs to reach isolated groups. This is in line with previous research on the digital divide (Akca *et al.* 2007), e-governance (Thompson 1999; Okot-Uma 2001; Millard 2003; Syrett and Baldock 2003) and future services in rural areas (Moseley and Owen 2008), which suggested that ICT enables government service delivery to the public and enhances e-governance by overcoming geographical distances.

Increased options

In cases where information changed over time, the internet was noted to be useful in keeping up-to-date (Odendaal 2003). The interviews revealed that participants often used the internet to increase their options for accessing information and services. For example, Respondent 4 referred to his experiences in getting information about a local issue from a government website:

"For us rural people, we hear about something but because we are remote we do not have the ability to find the information that relates to those things. For example, the Wind Farm which I think is being built on the road between Okehampton and Bow. The local authority did write to us about that, to see what our feelings were and we sent some information back, but it would be useful to find out what is happening now on the council website, because we have driven along the valley a couple of times just recently and said 'What happened to that?'. We know it got turned down the first time, but it went to appeal, so what is the situation now? So it would be great if we can see such information on the website" (Respondent 4).

Although participants acknowledged the role of the internet in increasing options to obtain information and services from regional and national websites, they also recognise that for now, this was supplementary to offline communication:

"I would say we get quite a bit through the door. We have problems with the drainage and the water around here, and South West Water are more likely to put something through the door to tell us that services are going to be disrupted and I would say electricity is the same, the South West Electricity Board still put something through the door and I would not necessarily go on-line for that. However, for West Devon Council, although we have received the newsletter I still like to go on the website ... in addition, for example, my daughter's just entering her second year at university and has got to fill in forms, and I know you can take them to the office in Exeter, but I have done all that on-line, I certainly found out information about her funding on-line, we use it a lot for work like that" (Respondent 9).

Respondent 9 emphasises that in cases where traditional methods were efficient in terms of providing information or services, then these were preferred which supports the earlier discussion in Chapter 7. However, there were certain activities for which the internet was preferred as it increases options and provided opportunities for citizen-institution participation. The quote also suggests that increasing options is critical for individuals in rural areas without private transport, consistent with Kenny (2006) and Moseley and Owen (2008).

The interview with the Chief Executive of the CCD supports participants' accounts about increased options and also the *supplementary* role of the internet. This later point was evident in the CCD's own efforts to promote its annual conference:

"We are promoting our conference now through the internet, on our email we are putting a little footnote that says 'please come to our conference', we put it on our website, we talk about it to friends, we send leaflets out, we send it out with the Village Green²⁹ and with other publications" (Chief Executive of the CCD 2008).

The Chief Executive of the CCD thus considered the internet to be a complementary method which increased the transparency and authenticity of the institution's work. This is in line with Heeks' (2000) suggestion that the success of an organisations' use of ICT is highly depended on its opinions about the capacity for technology to enable change. Thus, the institution will have more impact if using more than one medium to communicate with citizens: *"If I know you, I trust you and you tell me something and that is fine ... If I get it on a piece of paper how do I know ... now do I trust that? It is the same with the internet"* (Chief Executive of the CCD 2008). In this case, the internet was not seen as a vehicle

²⁹ Village Green is CCD's quarterly newsletter and is distributed to over 3000 people and organisations, mainly in Devon. All Parish Councils, district and county councillors, and most village halls receive a copy, as do many other community groups, statutory authorities, voluntary organisations and individuals. The newsletter contains information on a variety of topics of interest to people living in rural Devon. In every issue, there are pages directly aimed at parish councils, village hall committees, as well as pages on training, and environmental issues. Each issue also features a specific subject such as rural transport, social enterprise or affordable housing (<http://www.devonrcc.org.uk/>).

which could replace traditional methods for accessing information and services. It was instead about using ICT to increase options and offer new ways of dealing with government and NGOs in line with Millard (2003), Riley (2003, 2007) and Moseley and Owen (2008). Moseley and Owen (2008), for instance, argued that ICT is a driver of change in demand and supply of the various services in rural areas rather than a service in its own right. This corresponds with the idea of e-governance that policy stakeholders have (Millard 2003; Odendall 2003), which shares the understanding that the internet improves access to information and services.

The discussion thus far has concentrated on the first dimension of the e-governance structure namely, improving the delivery of information and services from regional and national institutions to rural citizens. To further understand e-governance in rural areas, the data relevant to how the internet improves rural people's interaction with regional or national policy stakeholders is now presented.

8.3 On-line interaction between citizens and regional and national stakeholders

Chapter 7 presented data which suggested that in general, internet users in Hatherleigh did not use the internet to interact with local stakeholders³⁰ and that there was a prevailing preference to use traditional methods of communication in a local context. This highlights the need to understand people's attitudes and experiences in relation to on-line interaction with policy stakeholders on regional

³⁰ Examples included the Hatherleigh Local Councillor, the Hatherleigh Community Website editor and the Chair of the Hatherleigh Area Project.

and national scales. The section will discuss internet users' perceptions about email, e-forms and e-voting.

Emails

As discussed in Chapter 2, previous research has argued that e-governance allows citizens and stakeholders to send and receive information (Markoff 2000; Raney 2000; Odendaal 2003), and enables individuals and organisations to communicate with stakeholders on regional and national scales (Staeheli 1994; Bulkeley 2005). In this study, Figure 8.3 shows that 30%³¹ of internet users emailed NGOs, 28% emailed government agencies while around 70% never used email to contact government or NGOs.

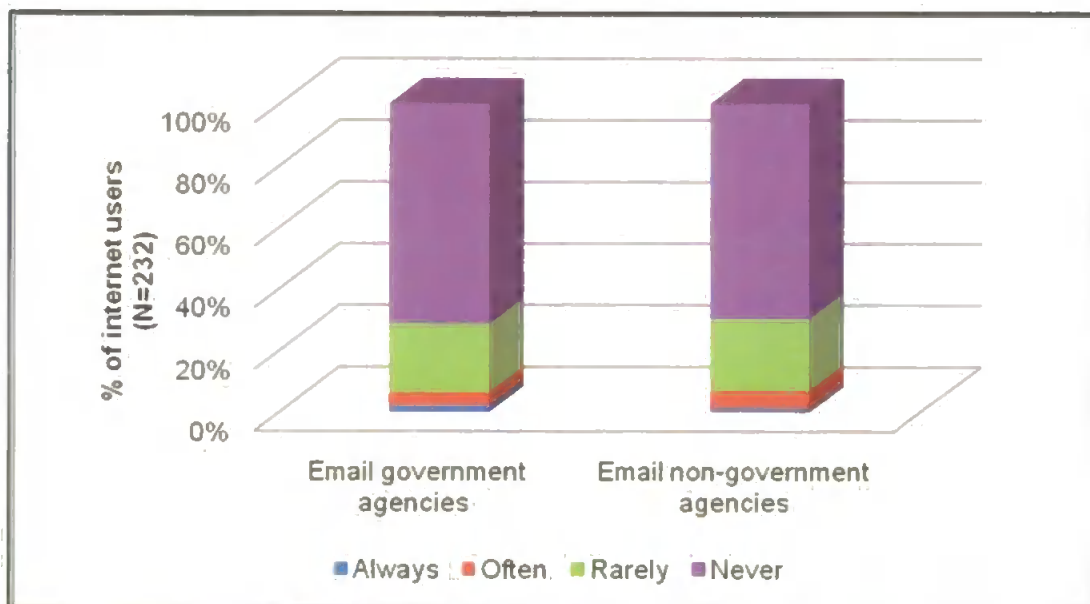


Figure 8.3: Frequency of e-mails sent to government agencies and NGOs

This suggests that citizens in Hatherleigh were, in cases, using the internet to engage with policy stakeholders on-line. The interviews provided further evidence that participants valued the internet to email regional or national stakeholders:

³¹ This percent includes the proportion of participants in *rarely*, *often* and *always* categories.

“Although I prefer writing letters, sometimes I feel the internet is more effective, for example, one of my big things was about house building because I felt there was too much in small rural locations, where schools cannot sustain the growing population, so I emailed the government to say that I do not agree with the amount of house building that was going here. They replied and said it would be taken forward to the next council meeting that month or whenever it was” (Respondent 150).

This response emphasises that although geographically distant from the Council offices, the internet facilitated on-line interaction with regional policy stakeholders. Another participant said that *“it is easy to fire out emails to the councillor until they reply”* (Respondent 4). In addition, participants felt that on-line interaction was more appropriate once they had established a target organisation and contact:

“For on-line engagement, yes I use the internet for contacting the government or other authorities, for example, the Civil Aviation Authority. I recently reported a low flying aircraft, flying really, really low and because I am into flying and aviation, I knew where to go and look for that information and was able to contact them. Also I use the Government Gateway stuff all the time for my business, VAT returns, PAYE returns and all those sort of things and all my banking stuff” (Respondent 19).

Participants also reported that communicating through the internet improved opportunities to contact policy stakeholders, which increases the openness and flexibility of e-governance. This is in line with previous research (Torres *et al.* 2005; Millard 2006) about the internet's role in enhancing the flexibility and openness of e-governance in rural communities.

“I have written emails to the PM and the deputy PM on a number of occasions with regard to different issues. I have not used it for my local MP, I have written him letters, I am quite active in that sort of thing ... I got standard responses from the email, for the forms that were submitted to the PM and I got a personal letter written from the local MP” (Respondent 19).

This is in contrast to the findings of Chapter 7 which concluded that participants often preferred off-line interaction with local stakeholders. It would seem then that although people in Hatherleigh use the internet to communicate with stakeholders, this is at present limited to regional and national scale interaction and that, in this context, the internet enhanced democratic process.

Participants' experiences of on-line interaction with policy stakeholders can be conceptualised as an important resource within a community-based approach to e-governance. Such an approach relies on notions of self-help and empowerment (MacKinnon 2002; Bryden *et al.* 1997). Although the internet was not utilised as a tool for local engagement, participants developed their own strategies by exploiting on-line engagement on a regional and national scale. This is consistent with Choudrie *et al.* (2005) who concluded that people will use on-line government services which benefit them.

Accountability and transparency

The publication of public administration systems for tracking applications and sharing performance data are known to increase accountability (Rakodi 2001) and enhance transparency, openness and participation in governance (Millard 2006). In this study, internet users felt that the internet offered opportunities for on-line communication with policy stakeholders which would otherwise not exist due to the rural and remote location of Hatherleigh. In the interviews it became clear that internet users considered e-forms to be a *new* opportunity which they perceived to increase the accountability and transparency of e-governance. The questionnaire data showed that 47% of internet users fill in applications forms on-line. In the interviews, internet users often reported that they had emailed government or NGOs to gain information or to access services such as application forms. However, participants reported that the quality of information and services they received depended strongly on the type of service the participant was seeking:

"I wanted to do some work on the cottage for my dad when he lived with us and I did apply for planning because this is a listed building. I downloaded the application form from the council website, sent it down to the listed planning officer, it was an attachment on an email basically, it was not a formal form or anything ... and he [officer] sent it back saying 'yes, you can do it'. So it was so easy, only few minutes on the internet" (Respondent 4).

