

## **IMPACT AND BENEFITS OF DIGITAL INCLUSION FOR SOCIAL HOUSING RESIDENTS**

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### **Abstract**

Presents findings from a resident survey on the impact of ICT access for residents of a social housing estate focusing on: education and training; community and culture; citizenship and democracy; health and well-being; economic equity and opportunity; and information and communication. The majority of respondents indicated first time use of computer and Internet with initial usage patterns centred on e-mail, news and information services and entertainment. The research reveals the impact on resident behaviour and capability: ability to do their job, employment search, ability to learn new things, to communicate with friends and family, and on pursuing hobbies and interests.

### **Introduction**

The provision of ICT infrastructure is designed to reduce a number of impediments to digital participation by reducing social costs and economic costs (establishment costs, transaction costs and search and information costs). Importantly, it is not provision per se but how ICT access enables and empowers communities. Access to ICT infrastructure in the digital age is arguably as important a “merit good” as education and health, in which genuine opportunity is fundamental to reducing economic and social disparity. Reducing the digital divide is not about infrastructure provision but rather supporting ICT-enabled solutions to improve social and economic outcomes by empowering local communities.

Building on the work of Kaiser (2005), Sipior and Ward (2005), and Kvasny and Payton (2005), this paper presents findings from a resident survey on the impact of ICT access for residents of a social housing estate focusing aims to improve: education and training; community and culture; citizenship and democracy; health and well-being; economic equity and opportunity; and information and communication. Around 54% of survey respondents indicated first time use of a computer as part of the project. Initial usage patterns revealed extensive use of e-mail, accessing news and information services and for entertainment purposes, with limited use of online banking, shopping and bill

payment. The research reveals that ICT access has already impacted on resident behaviour and capability including their ability to do their job, employment search, ability to learn new things, to communicate with friends and family, and on pursuing hobbies and interests.

### **The Project**

The Wired Community @ Collingwood Project provides opportunity for the installation of a network-ready computer to around 1,000 dwellings in a social housing estate at no cost to the resident. It includes the establishment of a communications network within the buildings and across the estate, an ICT training hub, an estate-wide intranet, e-mail and affordable Internet access for residents. To ensure sustainability beyond the initial establishment and implementation phases, a Social Enterprise is being created to ensure the project is self-sustaining after three years.

The project objectives are to:

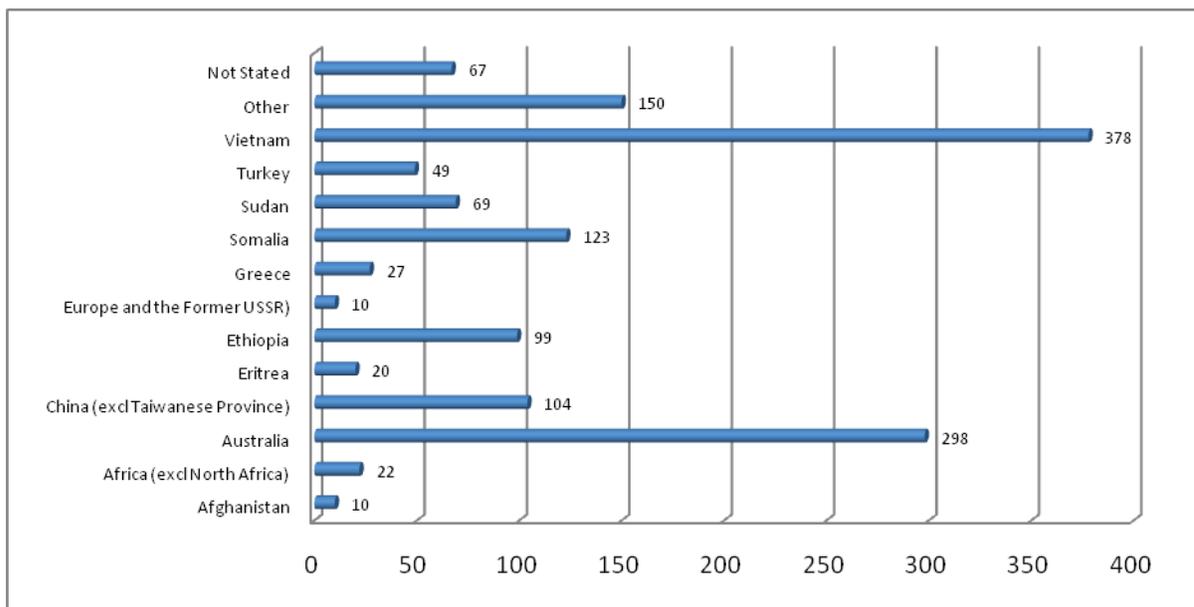
- improve the social and economic circumstances of the Collingwood Public Housing Estate;
- strengthen the capacity and cohesiveness of the community and its networks; and
- provide access to ICT for those normally excluded from its benefits thereby increasing skills and access for Collingwood housing estate residents.