This quote again emphasises how the internet can reduce the impact of distance on interaction, increase transparency and ease connections between regional and national organisations and people in rural areas. This in line with Dutton and Helsper (2007) who suggest that increased use of e-government services is associated with ease of access to political and civic information. Such access empowers those who have distanced themselves from offline political participation due to feeling removed geographically distanced from traditional politics.

In cases, participants expressed pessimistic opinions about on-line interaction with regional and national stakeholders. They argued that using the internet to communicate with policy stakeholders does not always engender transparency and accountability:

"I think politicians are quite shrewd, politicians in towns, politicians nationally ... they kind of slide things in and then they say, well, you have had an opportunity to make your feelings felt, but then they have not done a very good job of communicating to you exactly how you can make your opinions heard, so people don't. I suppose the English are a little apathetic anyway about ranting on about things. So I think that is part of it, these things tend to get slid in without people having a chance to say something about them. It is almost, like, 'Don't ask them in case they say no'. I think with the internet, the problem is they [policy stakeholders] see the websites solely as an instrument to encourage people to do what they want but not vice-versa, and I think that as a consequence, people are not going to really respond to them" (Respondent 4).

This quote suggests that *transparency* and *accountability* are key to promoting trust in the democratic process, which in turn is a prerequisite of functional e-governance (Caddy et al. 2007). Therefore, the perception that the internet is an 'instrument' that serves policy stakeholders interests to a greater degree than public ones may deter public participation.

Democratic participation

Chapter 2 discussed how many authors view e-governance as a way to enhance democratic participation through improved communication (Castells 2003; Odendaal 2003; Riley 2003; Syrett and Baldock 2003). This Chapter has discussed how internet users recognised that the internet provides opportunities to obtain information and services and facilitate communication with regional and national stakeholders. These opportunities were perceived to enhance the democratic participation of people in rural areas (Robertson 1992; Graham 1994; Castells 1996; Millard 2006). However, in the context of Hatherleigh, the interviews revealed that internet users had conflicting opinions about the prospect of considerable democratic change associated with ICT.

Internet users perceived the internet to be an important tool which impacted on their opportunities to vote: *"I have done a registration form to vote on-line; that covers national elections ... I did vote on-line as well ... previously I used to do that manually but now with the internet it is much easier"*. This experience was shared by many participants and exemplifies the potential of the internet to transform bureaucracy, in line with Fountain (1999). Encouraging bureaucrats to work together and develop websites that integrate information and services may stimulate democratic change through new forms of interaction between citizens and policy stakeholders at the regional and national scale.

Internet users also reported that the internet can improve the process of communication between citizens and stakeholders by enabling interactive dialogue:

"Because we live in a rural area we used to be away from anything happening in cities ... but now I am quite satisfied with the internet ... yes, it has definitely increased opportunity for engaging with democratic processes ... I am happy to fill in polling cards, I am happy to use the internet when it gives me an opportunity to do something. For example someone told me about petitions that you can register interest in, or make a vote for the government. I think Tony Blair started it, but it is not Tony Blair any more, it does not really matter though. Now, in Westminster Office ... there is a list of all the registered petitions ... something about how people in the armed services should have a bank holiday... people in schools should be able to teach whatever religion they want ... I quite like going on there and registering my support for whatever feels important to me. Well, I'd have never have done that if it was not for the internet. So it does give me a voice" (Respondent 113).

Thus, in the rural area of Hatherleigh, where citizens face geographical barriers to political participation on regional and national matters, the internet brings policy and rural people together. It was shown that by being able to have their voice heard on national issues, internet users in Hatherleigh perceived a two-way relationship and experienced active participation with government agencies. Through these opportunities people were able to propose policy options and experience a sense of responsibility beyond the local scale. This tie in with previous commentators who argue that electronic democracy is characterised by the transition of the relationship between citizens and government from one of passive access to information, towards active citizen participation (Millard 2003, Okot-Uma 2001). Although this applies equally to rural and urban areas, it has become essential in a rural context as the participation of rural and marginalised communities requires the building up of political awareness to encourage empowerment and democratic participation. This suggests that more consideration should be given to the currently limited understandings people in rural areas can have and the problem of self-selection that characterises democratic participation (Shane 2004).

Some participants discussed how the internet could also facilitate political participation at the global level:

"Yes, absolutely, the internet has increased opportunities for engaging with democratic processes especially for us as rural citizens ... I would like to think that we are on the verge of having 600-odd people deciding really serious issues such as the Embryo and Human Genetic stuff, which is for some a great opportunity and for others horrific. It should not be decided by a few people, there should be a much larger group of people and if we use the internet sensibly, with the security levels that there are around, we could all have a say in those sorts of decisions. I do think that it can play a much greater role in the democratic process for sure, 100% sure ... it would give us all a chance to vote on everything" (Respondent 19).

This comment highlights how some participants perceived on-line democratic participation as providing potentially limitless opportunities for rural people. In this context, it could be suggested that involving rural people is the starting point of effective rural democratic governance, when the government begins to involve people, in respect to their geographical location, in the governing process by cross-sharing information, delivering services and enabling them to comment on proposed plans (Heeks 2000).

However, other participants had negative perspectives about using the internet for democratic participation, and it was evident that increased opportunities for on-line participation in e-governance processes did not guarantee improved democratic participation. In cases, respondents felt that on-line democratic interaction was only democracy in theory and that this was an effective barrier to further participation.

"I did lots of voting over the internet, for example I voted for members of Devon County Council staff to win a wards on-line ... I used the internet to make a suggestion ... but honestly, although this is a new opportunity for us as a rural people, I do not feel any sense of democracy. Governments do not always listen" (Respondent 118).

In addition, it was evident in some cases that participants perceived on-line democratic participation as a new service, similar to shopping, chatting, and searching for information and did not necessarily perceive new opportunities for democracy. Instead these services were understood to save time, money and effort:

"I do not believe that the internet has increased opportunities for engaging with democratic process ... I am happy to use the internet when it saves my time...I use the internet to vote and to have my say about things, but I have never really got a feeling of democracy ... it is all about time ... is it not? If it was a matter of going to Okehampton for a meeting, going to Exeter, picking up the phone and waiting and waiting, I love the fact that I can do something immediately on the internet" (Respondent 150).

This is in line with previous studies such as Davis (1999), Margolis and Resnick (2000) and Chadwick (2003), who argued that various agencies and government organisations will be hesitant to use ICT, with the result that ICT will not necessarily enhance democratic governance.

Internet users in Hatherleigh have conflicting perspectives about the capability of ICT to achieve democratic governance and these perspectives may affect the process of e-governance (West 2004). Citizens may withdraw from democratic processes and choose, for example, to not e-vote or participate in e-forums, which may result in further exclusion from the process of e-governance. Also, rural people may perceive the internet as an opportunity to interact and participate with policy stakeholders on a regional or national scale but the final policy decision may be made by the policy stakeholders (Fountain 2001).

Furthermore, although ICT can act as enabler and facilitator of e-governance, enhancing accessibility and efficiency and increasing the options for information and services, ICT on its own is not sufficient to achieve inclusive e-governance in rural areas. Therefore, in order to achieve a comprehensive understanding of e-governance in the rural area of Hatherleigh, it is necessary to address current limitations.

8.4 Barriers to the implementation of e-governance at regional and national levels

Although internet users in Hatherleigh highlighted several advantages associated with e-governance (improved information delivery and engagement with policy stakeholders), participants and policy stakeholders both highlighted barriers and limitations to this process. The following sections consider these in terms of individual and institutional barriers.

8.4.1 Individual barriers

Lack of personal awareness

Some researchers have argued that internet users lack the awareness and readiness to interact on-line (Thomas and Streib 2003; Carter and Belanger 2005; Hedestig and Söderström 2008). Chapter 7 highlighted how internet users in Hatherleigh were often unaware of on-line local information and there was, in cases, also evidence of a lack of awareness and experience of regional and national on-line information and services. Although internet users often used the internet for activities such as fun or shopping, 44% of internet users had never obtained information from government websites (Figure 8.1). The interviews revealed that many individuals were unfamiliar with information and services available on government-related websites. For example, when asking participants about the sorts of services they get from their local authority website, the majority of participants were unaware of its content:

"You know I have never been on the local authority website to know what information they have. I do not know, that is what I am saying, this is probably my fault, I could probably go on there" (Respondent 104).

Although this quote demonstrates that individual behaviour patterns were relevant to on-line participation with policy stakeholders, participants also identified that they did not receive sufficient encouragement from stakeholder institutions. The interviews also revealed that some participants were unaware of the existence of government and NGO websites:

"The Parish Council has not got a webpage at all, I do not think, which means that if you want to contact the council you have to go through the Council's Clerk, so you have to write ... I mean, I have not really looked actually to see if there is a website. I do not think there is" (Respondent 150).

While this response shows that the respondent contacted the policy stakeholder offline, they were unaware of the existence of the parish council website. This is in line with Graham (1994), Vassilakis *et al.* (2005), and Reffat (2006) who argued that there is a lack of awareness about many on-line services. Furthermore, Reffat (2003, 2006) argued that many citizens have a minimal understanding of how government processes are executed and how decisions are made.

Lack of trust

Lack of trust in e-government services has been reported as a factor that affects the successful implementation of e-governance (Carter and Belanger 2005; Reffat 2006). The interviews revealed that even though some internet users did obtain information and services from government and NGO websites and interacted with regional and national stakeholders, they were not always able to establish a relationship of trust and stability:

"When we are talking outside the realms of the local community, when we are talking about political parties and people like that ... what happens quite often is that they will develop something that serves them, in other words, makes it easier for them and makes their communication easier, but that's not necessarily helping the public, to serve them and what affects them and what they're interested in. The council have got to keep inputting all the time, communicating that out and deleting anything that's no longer relevant, so that it is completely relevant to us. You know, a lot of the time they will say, oh, well, you know, you can do this on-line, but that's serving them, but

people do not really, you know ... if it doesn't ... people will just say, 'no, I am going to continue as I am'. But that's just because it suits the council, it does not necessarily suit the person (Respondent 4).

This quote suggests that some on-line services serve stakeholder interests more than the citizen and that this can have implications for how citizens perceive their value. Although this is relevant to both rural and urban contexts, it may have particular significance for rural people. According to Landis (1948: 366), *"Rural people do not trust centralised authority and oppose changes that they do not understand"*, and this was reflected in the experience of numerous respondents: *"Sometimes 'search' engines on actual government sites do not refine the search sufficiently, even if you put in something specific"* (Respondent 118). *"I have found government websites informative but on-line forms (e.g. tax credits, self-assessment tax return forms) are rarely working"* (Respondent 171). This suggests that in cases where on-line services do not facilitate efficient information or services, this can lead to the dissatisfaction amongst its users.