The project has been initiated by Infoxchange and funded by a consortium of government departments, businesses and not-for-profit organizations and includes both cash and in-kind contributions.

### **About the Collingwood Estate**

The Collingwood Housing Estate is a social housing estate located around three kilometers from the Central Business District of Melbourne and provides low cost housing to people with a low socio-economic profile, recent migrants and refugees. Figure 1 illustrates the diversity of the estate population and gives some clues to the challenges for the evaluation in terms of language and literacy. Vietnamese represents the largest single ethnic group on the estate (26.5%), followed by those born in Australia (20%) and a substantial number of residents originating from Africa, particularly Somalia, Ethiopia and Sudan.

Figure 1: Country of birth



(Source: Department of Human Services, 2009)

Resident profiling reveals a substantial number of residents that are recent migrants or refugees. Single parent is the most common household type (33%) followed by couples with children at around 20%. A very small proportion of residents received income from wages or self employment, with the vast majority receiving some form of government income support (unemployment benefits, age or disability pension) with around 11% of residence indicated that indicate they have some form of disability. This demographic profile suggests that the digital divide is likely to be particularly severe on the housing estate. Prior to the commencement of the project, a scoping study revealed that just over 50% of households had access to telephony services (InfoXchange, 2008).

## Resident Survey

The prime purpose of the evaluation is to understand how individuals and the community at the Collingwood Housing Estate use ICT technologies and the impact it has on their lives. A survey of residents was conducted to explore qualitative and quantitative dimension including; perceptions of self/community, citizenship, engagement, well-being and changes in skill, education, employment and unintended outcomes. This paper focuses on ICT usage and proximal changes in behaviour.

The survey focused on the first residents that completed the computer training as at March 2009. At that time, this training was a prerequisite to receiving a second-life computer. Data collected during the training sessions revealed that around 50% of the 323 residents had Limited English Proficiency (LEP) and did not speak English very well

or at all. To ensure that we maximised the response rate LEP residents were supported with the provision of interpreter services. Several key language groups were targeted and reflect their relative size on the estate: Vietnamese, Cantonese, Mandarin and Arabic/African. 102 of these 323 residents completed the survey.

Table 1: Proportion of self-completed and interpreter mediated survey responses

Survey Type	
<b>Interpreter Mediated: Vietnamese</b>	29
<b>Interpreter Mediated: Cantonese/Mandarin</b>	25
<b>Interpreter Mediated: African</b>	25
<b>Paper-based or Online Survey</b>	23
<b>Total</b>	102

## ICT Access and Experience

Around 54% of respondents are using computers for the first time as part of the Wired Community @ Collingwood Project. A further 14% have been using a computer for about 1 year while around 6% indicated that they do not use a computer. Around 14% indicated that they had used a computer for 5 years or more. Around 22% (18) of respondents do not have Internet at home. Around 11.4% of respondents indicated that they have no interest or use for the Internet. Around 7% did not have Internet services because they could not use a computer, while 9.1% said they did not have a computer at home. A relatively small 10.2% said they did not have an Internet service because they could not afford it. Around 2 in 3 (67%) respondents use the low-cost Internet service (\$15 per month) provided as part of the project. Around 24% use services provided by one of the two largest telephony companies in Australia, paying up to \$89 per month.