According to participants' perspectives, the *unreliability* and *untrustworthiness* they associated with on-line interaction had a negative impact on participants' participation in e-governance via e-forms, e-services, and e-contact. Participants argued that in order to increase participation in e-governance, increasing opportunities was important, but the ways in which the internet was used to facilitate information, services and interaction was also critical to promoting citizen participation (Millard 2006).

8.4.2 Institutional barriers

Lack of value

Riley (2007) claimed that a high percentage of internet users expect governments to use ICT to deliver innovative and efficient on-line services. In this context, Hatherleigh participants reported that they would use government or NGO websites in cases where these websites provide something of value to them. Participants further reported that bad design of websites resulted in user dissatisfaction. For example, Respondent 80 said, *“official websites are generally ropey”* (Margretts and Dunleavy 2002; Dugdale *et al.* 2004). *“I found the council and government websites hard to navigate sometimes”* (Respondent 18). These quotes may be representative of a lack of technical knowledge amongst internet users in Hatherleigh who have limited access to libraries or public internet access. For example Respondent 26 explained that she had spent hours searching the DEFRA website to find specific information. When asked why she had found this activity difficult she replied;

“Some official websites can be very complicated when trying to find something specific e.g. DEFRA ... maybe it is my problem, I need to be trained to use these sorts of sites ... but how with no training facilities available at this level?” (Respondent 26).

Thus, disparities in the presence of on-line skills are important when considering e-governance in rural areas. This is in line with Sampson (2002) who found that when the Inland Revenue self-assessment initiative went on-line in 2001, 130,000 people accessed the site, however, approximately 60% of those people logged out prior to on-line submission. This finding is also consistent with Millard (2006) who argued that rural areas need assistance in designing, acquiring, installing and implementing the necessary data, software and hardware and ensuring that the correct people and procedures are involved.

Furthermore, the interviews revealed that most participants were concerned with on-line security with regard to data transaction with official websites:

"I do not tend to pay over the internet unless there is no choice. So, for example, if I am paying local community tax, that is a debt out of the bank account. If I am getting tickets for a concert, I will tend to buy them locally. Also I buy my TV license through the post office. I do not do any kind of e-payment. It is only when I need to get something quickly or they do not really offer a choice, then I will use the e-payment, but it is not my preferred way of paying" (Respondent 118).

This response suggests that security concerns may make individuals reticent to use on-line services. This is in line with literature on e-governance which suggested that trust and security are key areas that need attention (Jarvenpaa and Tractinsky 1999; Harris and Schwartz 2000; Bonham *et al.* 2003).

Lack of strategy

The need for strategic plans was identified as a factor that leads to successful e-governance (Choudri *et al.* 2005). E-governance at the regional and national level was, in cases, restricted by a lack of appropriate strategy. For instance, Respondent 17 referred to the internet as limited in its ability to include all up-to-date information issued by government agencies and other organisations:

"Being a rural resident, the internet is very important to my life ... to find out all sorts of up-to-date information and services from the government, or any other websites such as housing development or new policies which might affect living here in Hatherleigh but sometimes it would be better to use the newsletters delivered to our doors from the council or from different organisations which might have more recent information not yet available on the internet ... yes that happens a lot here in Hatherleigh" (Respondent 17).

The interview with the Chief Executive of CCD discussed the CCD's institutional strategy for using offline media for the provision of certain information. Although the CCD has its own website, information and news were still delivered mainly by

magazine or leaflet because the CCD is a membership organisation which has to respond to the needs of its members:

"Because we have members, we have about 900 members, the main things they get from us are the magazine and we always put that on the internet three months later. So if you want to see the magazine, you have to get the paper copy and be a member. If you want to get it free three months later then you can get it from the internet. So we do not want our members to say, 'we will not bother to pay and join up to see CCD because we can get it all from the internet', so that is a slight problem for us, it will change eventually, but at the moment the paper copy comes first" (Chief Executive of CCD, 2008).

This quote suggests that the transition from traditional to electronic services will not automatically lead to comprehensive e-services, and it became clear that to realise efficient e-governance, individual agencies' strategies will need to be assessed and, in cases, restructured. This is consistent with Ke and Wei's (2004) work in Singapore and Choudrie *et al.*'s (2005) work in the UK. They emphasised management approaches and quality management as important factors in facilitating strategic organisational change associated with the transition from manual to electronic processes.

However, while the above example suggests that agencies have motivation to retain and improve electronic services, such strategy [use of paper copy] was supported by the agency or the institution itself. However, the Chief Executive of the CCD also referred to the positive side of this strategy, as it may help those rural people who are often not internet literate:

"I think it is a matter of age and rurality, rural people who are mainly old people are not very comfortable with the internet and email ... And in the countryside it is a bit slower, maybe primarily it is age and secondary it is rurality" (Chief Executive of CCD, 2008).

This quote highlights the policy stakeholders' perspectives about the limitations of internet use in rural areas, which mirrors the findings about age and internet exclusion in this study (Chapter 5). It is also evident that this perception informs

the CCD's strategy for information provision. There is evidence, therefore, of a paradoxical situation whereby if people do not use the internet to access the institutions' websites, the institution will not change their strategy to develop its on-line services to meet users' need.

Interviews with Hatherleigh local councillors revealed similar understandings about age, internet use, rurality and council strategies for information and service provision. For example, according to a local councillors' experience, the DCC held a *paper* public survey for 'Parish Planning' and this survey was distributed to households in Hatherleigh and across Devon with no on-line provision. This approach may be because some rural areas in Devon were not connected to the internet.

It is important to note here that both the Hatherleigh local councillors and the Chief Executive of CCD stated that their institutions intended to develop and change their strategies for information and service provision in the near future. This will mean that in future, citizens who live in rural areas will continue to receive a paper copy of information but with the option of an on-line version. This can be termed a 'dual strategy' which will benefit citizens by increasing options, but will be an added expense for institutions (as noted by both the Hatherleigh local councillors and the Chief Executive of CCD).

Therefore, there was evidence that organisations working with people in rural areas will have to modify strategies associated with conversion from manual to on-line information and service provision. This is in line with previous research (Bakry 2004; Choudrie *et al.* 2005; Reffat 2006) that argued that, apart from adopting electronic services for in-house e-government initiatives, government and NGOs

also need to design and implement policies that can facilitate the adoption of e-governance at regional and national level.

Lack of encouragement

Encouragement to use digital media aids the conversion of many manual institutional tasks (Choudrie *et al.* 2005). In this study, the interviews revealed that participants perceived encouragement to be the most important factor influencing their participation in on-line services and interaction with stakeholders:

"I think the council should put more resources into making facilities available for older people so they can use the internet first and then they can use the on-line services offered by the council afterwards ... and to do so there should be an internet facility locally and it would be publicised and it should be available to all Hatherleigh residents and to old people in particular" (Respondent 165).

Having public internet facilities is, therefore, described as essential for facilitating opportunities for rural citizens' on-line engagement. This understanding was generally shared by the majority of participants and ties in with Castells' (1996), Graham's (1994) and Odendaal's (2003) understanding of the 'information age' (Chapter 2) which has resulted in the widespread promotion of ICT.

Building up older people's confidence was seen as an important way of encouraging wider use of the internet. Participants highlighted how encouraging older people to use ICT may also encourage them to engage more with on-line services:

"There is part of me that thinks that the government should drag people who do not want to do it into the electronic age. But whether they could do something ... if they had some sort of electronic visual display, but one that had clear instructions ... a sort of press-button screen, because then people might be more confident about using it ... then afterwards they might be interested in using the internet for other things" (Respondent 118).

Having a visual screen and public internet access in the town was also reported to be important for providing everyone in Hatherleigh with the opportunity to be part of the 'information age':

"There is no public internet point and there should be as you walk in. There should be a computer sat there and that is the council's responsibility, who else is there? So I am concerned the local authority should be making at least one terminal available for public use, because there should be, how can you live without a computer these days?" (Respondent 19).

Participants also pointed out that public access alone would be insufficient to get people on-line and that institutions also had a role to play:

"I think the main thing for the council, if they are concerned about using the internet as a communication tool for the community, is to put more resources into marketing and encouraging people to use them. They could have much more in the way of meetings and introducing people and say, 'well, we do have an internet facility and we are providing training for everybody'" (Respondent 165).

Several respondents shared this belief, that encouragement needed to be two-dimensional, providing access to services but also the *marketing* of these services. Furthermore, interviews with the Head of Regional ICT in the SWRDA³² revealed that rural citizens (in the South West of the UK) did not receive encouragement to use the internet. For example, when asked if SWRDA developed policy or programmes to encourage internet use in rural areas he replied that:

"The SWRDA did a very large programme which is now completed... the work was to have a partnership in every county of the South West and the programme was called 'Connecting South West'. I started that programme in 2002-2007 and managed to get all the unitary authorities on board. So we had the entire regions covered. The work people did with the partnerships was linked with Business Link and it helped business engage with the internet, get websites and to understand how business can benefit from the internet ... etc. So by getting business to engage we [SWRDA] helped over 24,000 businesses in five years" (Head of Regional ICT in SWRDA, 2008).

This response shows that SWRDA were concerned about improving businesses connectivity in rural areas, but when the Head of Regional ICT in SWRDA was asked about actions to encourage individuals and households in rural areas the

³² SWRDA leads the development of a sustainable economy in South West England. SWRDA is used to help the region's businesses, communities and individuals to adopt and exploit ICT, improving the economy and quality of life (www.southwestrda.org.uk).

response was negative. This was also the case for the Hatherleigh local councillor and the Chief executive of CCD.

"Yes we only target businesses, but if we target businesses, all people who work with business also live in a home....When we move to the area and get business involved, then the employee goes home with a spirit of enthusiasm and gets their family connected" (Head of Regional ICT in SWRDA, 2008).

This response demonstrates that initiatives like the SWERDA strategy may have a trickle-down effect in cases where individuals are employed by businesses. However, this excludes those who do not. It became clear in the interview that SWRDA were unable to help individuals to access and use the internet: *"Usually in rural areas, for people who do not want to use the internet and also for those who do want to use the internet, it is a question of whether they can afford it or not and in both cases we can do nothing for them"* (Head of Regional ICT in SWRDA, 2008) exemplifying the link between social exclusion and digital exclusion (Warren 2007). These discussions of institutional barriers suggest, therefore, that lack of encouragement of rural citizens to use the internet can reactively influence the potential success of e-governance processes. That, in turn, corresponds with other finding from studies on the digital divide (Huggins and Izushi 2002; Warren 2007; Selg and Svenesson 2008) and on e-government (Choudrie *et al.* 2005; Reffat 2006).

8.5 Conclusions

This Chapter aimed to describe and evaluate patterns of use of regional and national level e-governance by individuals in Hatherleigh. The literature suggests that grassroots or marginalised communities can benefit from on-line access to

information, services and interaction with stakeholders at the regional and national scale (Staeheli 1994; MacKinnon and Phelps 2001; Bulkeley 2005). Therefore, the Chapter investigated participants' use of the internet to obtain information and services from regional and national government and NGOs, and explored to what extent the internet stimulated on-line interaction.

It has been suggested that advancements in ICT will ensure that every citizen has the basic level of internet skill to use on-line public services and information (Selwyn 2003). However, the empirical findings of this study indicate that a lack of internet skills (see also Chapter 7) was restricting citizens from accessing and participating in e-governance. This demonstrates an internet skills divide in Hatherleigh, which suggests the need to build up technical skills amongst specific population groups including the elderly. For those participants who did use the internet to access information, this behaviour was related to age and employment status. The middle-aged groups and employed people (self-employed in particular) were most likely to obtain information from government websites. This may be explained by these groups using such websites for work purposes. This suggests a divide characterised by age and employment between those who participate in e-governance processes and those who do not.

Internet users in Hatherleigh were convinced of the value of the internet in improving accessibility, efficiency and increasing options for government and NGO information and services, all of which have been described as key considerations for rural areas (Moseley and Owen 2008). Internet users were likely to use the internet to seek regional or national information from official websites, suggesting a need for an alternative channel for political markets not served by offline media. This is in line with previous research (Okot-Uma 2001; Riley 2003; Syrett and

Baldock 2003) which suggests that e-governance provides new ways of accessing services, improving efficiency, and increasing options in information delivery to rural people.

Participants in this study used these on-line services as a supplement method to traditional media. This combination, however, is not only associated with the local-national scale, but also with rurality as a geographical issue, in parallel, with increased opportunities to make rural people more reachable. These opportunities can be mapped against the 'e-governance' and 'ICT in rural areas' literatures as outlined in Chapter 2, which suggested that the role of ICT in governance is to overcome geographical distances (Castells 1996; Thompson 1999; Odendaal 2003), and to bring new sections of society (including people in remote areas) into the sphere of governance (Millard 2003).

Participants identified similar understandings of 'accessibility' which supports previous research on e-governance. This suggests that the internet provides the potential for local people to rescale participation by engaging in networks that transcend their locality. Some internet users reported that e-governance processes such as email contact, e-forms and e-voting enhanced the accountability and transparency of the democratic process and were therefore beneficial. This is consistent with the literature that identifies these sorts of services as popular within e-governance (Okot-Uma 2001; Millard 2003; Odendaal 2003). It is, therefore, important that these services are exploited and their benefits emphasised to citizens of Hatherleigh and other rural areas. Internet users were not only aware of the accessibility of government information on websites, but also able to exploit this to interact with policy stakeholders who cannot be reached locally.

	Barriers	Description of the barriers	Suggested future solution
Individual barriers	<i>Lack of awareness</i>	Some internet users are unfamiliar with official regional and national websites.	Building up rural people's awareness of the availability of electronic services.
	<i>Lack of trust</i>	<ul style="list-style-type: none"> • Some internet users think that official websites are unreliable and only serve the interests of the institution rather than citizens. • Some internet users think that official websites are misleading and do not facilitate e-information and e-services. 	Build up rural people's trust of the official agencies' work and services.
Institutional barriers	<i>Lack of Value</i>	<ul style="list-style-type: none"> • Some internet users think that official websites are badly designed and complicated. • Some internet users have security concerns with regard to transactions over the internet. 	<ul style="list-style-type: none"> • Build up rural people's internet skills. • Provide new understandable e-services which can meet the needs of more people • Increase the security for on-line transaction with clear guidelines for such procedures that in turn can make it easier, 'quicker' and more favourable than traditional methods of transaction.
	<i>Lack of strategy</i>	Some institutional strategies might restrict providing up-to-date information or communication with rural citizens	<ul style="list-style-type: none"> • Individual agency strategies have to be assessed and maybe changed to ensure comprehensive e-services.
	<i>Lack of encouragement</i>	<ul style="list-style-type: none"> • A lack of encouragement of different groups to use the internet in rural areas, especially older people. • Lack of encouragement to access official services on-line. 	<ul style="list-style-type: none"> • Provide public internet access in rural areas. • Build up older people's confidence by providing training facilities. • Institutions should market their services to rural citizens and provide illustrations of the benefits rural people can gain through using these services.

Table 8.1: Barriers to the implementation of e-governance at regional and national levels (Source: Author)

In addition they referred to experiences of inclusion and forms of interactions, which indicates that the internet played a role in broadening the political participation of people in Hatherleigh.

However, there was evidence of barriers to exploiting e-services provided by government and NGO websites which impacted on the way users interacted with them. Table 8.1 provides a summary of limitations and barriers based on individual and institutional barriers.

For individual barriers, it is evident that internet users had a lack of personal *awareness* because of unfamiliarity with government and NGO on-line services. It further became clear that, in cases, participants did not *trust* official websites and could find them misleading. This leads the present research to suggest that where ICT is introduced, services must retain a local dimension if they are to be effective. This requires sophisticated new e-tools and services which can accommodate users' informal knowledge and uses language which is accessible to the wider population. Hence, the implementation of better, simpler and more user-oriented ICT tools and services is necessary, but is not in itself sufficient to improve participation of all rural citizens. Therefore, given the context of the empirical findings, it can be argued that that institutions and organisations working with rural people need to specifically address barriers such as lack of *value*, lack of *strategy* and absence of *encouragement*, in order to facilitate e-governance at regional and national scales.

Participants also highlighted the need for locally-based internet resources supported by policy stakeholders' commitment to the *marketing* and *development* of on-line services that reflect the dynamics of rural people's on-line interaction.

Thus, in order to promote e-governance in Hatherleigh, there is a need to provide public internet access and to offer access to internet training. This could involve stimulating public awareness of e-governance through meetings and workshops at the local level, which may encourage direct participation with policy stakeholders. These strategies alongside, an emphasis on building up older people's confidence in using the internet, may provide the best way to enhance participation in e-governance.

Chapter 9: Conclusions

9.1 Introduction

This Chapter will summarise the key findings of the research detailed in this thesis. As previous research has shown, the issue of rural governance has become increasingly important, especially in the context of institutions and initiatives in and around rural and local communities (Murdoch and Marsden 1998; MacKinnon 2002; Yarwood 2002; Woods 1998a, 2005; Warren and Yarwood 2006). However, studies that have analysed rural governance have tended to concentrate on *policy issues*, such as the emergence of new policy initiatives or the role played by communities in empowerment of specific stakeholder groups (e.g. Murdoch 2000; Mackinnon 2002; Herbert-Cheshire 2000), while few attempts have been made by academics to analyse the impact of ICTs toward *e-governance* in rural areas.

The study aimed to analyse the impacts of ICT availability and use for e-governance processes in rural areas in the UK. The 'remote rural' town of Hatherleigh (West Devon) was used as a case study. To address the aim of the thesis, the investigation had the following objectives:

- a) To examine patterns of ICT adoption in Hatherleigh, and to assess the purposes and motivations underlying individual use/non-use of the internet.
- b) To investigate patterns of ICT inclusion/exclusion in Hatherleigh, and to identify reasons for exclusion linked to factors such as age, gender, employment, family type, etc.
- c) To assess the potential contribution of ICTs to e-governance processes in Hatherleigh. Specific emphasis was placed on how residents use the internet for

accessing on-line information and services and how they use the internet to engage with policy stakeholders within and beyond Hatherleigh.

These objectives provided insights into the interplay of ICT and the rural community, issues about ICT inclusion/exclusion, and e-governance processes in Hatherleigh.

The structure of this chapter will follow the same order as the objectives above. Section 9.2 will summarise key points emerging from the analysis of ICT access and use in Hatherleigh. In Section 9.3, the discussion will focus on patterns of digital exclusion. Based on the nature of the interrelationships of ICT and governance, Section 9.4 will highlight key points about e-governance processes in the case study area. Recommendations for future work will be presented in Section 9.5, especially in the context of Syria where this researcher is from. The key contributions made by this thesis to e-governance debates will be highlighted throughout the chapter.

9.2 Changing patterns of ICT access and use in the study area

The analysis highlighted that ICT has reached into everyday life in Hatherleigh and has changed the social landscape of many people's lives (Castells 1996; Graham and Marvin 1996). Following the call to pay attention to the positive role of ICT in time-space compression in rural areas (Graham 1994; Castells 1996; Robertson 1992, 2003; Giddens and Griffiths 2006), this study not only analysed how Hatherleigh residents identified a plethora of potential wide-ranging changes with regard to how the internet affects social structures, but also what socio-economic

factors are associated with ICT use and non-use in Hatherleigh (Castells 2003; Anderson 2004; Dwivedi and Lal 2007; Haines and Leonard 2007; Selg and Svenson 2008). Three main findings emerged from this analysis.

First, research findings suggested that network infrastructure is a necessary condition for internet access. Interviews for this study revealed that in less profitable 'remote' rural areas such as Hatherleigh, network service providers are not very interested in deploying internet access facilities, as the market often does not justify the investment. Despite this, Hatherleigh residents managed to obtain broadband access for their town. As a result, they argued that ICT and its application has had great potential for social change and digital inclusion in Hatherleigh. This is in line with Wilcox (1996) who argued that the 'information society' is both about the willingness to get connected and subsequent utilization of new ICT. It became clear that ICTs embody the capacity of the Hatherleigh community to transform itself (see Castells 1996). To some extent this suggests that for rural people who live in remote areas aspirations about 'getting connected' should not be seen as necessarily different from those living in large cities – at least for the UK rural/urban context. Such insight is particularly important with regard to understanding the 'bottom-up' approach of economic and social development in which rural people take responsibility for their own development (Murdoch 2000).

Second, and linked to the above, factors such as, age, employment and household types were significant in determining internet use by Hatherleigh residents. Old age and unemployment particularly impacted on decisions not to adopt the internet (see So *et al.* 2005; Selg and Svenson 2008; Dwivedi and Lal 2007, for similar results). Internet adoption was also influenced by whether families

had children, as most nuclear families in Hatherleigh adopted ICT and have internet access. According to participants, the internet was used frequently as a tool for children's education, for communication and for fun. Children are, therefore, important in ICT adoption decisions. Such factors explaining ICT exclusion and the digital divide between internet users and non-users in Hatherleigh support Castells' (1996) argument that the information society can be a new route to both social inclusion and exclusion (see also Howland 1998; Norris 2001; Servon 2002; Warren 2007).

Third, the literature suggested that ICT has had a significant influence in the development of the 'global village', by allowing fast communication of information around the world (Appadurai 2001; Walsham 2001; Giddens and Griffiths 2006). The analysis revealed that Hatherleigh internet users identified a plethora of potentially wide-ranging changes with regard to how the internet affects their social and economic networks within and beyond the community. Internet users particularly identified a range of social and economic changes linked to communication via e-mail and to obtaining general information via the internet. They identified the internet as an important tool for shopping and new job opportunities in rural areas – two key internet uses that may be particularly important in remote rural contexts. Yet, the findings also revealed that internet and e-mail use was often more about increasing global interaction of rural people than changing their local social interaction (see below). Nonetheless, internet and e-mail access have restructured the sphere of production in rural towns such as Hatherleigh (Dabinett 2000; Castells 2003), and there is an evident link with processes of intensification and the speeding up of time-space compression in

economic and social life identified by previous commentators (Harvey 1989; Giddens 1991; Robertson 1992, 2003; Massey 2005; Inda and Rosaldo 2008).