## Information and Communication

This section of the survey explored Internet usage patterns, behavioural change and capability, daily use of ICT, access to housing estate information and news, and news services more generally.

### Internet Usage Patterns

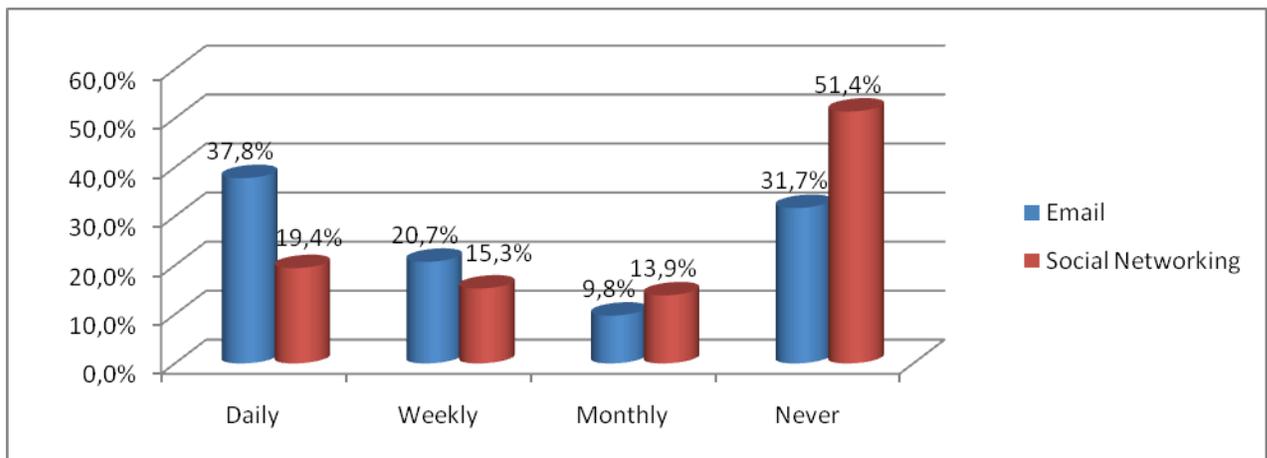
Table 2 presents Internet usage patterns by activity or purpose. Data is presented in rank order utilising the first column (daily use or activity) and reveals that e-mail is the most frequent activity with 38% of respondents using e-mail every day with a further 21% using e-mail on a weekly basis. 32% of respondents indicate that they never use the Internet for e-mail.

Table 2: Internet usage patterns

	Daily	Weekly	Monthly	Never	Total (N)
<b>E-mail</b>	38%	21%	10%	32%	82
<b>News</b>	34%	22%	13%	30%	72
<b>Study, homework or research</b>	25%	15%	8%	52%	72
<b>Entertainment (games, music, videos)</b>	21%	32%	14%	34%	73
<b>Social networking/communication</b>	19%	15%	14%	51%	73
<b>Looking for employment</b>	18%	5%	10%	66%	73
<b>Downloading (music or movies)</b>	16%	4%	14%	66%	77
<b>Information (health and other services)</b>	14%	26%	8%	52%	71
<b>Online education or training</b>	10%	14%	11%	65%	73
<b>Paying bills</b>	8%	4%	3%	85%	70
<b>Banking</b>	6%	7%	7%	81%	76
<b>Shopping</b>	4%	4%	11%	80%	72

Accessing news and current affairs is the next most frequent use of the Internet with 34% of respondents sourcing news daily, with a further 22% using it for news on a weekly basis. Around 30% of respondents never use the Internet for sourcing news.

Figure 2: E-mail and social networking



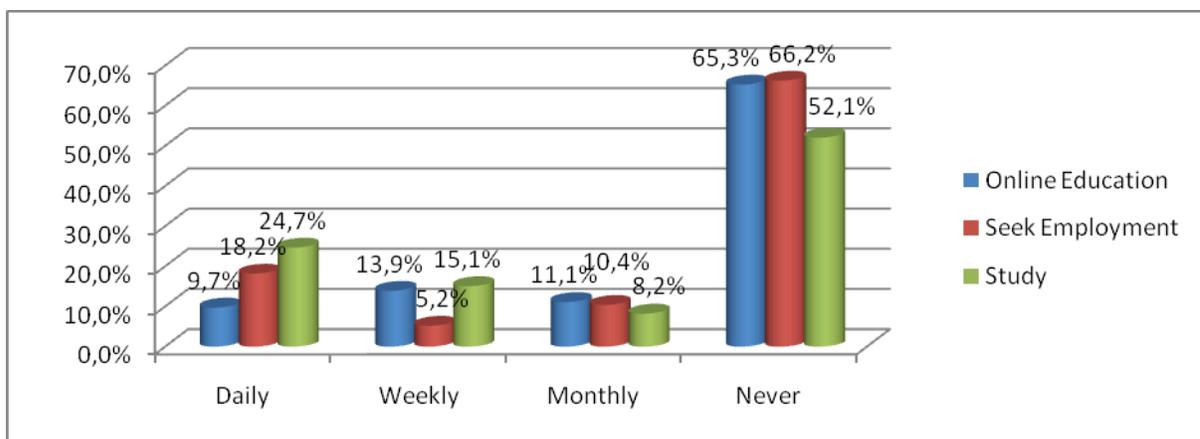
Of the respondents 25% use the Internet for study each day, with a further 15% using it for this purpose each week. Around 52% indicate that they never use the Internet for this purpose.

Using the Internet for entertainment is the next most significant activity with 21% and 31.5% using the Internet for this purpose on a daily and weekly basis respectively. Around 34% indicate that they never use the Internet for entertainment.

Social networking is used daily by 19% of respondents, with a further 15% doing so on a weekly basis. 51% of respondents never use the Internet for this purpose.

Employment search is indicated as a daily activity by 18% of respondents, with a further 5% using the Internet for this purpose on a weekly basis. While a relatively high 2 in 3 indicate they do not use the Internet for job search this reflects the high proportion of older residents in the sample who are not in the workforce.

Figure 3: Education, employment and study



Improved access to information on a range services is major objective of the Wired Community @ Collingwood project. Of the 102 residents surveyed around 14% use the Internet to source information about support services on a daily basis, with a further 26% doing so on a weekly basis. A significant 52% of Internet subscribers were not using the Internet to access information about services such as health and housing, representing a significant opportunity for service providers, particularly those operating on or around the estate to better engage and support residents.

Given the number of first time users it is not surprising that online banking, shopping and bill payment are the least frequent uses for the Internet with around 80% to 85% of respondents never using the Internet for these purposes. This baseline data will prove useful in exploring usage patterns for diverse cohorts in around 18 months time (post-program survey).