Finally, the analysis revealed that participants generally perceived the community website (HCW) as a tool to promote the town within the 'global village'. The HCW was perceived by residents as 'representative' of the town at the global level, and as a method to promote local tourism businesses in particular. This understanding of the role of the HCW had major implications on participants' perception of rural regeneration (Gibbs and Tanner 1997) and the strategies they suggested to better advocate the HCW role for local networking. This is in line with Warren (2007) who argued that village websites are a key product of community activities. Participants, however, criticized that the HCW was dominated by the business sector, with often poor local information and that, at the same time, the HCW ignored young people's interests (see also Schäfer, 2008).

Based on these results, this study suggests that it is important to initiate a more differentiated understanding of ICT non-users' disadvantages, for example, in terms of ICT access as well as with relation to benefit of ICT use (see for example Warren 2007). The need to challenge the ICT and social exclusion discourse of internet user/non-user differences became particularly apparent in how internet users described how the internet affects their lives in a remote rural community such as Hatherleigh (see Section 9.3 below). Such insights are particularly important with regard to developing a more inclusive environment for rural people and to understand ICT effects in rural remote areas. In this context, the greatest danger posed by the promotion of internet access to remote rural locations is that internet non-users who live in rural and remote areas are actually *further* excluded

(see below) (Servon 2002; Mossberger et al 2003; Selwyn 2006; Rao 2005; Warren 2007).

The following section focuses in more detail on ICT inclusion and exclusion in Hatherleigh, by examining key results as to how ICT access and use have affected Hatherleigh.

9.3 ICT inclusion and exclusion in Hatherleigh

Previous research has indicated that without adequate connections to advanced ICT infrastructure and services rural communities may not be able to fully participate in the emerging information economy (Huggins and Izushi 2002; Strover 2001, 2003, Millard 2005; Woods 2005). This study revealed that Hatherleigh internet users particularly emphasised the importance of internet access for rural areas. The internet was, therefore, seen by internet users as a powerful new opportunity to overcome the disadvantages of distance and isolation.

This understanding of the relationship of internet use and rural location had implications for internet users' perceptions of everyday lives in Hatherleigh. Previous rural studies have particularly suggested that ICTs offer rural citizens significant benefits by overcoming social and economic disadvantages (Clark 2000; Strover 2001; Hollifield and Donnermeyer 2003; Woods 2005, Moseley and Owen 2008). However, Hatherleigh internet users referred to different experiences of benefits and ICT impacts on their 'remote rural' lives. Internet users seemed to experience different levels of inclusion, but overall seemed more able to overcome disadvantages than before the internet came to Hatherleigh.

One of the key dimensions impacting on the experiences and feelings of inclusion was rural people's geographical or social isolation which affected the social network available to them. Thus, for internet users, this isolation could be partly overcome through the internet. Further, young people who did not enjoy living in Hatherleigh mentioned that there was not much of interest in the town for their generation (Silbley 1995; Glendinning *et al.* 2003). However, young people often referred to high levels of integration into wider social networks through the internet, and it was now much easier for them to communicate with their friends who are geographically distant (see also Schäfer 2008).

Another important dimension of ICT inclusion represented *improved services in rural areas*, which seemed to result from new opportunities and choices offered by the internet for remote rural areas. Internet users particularly referred to new and better services, the ability to work from a distance, and being able to communicate with customers, clients or employers/employees. This supports previous research which has suggested that the emergence of ICTs in rural communities has positively affected the rural economy (Clark 2000; Schmied 2005; Moseley and Owen 2008). Indeed, many argued that the internet has improved the rural and social economy of Hatherleigh (e.g. job opportunities) and that it has helped to produce a 'new vision' of life and opportunities for the town. As a result, for many internet users the fact that they could access the internet helped in their decision to stay in Hatherleigh. Although there was evidence of conflicting attitudes about the importance of internet access as a deciding factor in choosing to live in Hatherleigh, it was apparent that the internet has aided the mobility of Hatherleigh residents where rural people can work from a distance (Cloke *et al.* 1998; Hugo and Bell 1998; Boyle and Halfacree 1998; Millard 2005). As a result, internet users

perceived the internet as raising the quality of life in their rural remote area and helping Hatherleigh to be 'contemporary' and 'up-to-date' (see Malecki 2003; Woods 2005; Tookey *et al.* 2006; Schwanen and Kwan 2008; Moseley and Owen 2008).

The situation was very different for ICT non-users. As highlighted above, Hatherleigh is also characterised by social and ICT exclusion, and it is these ICT non-users that need to be involved more in order to improve their living conditions (see also Clark 2000; Schmied 2005; Moseley and Owen 2008). Hatherleigh internet non-users argued that the main barriers for non-use were 'no interest', 'security concerns' and 'cost'. Although reasons for internet non-use are similar in other locations, non-use is important in rural locations such as Hatherleigh because the internet is perceived as an important solution to economic and social issues associated with geographical remoteness (see above), and people who are not using this technology are, therefore, likely to remain excluded (Warren 2007). Some non-users, however, highlighted specific coping strategies with which they attempt to address their digital exclusion. A key strategy was, for example, for non-users to benefit from using the internet through an intermediary (e.g. relative, friend). This, in turn, may enable this group to use the internet more proactively in the future.

Previous researches (Wyatt *et al.* 2002; Lenhart *et al.* 2003) have begun to bring attention to the nature of internet non-use (see Chapter 6). These literatures suggested that some people might choose not to use the internet and that this choice does not always reflect a position of disadvantage. However, this study also suggests a typology of non-users in Hatherleigh, suggesting that non-users are a highly differentiated group in which some segments are relatively keen to

use ICT in the future, while others continue to staunchly resist using ICTs. The latter are a particularly problematic group as they may be 'doubly' excluded by both living in a remote rural area that has lost some of its services (to some extent because of ICT availability) and by not being interested in using ICTs to overcome such disadvantages. The analysis of the relationship between internet non-users' future expectations and having someone use the internet on their behalf allowed a typology of non-users to be developed: (1) *Resolute non-users*: those non-users who do not benefit from using the internet through an intermediary and who do not want to use the internet in the future. (2) *Neglected non-users*: non-users who do not benefit from using the internet through an intermediary but who want to use the internet in the future. (3) *Ignorers*: non-users who benefit from using the internet through an intermediary but who do not want to use the internet in the future. (4) *Converters*: non-users benefiting from using the internet through an intermediary and who want to use the internet in the future. These four categories demonstrate that the non-users are not equally disadvantaged. The typology was particularly beneficial in identifying 'resolute' non-users as the largest group of non-users and as those who are the most likely to remain excluded from ICT. It is this group of residents that may be particularly affected by ICT exclusion in a remote rural location such as Hatherleigh. There is, therefore, a good potential for the development of strategies which can specifically address the needs of each category of non-user in order to address ICT exclusion in this and other rural areas.

9.4 E-governance in Hatherleigh

Following the latest understanding that ICT may give birth to a new discourse of e-governance (Okot-Uma 2001; Millard 2003) this thesis aimed to assess the

potential contribution of ICTs to e-governance processes in Hatherleigh. The focus was on how rural residents use the internet for accessing on-line information and services, and how they use the internet to engage with policy stakeholders within and beyond Hatherleigh.

Internet users referred to very different experiences of on-line involvement to express their position in the e-governance processes on a local-national scale. There was a *pronounced geography* associated with these processes, as internet users seemed to value the new opportunities offered by the internet to access information and services and to interact with policy stakeholders at the regional/national level more than they do at the local level. Indeed, only a small number of internet users emphasised the importance of *local* e-governance. For those who did engage in local e-governance processes, ICT was seen as a chance to improve local prospects through local information accessibility, efficiency and options along with local engagement.

How can the relative lack of interest/engagement with *local* e-governance processes be explained in the context of Hatherleigh? One of the key dimensions relates to the 'remote rural' nature of Hatherleigh and its small size, which leads to the persistence of a relatively close-knit community that continues to value face-to-face interaction based on 'physical' meeting opportunities. There are many examples of such meetings and events, such as the Hatherleigh Festival, the carnival, churches, and the local market. All of these facilitate social networking, especially the development of face-to-face local participation, and lead to a decreased *need* to use internet for *local* purposes. Correspondingly, in Hatherleigh, people read the local newspaper, use the 'Parish Pump' for local events news and services, and if they want to raise issues they meet directly with

the local councillor rather than using the internet. In this context, patterns of local e-governance are likely to be different in a remote rural town such as Hatherleigh compared to larger towns or urban areas where access to local e-governance services and processes is more likely to take place via the internet. This confirms findings from previous research (e.g. Wilcox 1996; Dabinett 2000) which has highlighted that although ICT provides benefits for communities such as accessibility to information, community information sharing and problem solving, "*revival of the community is not one of them*" (Wilcox 1996:5).

However, the analysis of internet users' experiences of e-governance at *regional-national level* revealed different patterns. Participants often referred to a 'higher level' of e-information and e-services and interaction with policy stakeholders at that geographical scale, and it seemed more efficient for rural residents to interact with government and non-government agencies which are geographically distant (e.g. CCD, DCC). Although it can be questioned whether such remote interaction is an important tool for effective e-governance, it nonetheless creates opportunities for growth and empowerment in rural areas (Odendaal 2003). Thus, while participants referred to traditional methods (face-to-face, letters) of communication with local policy stakeholders, they made use of the internet to email *regional or national* stakeholders, or to vote on-line on issue that meet their interests. Participants particularly perceived these new opportunities as 'efficient' with regard to developing strategies to overcome their spatial disadvantages. It can, therefore, be argued that such 'empowerment' through regional-national e-governance can be read as a response by rural people to overcome specific disadvantages linked to their rural location. This is also supported by other studies which have highlighted that remote communities can be empowered through e-

governance (Staeheli 1994; Howitt 1998; MacKinnon and Phelps 2001; Buckley 2005).

However, the analysis also revealed limitations and barriers affecting e-governance at all scales. For the purpose of this study, barriers were classified with regard to individual and institutional standpoints, partly also to provide future policy-makers with baseline information how to overcome such limitations in e-governance processes. On the whole, Hatherleigh residents showed relatively low levels of awareness about internet sites linked to e-governance (e.g. government sites or sites linked to public services) and were not very adept at navigating to available on-line services – neither at local, regional or national level. For example, some participants were unaware of the existence of the HCW or what services the DCC website can provide. While this may be a factor of age and lack of internet skills for some respondents (see above), and while some Hatherleigh residents seemed less able to overcome disadvantages with regard to access to e-governance structures and processes, the findings generally confirm Graham's claim (1994) that, in the UK, successful community-based responses to technological change have to be based on increasing individuals' awareness.

Yet, the relationship between ICT and e-governance was not just underpinned by individual barriers associated with people in Hatherleigh. Another important dimension of barriers and limitations was linked to institution-specific restrictions which seemed to result in limited opportunities and choices for rural people from benefiting from e-services and, consequently, to engage with the e-governance process. In terms of *local* e-governance, 'lack of funds' was a key restriction faced by local institutions (see also Fountain 2001; West 2004). For example, the local institution of HAP does not have enough resources to set up a website to serve as

a source of information and news. Similarly, the allocation of funding and resources is hindering more ICT investment in the Hatherleigh Area Business Forum. Further, the study highlighted that lack of organisation of local information and services restricted the ability of Hatherleigh residents to place services on-line and to use ICTs for local outreach. It appears, therefore, that the HCW is particularly inadequate to meet Hatherleigh residents' e-governance needs.

The analysis of institutional barriers further revealed skills-related issues with regard to accessing regional/national e-governance services. This highlights the importance of building up rural people's skills, and taking into consideration the often limited ICT knowledge of rural (and possibly urban) people. For example, although some institutions working with rural communities (e.g. CCD) acknowledged the role of ICT in improving their role and interlinkages with the community, some institutions do not provide the most up-to-date information and technology to rural citizens (Fountain 2001). The findings further brought attention to the need for institutions to closely work with rural residents, especially to encourage the use of the internet in remote rural areas. Older people should be particularly targeted, as restricted access to the internet is often linked to lack of internet skills among this age group, leading to feelings of exclusion from the digital age. However, more work is also needed in general to better market institutional services by encouraging rural people to access official services on-line.

In summary, a major contribution of this thesis is in identifying that e-governance interaction of Hatherleigh residents was more pronounced at regional-national level than at local level. At local level, ICT access alone will not change the circumstances of the relationship between governance and ICT. Indeed, promotion

of information and services delivery and interaction between remote rural residents and ICT will be wasted if there is no development of projects and initiatives and skills that help people engage more with e-governance processes at all scales. Therefore I argue that a more positive and comprehensive campaign is needed at all levels of e-governance institutions and agencies in order to promote e-governance. This is certainly true for Hatherleigh and is also likely to be true for other 'remote rural' towns in the UK. Such a campaign should involve stimulating rural people's awareness of on-line services provided by a variety of government and non-government institutions and, consequently, awareness of e-governance opportunities. This could be done through different agency-sponsored seminars, workshops, meetings, and also through visits of key regional/national stakeholders at the local level. More effort could be put into, for example, mailing newsletters to Hatherleigh citizens, displaying posters and banners in public places and using public media services to advertise the benefits of e-services offered through e-governance networks – to both users and non-users (especially to the above-mentioned 'converter' group who is most in need of additional information of how to use the internet and its associated services).

9.5 Contribution of this study to the wider rural studies literature

How do the findings from this study link in with wider debates in the rural studies literature? In this final section, I wish to tease out some of the key findings emerging from the Hatherleigh case study, and how these may help shape future research agendas.

This study explored the prospects for rural areas within the emerging information society, with specific focus on access and use of ICT by residents of the remote rural town of Hatherleigh. As Chapters 1 and 2 highlighted, the new ICTs have been particularly credited with the potential for helping remote rural areas overcoming the negative effects of distance and isolation from core markets, cities and agencies. The findings from this study broadly support arguments made in previous studies which have acknowledged the *positive* role which ICTs play in rural areas, especially with regard to improving rural services by diminishing distances from markets and services (Schmied 2005; Moseley and Owen 2008). It has been argued that in rural and remote contexts in particular, different online services create new environments and new spaces for citizen interaction with their locality and the wider world. This has an impact not only on the products and services that rural residents can obtain more easily via the internet, but, as Stover (2001), Malecki (2003) and Schwanen and Kwan (2008) argued, also on less tangible factors such as social well-being and happiness that are enhanced by new means of information communication in rural areas – processes that were evident in the context of the Hatherleigh case study.

The question remains, however, whether ICTs may also accelerate the often proclaimed *demise* of rural and remote communities by linking them more to globalised patterns and processes of information exchange (thereby possibly further eroding local social capital), or *aid* in their transformation towards becoming more resilient spaces. As Woods (1998b) and Ramírez (2001) highlighted, there is increasing evidence that rural communities define what they want to be and where they want to go. This study has shown that ICTs are undoubtedly tools that can be harnessed in these processes, especially as ICTs open new opportunities for rural

residents with regard to global markets, new ways of communication at various scales, new job opportunities, information accessibility, or service provision (e.g. online banking). ICT-related tools can, therefore, be harnessed and put to work whereby ICT can create a new environment that was not there before, and, as this study suggests, one that will certainly transform options that rural and remote communities have in order to improve their access to rural services. However, this study has also highlighted that simply increasing access to information, supporting the availability of ICT provision and access to online services, and even helping to re-establish the often missing links to distant individuals, communities and markets, will not automatically lead to stimulation of rural social and economic development. Future studies about remote rural towns such as Hatherleigh will, therefore, need to further investigate how such towns evolve with regard to differential constraints and opportunities offered by new ICTs.

There nonetheless continues to be optimism about the potential impact of new ICTs for overcoming the remoteness disadvantages of rural areas, and for helping reduce the rural-urban digital divide (Norris 2001; Servon 2002; Hollifield and Donnermeyer 2003; Nicholas 2003; Kenny 2006; Warren 2002, 2007). Storgaard (1998), for example, argued that contrary to the common belief that ICT is closely related to urban areas, highly advanced users of telecommunications are also found in rural locations, and the case study of Hatherleigh has supported this latter assertion (see also Chapter 3). However, this study also showed that while the ICT revolution has transformed the lives of many people in rural areas (especially the 'haves'), it has also left largely untouched the lives of many of the 'have-nots'. In other words, existing divides within rural communities between those who have access to the wider world and to wider communication networks may be

exacerbated by the new ICTs. This means that a sizeable section of the rural population still misses out on the political, social, economic, educational, and career opportunities created by ICTs (Hindman 2000; Warren 2007). The findings from this study, therefore, support results from other studies that also suggested that ICT exclusion leads to, and exacerbates, *social and economic exclusion* in rural areas (e.g. Chen *et al.* 2002; Servon 2002; van Winden, 2001; Crampton 2003; Malecki 2003). This will be particularly the case when electronic means of organising access to services grow progressively more dominant in future, leading to the further downgrading or curtailment of traditional face-to-face or paper-based ways of delivering services.

As this study showed, *older residents* in rural areas may particularly miss out, as many non-internet users in rural area are older people who tend to lack interest, skills, knowledge, equipment and money necessary to access and fully exploit the rapidly expanding online opportunities. Yet, this study also showed that ICT non-users are a highly differentiated group and that rural residents are not equally excluded (see also Section 9.3). Thus, it can be argued that the diffusion of ICT (internet in particular), represents a subtle, often invisible, but immensely powerful, process of dualisation of rural society, as rural people become separated into the 'on-line' and 'off-line' clusters that, as Chapters 6-8 highlighted in particular, involve complex forms of inclusion and exclusion which work simultaneously and at multiple geographical scales.

Focusing on ICT, governance, and citizen engagement in rural areas also resonates with other developments that are already occurring in rural research. There has particularly been a renewed concern with interrelations between rural

citizens and a variety of government and non-government agencies from the public, private and voluntary sectors (Marsden and Murdoch 1998; Little 2001; Mackinnon 2002; Welch 2002 Goodwin 1998; Ray 1998; Cloke *et al.* 2000; Woods and Goodwin 2003; Woods 2005). These arenas of research inevitably also involve analysis of rural citizen involvement and local empowerment via ICT and the internet. This study has particularly explored two aspects of how applications of ICTs are currently tending to support citizen engagement with agencies and stakeholders at different geographical scales, namely how the internet is used by rural residents to obtain online information and services and how they interact with policy stakeholders. Previous research suggested that for residents in rural areas, instant internet connection for all geographical scales (local, regional, national, global) is becoming more and more important (Díaz and Cathy 2009). Insights offered by this study about different online citizen engagement at different scales broadly agrees with findings from previous studies about differential scalar use of the internet, but highlights particularly the limited use of the internet for locally-based activities, while a more wide-ranging use of ICTs for interaction with regional, national and global agencies and stakeholders was evident. Findings from this study, thus, support the literature which has suggested that human activities (including political and economic behaviour) find different expressions at different spatial scales (e.g. Graham 2002; Marston 2000; Swyngedouw 2003, 2004).

From the point-of-view of rural citizens' online engagement, this study particularly showed that *close-knit* rural communities such as Hatherleigh and the *efficiency* of local communication are key explanations why use of the internet for local purposes (e.g. to obtain information about the locality) is limited. The study,

therefore, argued that intensification of e-governance processes at local level is particularly important, if one future objective is to improve interaction between rural citizens, government, non-government organisations and policy stakeholders at *all* scales. This may help address the issue of what is often portrayed as a growing sense of *disconnection* at local level within many rural communities in the UK and beyond (Woods 2005; Moseley and Owen 2008).

The study also highlighted that the picture at the regional and national scale is different, as Hatherleigh residents showed much more interest and willingness to use ICT to communicate with, and find information about, stakeholders and services offered at these scales. Therefore, the findings from this study support previous studies which suggested that ICT and their effects are currently strongly shaped by the ways in which they are being mobilised beyond the locality to extend the power of remote rural citizens (Staeheli 1994; Thompson 1995; Howitt 1998; Le Galés 1998; Dabinett 2000; Markoff 2000; MacKinnon and Phelps' 2001; Odendaal 2003; Bulkeley 2005). Thus, rural citizens are now able to gain empowerment by pressing claims and engaging with policy stakeholders at spatial scales beyond their localities.

Finally, this study also supports Castells' (2003) notion that ICT is an inherently *flexible* technology. The Hatherleigh case study showed, in particular, that the ways in which ICT is configured, diffused and applied are also crucial. The remarkable powers of ICT for supporting new types of local online citizen engagement in rural areas, as well as supporting new ways of information delivery, communication, and interaction, can all still be enhanced and expanded in future (dynamic process). This, in turn, should make the effects of ICT on rural citizens and rural development (even) more positive and progressive. This study

particularly showed that e-governance processes could be easily enhanced through more citizen engagement at the local scale, especially by showing rural residents that they may also benefit from accessing local services that meet local people's interests and needs via the internet. E-services should, therefore, not be dominated by information offered at regional and national scales, but websites, online information, service information and opportunities for *local* online citizen engagement also need to be created locally, thereby potentially adding new voices to the regional and national internet conversation and making overall internet content more relevant to rural communities.

There is no doubt that findings from this study related to questions of scale and internet use, and to issues of inclusion/exclusion of rural citizens from ICT processes, also highlight that more *future work* will be needed to analyse whether these scalar and socio-economic disparities between local versus regional/national/global contexts of ICT use will continue, and how this may affect rural governance processes in future.