Figure 4: News and information

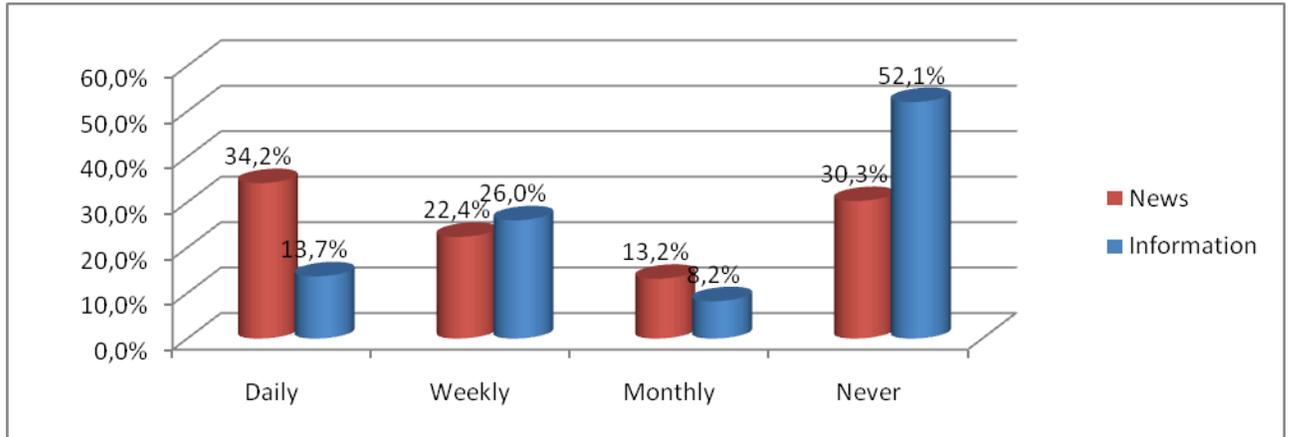


Figure 5: Online banking, shopping and bill payment

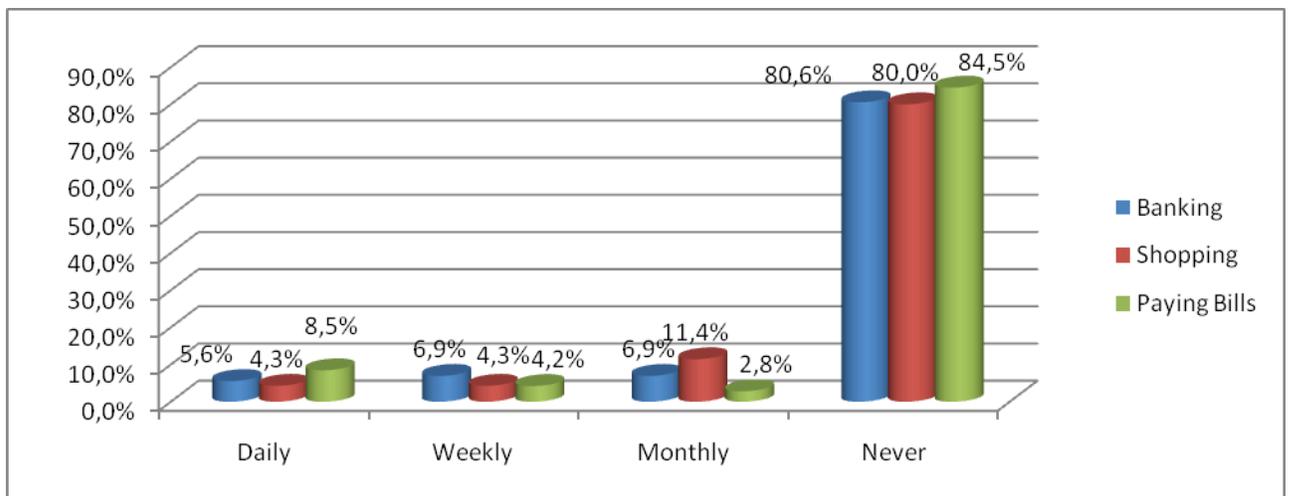
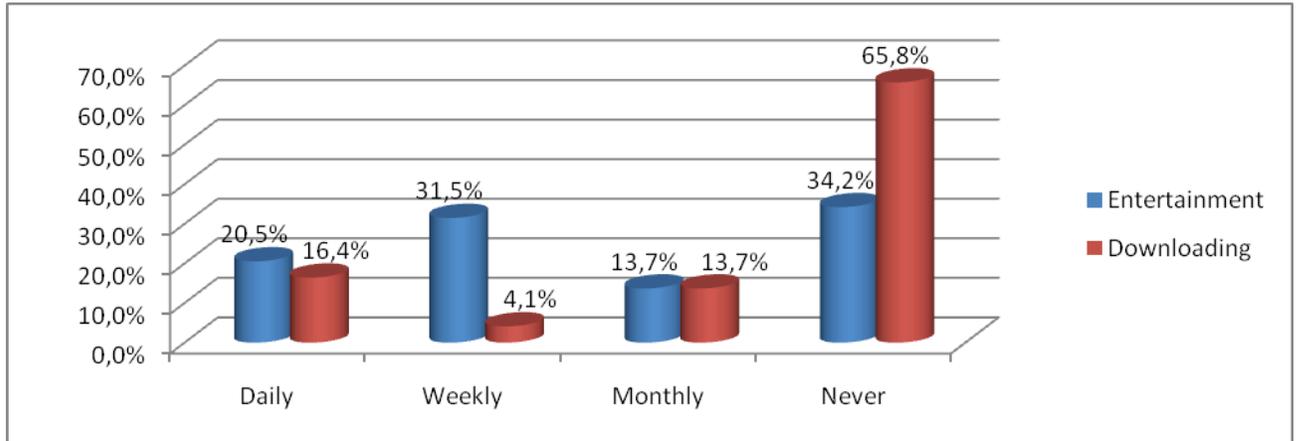