9.6 Future work

Above discussion has already highlighted fruitful avenues for future research, including better targeting of policies and information to residents of remote rural locations. In addition, there are some specific research opportunities emerging for me as a Syrian researcher. As mentioned in the research methodology (Section 4.6), I was brought up in the Syrian countryside and have considerable experience of the rural economy in Syria, and I am employed as a lecturer in the Faculty of Agriculture (Damascus University). To take this research forward I wish to

particularly contribute to an understanding of e-governance in rural areas of Syria and to the growing debate regarding differences and similarities in e-governance between rural areas in the developing and developed world. In this context, Kenny (2006: 101) argued in his study about the internet in the developing and developed world that *“the overall level of development will limit citizen access, but even more so it will limit use where there is access”*.

Building on experiences gathered during this thesis, a future study could focus on patterns of ICT adoption in Syria, by assessing the importance of socio-economic and technology-related factors in rural areas. The key barriers affecting e-governance in remote rural areas of Syria could be identified and their role compared to those found for Hatherleigh. The main focus could be on e-governance frameworks as demonstrated in this study (Figure 1.1), and how a ‘remote rural’ location in Syria may affect access of on-line information and services. A particular focus of the proposed study could be to analyse use of the internet by residents and how this interacts with policy stakeholders at local, regional and national levels.

This study has shown that other barriers impacting on the use of regional-national level e-governance structures and websites were related to lack of trust in on-line services. In Syria, as a non-democratic country, this could be of particular importance as official websites are often unreliable and may only serve the institution itself and not the people. Further investigation with regard to the application of this framework in Syria is, therefore, fundamental to understand e-governance processes in a more centralised country with limited institutional accountability and integrity.

Additional lessons were also learned with regard to the various sources of data and information used for this thesis. One of the most important lessons was that living with rural people in their own community (participant observation, observational methodologies) and linking a broad questionnaire survey with more deeply textured interviews (with locals and key stakeholders) yielded valuable data about various processes related to ICT use and non-use, and a study in Syria could attempt to apply similar methodologies and approaches. Finally, this study has also shown that there is a need to focus research on key factors such as ICT awareness, skills, and the nature of the community – factors that may assume even greater importance from a developing country perspective.

Appendix 1: Questionnaire survey used in this thesis

Questionnaire cover page:

Information communication technology (ICT) in the rural community

Hatherleigh case study

1. Could you please specify in the table below the number of people who live in your house indicating their age, gender, and if they are users or non-users of the internet?

	12-19		20-29		30-39		40-49		50-59		60-69		70+	
	User	Non-user	User	Non-user	User	Non-user	User	Non-user	User	Non-user	User	Non-user	User	Non-user
Female														
Male														

2. What is your household type? (please tick whichever applies)

- Childless couple
- Single parent
- Single adult
- Cohabiting
- Nuclear family
- Other.....

3. Do you use the internet (at home or elsewhere)?

- Yes
- No

If **YES**, please go to questionnaire **A**

If **NO**, please go to questionnaire **B**

Questionnaire A (Internet Users)

Information communication technology (ICT) in the rural community

Hatherleigh case study
Internet users questionnaire

Introduction:

Good morning / afternoon. I am Afraa Sallowm; I am a Syrian post graduate student at the University of Plymouth. I am doing a PhD about information communication technology in rural communities. I am trying to learn about the way the internet is changing the community in Hatherleigh. I am also interested to find out what services the internet offers to you as a citizen and to the community as a whole. I would be very grateful if you could participate in this study and if each member of your household could fill in a questionnaire aged 12 and above (Parents of children under 16 may need to help their children fill in the questionnaire). This should not take more than 10-20 minutes.

Your answers will be treated confidentially and it will not be possible to identify your responses in any published material. You are under no obligation to answer any question.

I will pick-up the questionnaires from your house on (Date)

Questionnaire number.....

1. What is your position in the household?

.....

2. What is your employment status?

- Student (working or not working)
- Employment part time
- Employed full time
- Self employed
- Retired
- Registered unemployed
- Other (please specify).....

3. Does your household have internet access?

- Yes
- No

4. At what location do you use the internet?

Please circle ONE number for each location.

	Very important	Important	Unimportant	Very unimportant
At own home	1	2	3	4
At work	1	2	3	4
At school, university, or college	1	2	3	4
At another persons' home	1	2	3	4
In a public library	1	2	3	4
In a town hall	1	2	3	4
In an internet café/shop	1	2	3	4
Other	1	2	3	4

5. If you use the internet from home, do you have a broadband connection there?

- Yes
- No

6. If you use the internet from work, do you have a broadband connection there?

- Yes
- No

7. Which of the following best describes your internet skills (for example for sending and receiving messages or searching information)?

- Non-existent
- Beginner
- Intermediate
- Advanced
- Expert
- Don't know

8. How have you learnt to use the internet?

.....

.....

9. Have you ever used the internet to help someone (for example to obtain information for them, to send emails, or to make on-line purchases...etc)?

- Yes
- No

If yes, could you please specify?

.....

.....

.....

If yes, what is your relationship to the person(s)?

- Neighbour
 - Family member
 - Friend
 - Other (please specify.....)
-

If yes, how often has this happened?

- Once only
- Very occasionally
- Once or twice a month
- Once a week or more

10. How often do you use the internet for the following?
Please circle the appropriate numbers

	Never	Rarely	Often	Always
Email	1	2	3	4
Chatting on-line (using MSN messenger or Yahoo messenger...etc)	1	2	3	4
Play games	1	2	3	4
Listen to or download music	1	2	3	4
Have fun in general	1	2	3	4
Join on-line support group	1	2	3	4
Banking on-line	1	2	3	4
Book flight, coach, accommodation... (etc)	1	2	3	4
Pay bills	1	2	3	4
Shopping on-line (buy and sell your products, i.e. eBay)	1	2	3	4
Grocery shopping on-line (Tesco, Sainsbury ...etc)	1	2	3	4
Working from home through the internet (e.g. survey on-line, customer interaction...etc.)	1	2	3	4
Seek information about jobs	1	2	3	4
Seek health information	1	2	3	4
Read newspapers or watch news on-line	1	2	3	4
Obtain general information (e.g. holidays, housing, education, finance)	1	2	3	4
Obtain information from government websites (e.g. Inland Revenue; Home Office; local council ; NHS,...etc)	1	2	3	4
Email government agencies	1	2	3	4
Email non-government agencies (e.g. support groups, environmental groups,...etc)	1	2	3	4
Fill in application forms	1	2	3	4
Other				

Please feel free to add further comments here:

.....

.....

.....

.....

11. How do you find out about information / services in your local area?

	First choice	Second choice	Third choice
Local newspapers			
Books			
Radio			
Internet			
Social networks			
Neighbours			
TV			
Phone			
Word-of-mouth			
Leaflets (by mail, in shops, libraries, church)			
Parish pump			
posters			
Other:			

12. Please rate how satisfied you are with:

Please circle the appropriate number

General Websites:	very satisfied	Fairly satisfied	Fairly dissatisfied	very dissatisfied
Quantity of information I can get through the internet	1	2	3	4
Quality of information I get from the internet	1	2	3	4
How much time I save by using the internet	1	2	3	4
New services I have because of using the internet	1	2	3	4

Please feel free to add further comments here:

.....

.....

.....

.....

13. Please rate the following statements.
Please circle the appropriate number

	Agree	Somewhat agree	Somewhat disagree	Disagree
Internet helps me feel less isolated	1	2	3	4
Internet helps young people to communicate	1	2	3	4
I can get better/more services now because I have the internet	1	2	3	4
The internet helps people to remain in Hatherleigh	1	2	3	4
The internet raises the quality of life in Hatherleigh	1	2	3	4

Please feel free to add further comments here:

.....

.....

.....

.....

14. How often do you access the Hatherleigh website www.Hatherleigh.net?

- Never (please go to question 16)
- Rarely
- Often
- Always

15. How satisfied are you overall with this website?

- Very satisfied
- Fairly satisfied
- Fairly dissatisfied
- Very dissatisfied

Could you please explain your answer?

.....

.....

.....

16. Would you encourage/ recommend anyone to use the internet?

- Yes
- No
- Sometimes

Could you please explain your answer?

.....

.....

.....

17. Do you take an active part in any community activities?

- Yes
- No

If yes, can you please describe them?

.....

.....

.....

18. Do you think the internet is important for the town?

.....

.....

.....

19. Is there anything you would like to add with regard to the internet?

.....

.....

.....

20. I may be interested in talking to you in more detail about some of the points you raise in this questionnaire. Would you mind being contacted again? If no, please indicate your address and **phone number**.

.....

.....

.....

Thank you very much for taking the trouble to answer my questions.

Questionnaire B:

Questionnaire B (Internet non-users)

Information communication technology (ICT) in the rural community

Hatherleigh case study
Internet non-users questionnaire

Introduction:

Good morning / afternoon. I am Afraa Sallowm; I am a Syrian post graduate student at the University of Plymouth. I am doing a PhD about information communication technology in rural communities. I am trying to learn about the way the internet is changing the community in Hatherleigh. I am also interested to find out what services the internet offers to you as a citizen and to the community as a whole. I would be very grateful if you could participate in this study and if each member of your household could fill in a questionnaire aged 12 and above (Parents of children under 16 may need to help their children fill in the questionnaire). This should not take more than 10-20 minutes.

Your answers will be treated confidentially and it will not be possible to identify your responses in any published material. You are under no obligation to answer any question.

I will pick-up the questionnaires from your house on (Date)

Questionnaire number:

1. What is your position in the household?

.....
.....

2. What is your employment status?

- Student (working or not working)
- Employment part time
- Employed full time
- Self employed
- Retired
- Registered unemployed
- Other (please specify).....

.....

3. Does your household have internet access?

- Yes (go to question 4)
- No (go to question 5)

4. Do you have a broadband connection?

- Yes
- No
- Not sure

5. Why do you not use the internet?

Please indicate how important these reasons to you are.

Please circle ONE number only for each reason.

	Very important	Important	Unimportant	Very unimportant
Concern over cost	1	2	3	4
Lack of computer	1	2	3	4
Concern over the need for training course	1	2	3	4
Security concerns (e.g. credit card...etc)	1	2	3	4
Uncertainty over the benefits of the internet	1	2	3	4
Lack of skills or confidence	1	2	3	4
No one to help me	1	2	3	4
No time to use the Internet	1	2	3	4
Uncertainty over which supplier, or service to use	1	2	3	4
No interest	1	2	3	4
Other				

Please feel free to add further comments here:

.....

.....

.....

.....

6. Have you ever used the internet?

- Yes
- No

7. Would you like to use the internet in the future?

- Yes
- No

8. Do you think the internet is an important tool?

- Very Important
- Important
- Not important
- Very unimportant
- Don't Know

9. How many of people you know use the Internet?

- All
- Most
- Some
- None
- Do not know

10. Has anyone ever used the internet to help you (for example to obtain information for you, to send emails, or to make on-line purchases...etc)?

- Yes
- No

If yes, could you please specify?

.....

.....

.....

.....

If yes, what is your relationship to the person(s)?

- Neighbour
- Family member
- Friend
- Other (please specify)

.....

.....

If yes, how often has this happened?