Figure 6: Online entertainment and downloading



### Behavioural Change and Capability

Of particular interest is the impact of ICT on resident behaviour and capability. Table 3 presents resident responses to a series of capability statements, with the total number of responses to each statement in the last column. Of the 32 respondents currently employed, around 1 in 3 (11) respondents indicated that there has been a moderate or significant change in their ability to do their job, while 34% of 62 respondents believe they are better able to search for employment. Around 64% believe that access to a computer and Internet has impacted their ability to learn new things.

Table 3: Changes in behaviour and capability

Impact	Significant Change	Moderate Change	Minimal Change	No Change	Total
<b>Pursue your hobbies or interests</b>	13	30	14	8	65
<b>Ability to do your job (if employed)</b>	3	8	5	16	32
<b>Ability to learn new things</b>	21	21	11	13	66
<b>Keep in touch with friends &amp; family</b>	21	15	16	14	66
<b>Ability to share your ideas and creations with others?</b>	7	16	15	24	62
<b>Access services (health, transport...)</b>	8	10	13	28	59
<b>Ability to search for employment</b>	13	8	10	31	62
<b>Ability to find out about courses and training opportunities</b>	11	16	6	28	61

Figure 7 reveals that the provision of ICT access has had a moderate or significant impact on respondents' ability to communicate with friends and family (55%) and on pursuing hobbies and interests (66%). 34% report a moderate or significant change in job search and 34% for doing their job. 44% report an impact on ability to find out about courses and training opportunities. 37% report that ICT access has impacted their ability to share ideas and creations, while 31% report an improved access to services.

Figure 7: Communication, hobbies, and interest

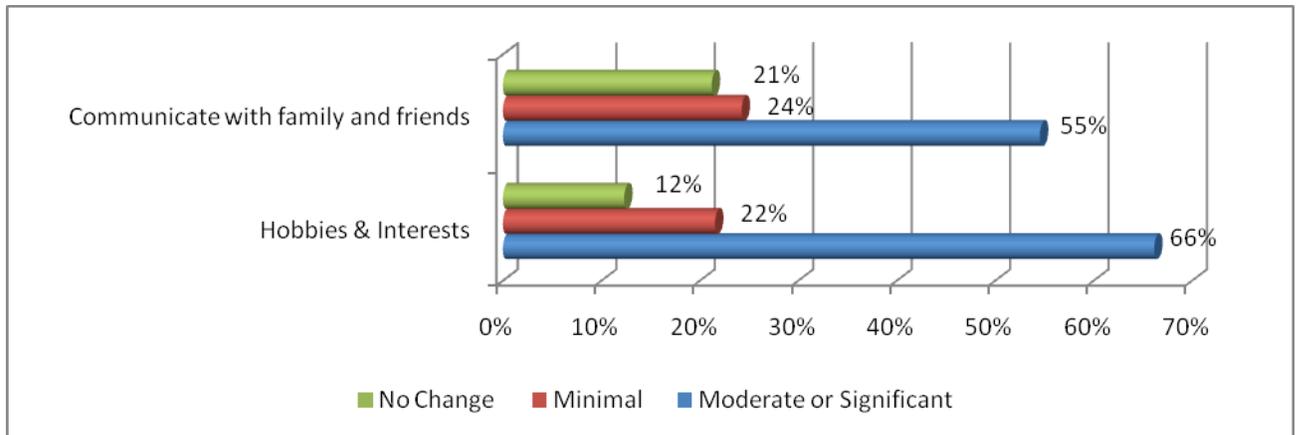


Figure 8: Job search and job performance

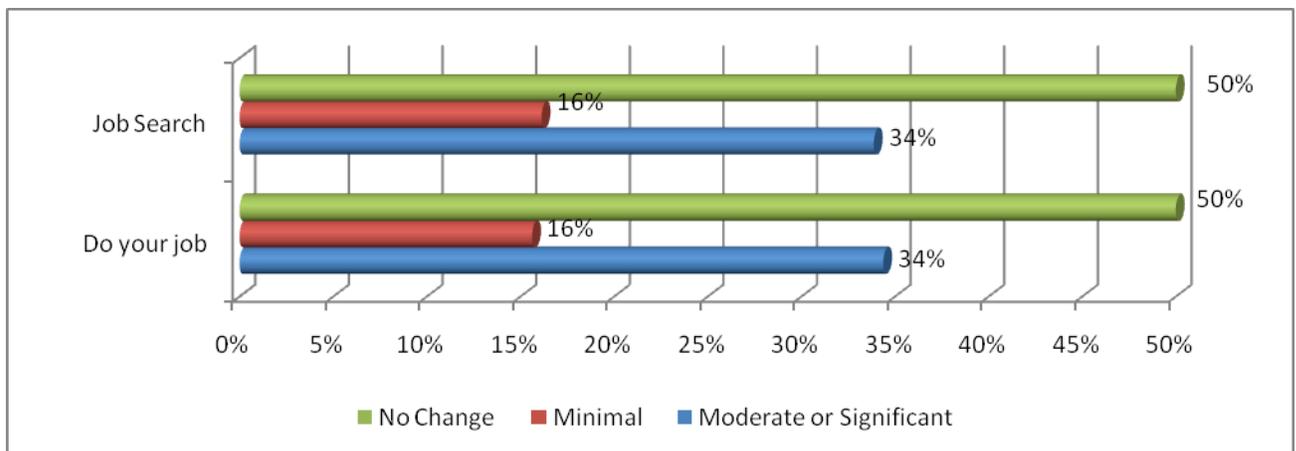


Figure 9: Learning and training

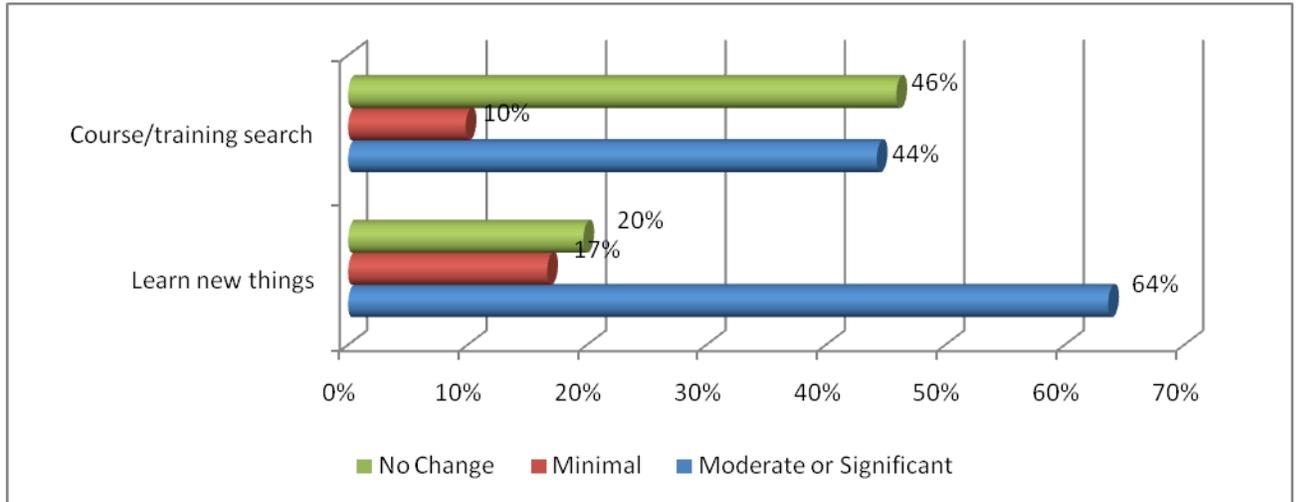
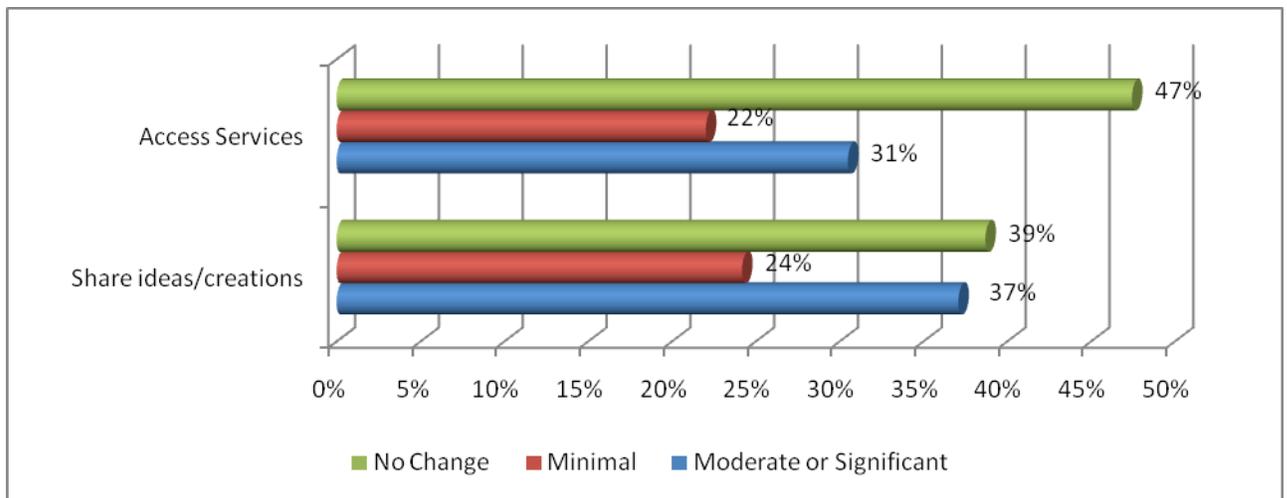


Figure 10: Accessing services and sharing ideas



## Summary and Conclusions

These results suggest that this digital inclusion initiative has, within a very short period, had a considerable impact on residents, more than 50% of whom are using a computer for the first time. The socially isolated, such as recent migrants and refugees, are now able to connect to friends and family both locally and overseas. There are over 30 government and community/philanthropic organizations operating on or around the housing estate. The ICT infrastructure and estate intranet in particular, present service providers with an opportunity to connect with housing estate clients in ways previously only available to a small proportion of residents. That only 3 in 10 of residents surveyed indicating they are using the Internet to access to online services and information, presents a great

opportunity for improved service and information delivery. Self reported behaviour and impact suggests that outcomes are significant and include employment search, productivity and access to education and training. These proximal outcomes are indicative of potentially larger and more significant distal impacts and benefits.

**Acknowledgement**

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**References**

- Department of Human Services. (2009). *Housing estate profiles*. (unpublished).
- InfoXchange. (2008). *Wired Community @ Collingwood Scoping Study*. (unpublished).
- Kaiser, S. (2005). Community technology centers and bridging the digital divide. *Knowledge, Technology & Policy, 18*(2).
- Kvasny, L., & Payton, F. C. (2005). Minorities and the Digital Divide. In M. Khosrow-Pour (Ed.), *Encyclopedia of Information Science and Technology*, (pp. 1955–1959), Hershey: Idea Group
- Sipior, J., & Ward, B. (2005). Bridging the Digital Divide for e-government inclusion: A United States case study. *The Electronic Journal of e-Government, 3*(3), 137–146. Available online at [www.ejeg.com](http://www.ejeg.com)