- Once only
- Very occasionally
- Once or twice a month
- Once a week or more

11. How do you find out about information / services in your local area?

	First choice	Second choice	Third choice
Local newspapers			
Books			
Radio			
Social networks			
Neighbours			
TV			
Phone			
Word-of-mouth			
Leaflets (by mail, in shops, libraries, church)			
Parish pump			
posters			
Other			

12. Do you take an active part in any community activities?

- Yes
- No

If yes, can you please describe them?

.....

.....

.....

.....

13. Do you think the internet is important for the town?

.....

.....

.....

14. Is there anything you would like to add with regard to the internet?

.....

.....

.....

.....

15. I may be interested in talking to you in more detail about some of the points you raise in this questionnaire. Would you mind being contacted again? If no, please indicate your address and **phone number**.

.....
.....
.....
.....

Thank you very much for taking the trouble to answer my questions.

Appendix 2: Example of interview transcript

Transcript of interview with Chief executive of CCD as an example of interviews conducted in this study

Interview was conducted on 26th September 2008 in the CCD in Exeter. I [Afraa] was very welcomed by the CCD in general and by the interviewee [Chief executive of CCD] in particular. The interview lasted approximately 45 minutes and this is only the summary of the main discussed points.

Afraa: what is your job?

Interviewee: I am the Chief executive of CCD and we [CCD] are working with rural community in Devon.

Afraa: what do you think about the internet?

Interviewee: When I came here [CCD] which is a long time ago, that is 16 years ago, we did not have internet, we did not have email, and we did not even have computers. We wrote everything by hand, we put them in trays, the secretary took them away, you found a mistake and typed them again, post staff to the rural people or drive to them, it took ages. Now internet, emails and computers have sorted everything out. It means a number of things; we do not have to do so much driving around the countryside as we can deal with things electronically.

Afraa: but how do you think the internet helps your work with rural communities.

Interviewee: obviously, yes! I think if you live in a village like Hatherleigh or even in a smaller village, you have not got a good bus service, you might have one a week, one every day if you are lucky, it is not enough to do anything useful, you cannot go to work you cannot do shopping, so you use a car and if you have not got a car, you got a problem. For people which are half population of Devon living in small villages the solution for that might be the internet.

Afraa: yes, but what about the rural people you are working with, do you think the internet helps in bringing you [CCD] different information and services to them?

Interviewee: I think internet helps more as time goes by ... I think it often works more in terms of, for example, every year we have a big conference and we have one this year in Bridestowe, not far from Hatherleigh in Rural Health and Social Care, so we want to attract good speakers to this conference and so they want to know about it, so if you want to find out about it look at the internet, look at our website you can find out about it. Also pick up those documents rather than posting them.

Afraa: do you think people who live in a rural community will look at the CCD website?

Interviewee: I think so, for example, about a year ago, we did assessment of our website, we keep records, and its uses has grown and grown ... statistics, of how many people is using it, where they come from. So, we keep a record, for example, 900 hits for the CCD website in August that was not very busy, up to 1200 in July, and 1200 hits in June. We call the front page, the news page, and we have got ten different things a month we put on it, which can be news about CCD, conferences, training courses and the last thing we put out was...there is a proposal to change the local government structure for unitary authority, so we made a comment on that.

Afraa: do you think the internet can bring the CCD and people living in rural areas together?

Interviewee: I think yes, if rural people are going to observe information and use it, it offers help. That information comes from more than one direction. If you hear about something once, you may be do not take much notice, if you hear about the same thing, if I tell you something and you go somewhere else and they[anyone] tell the same thing and something related, it triangulates ... it starts to leave something of interest.

Afraa: And do you think this is what is happening with rural people?

Interviewee: yes, actually rural people like to talk, so talking, newspapers and the internet are all going to have an impact on the delivery of information to rural people. If one of them is working alone, it is not to have such an impact.

Afraa: why?

Interviewee: because if I know you, I trust you and you tell me something and that is fine ... If I get on a piece of paper how do I know ... now do I trust that? All the same with the internet. For example, we are promoting our conference now through the internet, on our every email we are putting a little footnote that says 'please come to our conference', we put it on our website, we talk about it to friends, we send leaflets about our conference, we send it out with the Village Green and with other publications.

Afraa: what about other services? Do you have all the new services and up-to-date news available on-line?

Interviewee: not really. It is also about, obviously, in terms how you want thing to look, we [CCD] still use printed stuff quite a lot ... if you take the census to the printers you can make it look nice, if you print off the internet, the paper does not look that good..

Afraa: but is that an excuse?

Interviewee: not really! Because we have members, we have about 900 members, the main things they get from us are the magazine and we always put on the internet three months later. So if you want to know the magazine, you have to get the paper copy and be a member. If you want to get it free three months later then you can get it from the internet. So we do not want our member to say, 'we will not bother to pay and join up to see the CCD because we can get it all from the internet' ... so that is a slight problem for us, it will change eventually, but at the moment the paper copy comes first.

Afraa: does the internet play a role in improving the interaction between the CCD and rural people? For example, Email, forms and voting?

Interviewee: yes, I think, email is great, what I notice is that I got member stuff that looks after the parish councils and even four years ago a small minority uses the email. Now nearly all of them use email.

Afraa: but do you think rural people use the internet to communicate with the CCD a lot through email?

Interviewee: I do not know, not really with the internet....we have received lots of email from the public and I would say yes we receive emails from rural people. But in terms of interaction I am not sure, a lot of our work is done through things like, how can rural people influence and change things that affect them, and we did lots of questionnaires in rural communities.

Afraa: was the questionnaire available on the internet for people to fill it in?

Interviewee: not in gathering, only in the emanation afterwards.

Afraa: do you think a change will happen in the future?

Interviewee: I think so, to give you an idea how things have changed, every year or two ... I hold a survey for my staff , say 'how do you feel about working here in the CCD, what are the good

things and what are the bad things, are you getting your prizes ... etc'. Last time we did this, we did it as a paper exercise, and it was all done manually, and now I am looking at, actually this can be done electronically, we can give everyone an electronic copy to fill in. But the fact is done electronically it makes it so quick to do ... when done manually people wrote and I think people hate writing. Electronically cut and paste and off you go. So I can see before too long the CCD surveys in rural communities will move to electronic.

Afraa: is there any current practical action to this idea?

Interviewee: the problem is , I think for at least twenty years, there is still people, who will say ' I am not touching that computer I hate that machine', so you cannot get everyone to do it electronically. With paper everyone can do it. Therefore, you start looking at who is being left out.

Afraa: why you do not have the two versions, electronic and paper?

Interviewee: So, you have to have a dual system, which is obviously more expensive and more complicated. However, I think it is time to start thinking about that more comprehensively, it is a good point. Sometimes, we [CCD] do surveys to get information, for example, we have Village Hall Services, that helps all village Halls, and we have the Village Green, we ask question like 'how do you find our services?' But obviously, if it was an electronic questionnaire, and so when you come up on our website it can say look 'can you help us with this survey?' you can go here, fill-out electronically this questionnaire for the CCD? That would be really good.

Afraa: do you think such electronic services are going to be available in near future?

Interviewee: maybe ... it needs time. I mean for example, the Village Green has been going for hundred and thirteen issues, that is thirty years, whereas the website has been only going for five or six years. So there is a history of connection, an ownership of it. And I think people will always find it very hard to make an emotional attachment to the internet website, instead of a magazine and organisation, it is always going to see in more impersonal.

Afraa: do you offer services like electronic forms on the CCD website?

Interviewee: oh, yes...because we are a small organisation, covering a big county and big area, it takes a big time to get from one place to another. So, we will often do, we will often work, for example, through a training course, so we would say on the internet, on our website in particular 'we do training on leadership skills, or planning policy ... etc. and in order to do these training courses we have information, details and booking forms, and that can be done electronically. So in that sense, yes we and rural people use the internet for this service. You can download booking forms, sometimes you can fill them in on-line, sometimes you can download them, but you have still to fill them in manually.

Afraa: how do you identify problems and solutions for rural communities?

Interviewee: our organisation aims for the community council to help the communities help themselves, and so, our job is really not to make or decide solutions, it is to help the community decide the solutions themselves. So we might try to influence, for example, there is things like racism or climate change, where we might have ideas, the most stuff which we want to sensibly promote. We want to promote racial equality, anti-racism ... we want to promote greener things and less carbon uses ... etc. But we know that, those things are sometimes sensitive issues in the countryside, so how do you manage them? So, we might try to settle the influence because what all believe as an organisation, we believe consistency with our objectives is to be environmentally sensible. Rural communities are quite conservative, change slowly, they look backwards instead of forwards ... etc. Our job is to try to move the community forwards and the community make itself at tend to itself by saying 'Oh, you know, things used to be much better in the old days'. So it is a tactical issue, how do you want that to work?

Afraa: does the internet help in that?

Interviewee: I think it helps a bit in that. It is much easier to point people towards the relevant materials, and people might often find out for themselves. If people are interested in particular things like climate change, then they will be using the whole international studies and understandings and experiments and projects, people will be picking stuff up, this is happening in Brazil, China, India, Holland, and they will start to use those things locally in that sense, even without our intervention, there is a huge amount of inquisitiveness, which is able to search the internet.

Afraa: has the CCD used the internet to engage rural people in any democratic discussion for example voting or forum?

Interviewee: not a lot, but you can see it is growing, and these things often grow very quickly, so I expect it to change quite a lot in the next few years. It often takes time, particularly for rural people if you put bus services to village people. The would say 'Oh...oh... I am not using that it might not last, I will not change my system and I start using the bus' so that bus is permanently there. It is the same with the internet, it has to be around for a long time, people have to imbibe it, absorb it and eventually they would say 'it is ok we can use this now'. There is an ancient period before, and people have suspicions and they hear stories and they read typed newspapers. The internet may be seen as terrible and things are corrupted by the internet', and that actually stops them thinking about using the internet. The internet is like, 'when you start and you get in the water and it is cold, and all of a sudden the water feels nice and you stay in the water, and that is what is happening with all of the people who take a long time to put their tail in the water, they eventually do the work.

Afraa: why? What is your opinion about having this service available on-line?

Interviewee: we do not do any e-voting in the CCD. We are not an e-society yet, people will pick up services from the internet but they will not necessarily at that level use it to turn policy and implement policy.

Afraa: but what if the stakeholders through different agencies take the advantage of the internet and make a start to engage rural people in this sort of democratic process?

Interviewee: the Devon county council put the committee meeting on the internet, so you can actually watch a video of the committee meetings. But in terms of electronic voting or something like that, I think we are a long way away from that apart from they have tried it for central government, have they not? For election it is a bit risky, not sure if it is safe.

Afraa: but have you or the CCD done any practical action to encourage rural people to use the on-line services the CCD provides?

Interviewee: no

Afraa: why?

Interviewee: I think it is a matter of age and rurality, rural people who are mainly old people are not very comfortable with internet and email ... And in the countryside it is a bit slower, maybe primarily is age and secondary is a rurality.

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