The State of Elderly in ICT Adoption at Rural Area

S.Y.Lee and A.Phippen

Network Research Group, University of Plymouth, Plymouth, United Kingdom
e-mail: info@network-research-group.org

Abstract

Despite the rapid growth of Internet, elderly often being left out while their needs and opinions seldom being heard and represent. Given the number of elderly population started to rise over the years, their commercial potential have draw attention of government and private party which show interest of the neglected market segment. This paper refers to study 87 sample respondents from Plymouth, United Kingdom. Behind the sense, many encouragements and Internet facilities had been built at rural area to enhance the development. This paper discusses the state of readiness for elderly to accept ICT having the current condition, measuring their ability, emotional constraints and physical barriers. Additionally, it would looks into effectiveness of encouragements used to promote ICT and connection of social impact to elderly's learning attitude. The result suggests different approaches of sustaining local area elderly's interest in ICT adoption and government effort in monitoring existing scheme.

Keywords

Elderly, Information Communication Technology (ICT), social, barriers, Internet

1. Introduction

Elderly citizen has become the most rapidly expanded population, over 16% of the population of UK is now 65 and over, majority of them are baby boomers born after the period of Second World War (1946-1964) who become older during first half of this century (ONS, 2004). Many of the elderly have move to reside at rural area after retirement. In fact they are looking forward for free lifestyle of 10-20 years with current advanced of medical technology, elderly is expect to have higher life expectancy. The fact that ageing process bring limitations to elderly, reason of finding out what are their needs in IT and what are best Information Communication Technology (ICT) make used by them are essentials. At the current condition, Internet and ICT could offer assistance in personal communication, providing alternative method for financial matters, information provider and online purchasing which could help to prevent isolation, loneliness, depression and social exclusion for elderly.

For this paper purposes, the elderly is defined as anyone age 60s and above to accommodate the public acceptance on elderly both based on qualification to received pensioner scheme and commonly noted in literature review. This study would starts discussing the issue from previous web literature, journals, and annual reports. Then this paper describes the survey among Plymouth respondents that was conducted to measure their ability in physical, preventing ICT barriers and awareness

of training at local area. Finally, the state of elderly readiness is presented after the evaluation of encouragements being done.

2. Issue on elderly and the use of Internet

It is a debatable question since the raise of Internet on the measurement of acceptance from elderly group to use Internet and the ability of the environment to provide suitable learning atmosphere. The difference existed between rural and urban area is due to vast development, which could not be aligned either by magnitude or speed of development. This could terribly affect the competitiveness of rural areas, by reducing the interest to attract business investments and more importantly, reducing the people's level of exposure who are living there. Although many efforts have been made by the government to provide broadband access to rural area, it has not been achieving to fully successful. By autumn 2003, about 16% of rural villages and 4% of remote rural areas had access to affordable broadband Internet connections, compared to 99% of the urban populations and 80% of UK population (Countryside Agency, 2004).

Elderly's participation in ICT has always been reluctant by barriers either from personal problems or technical problems. Personal problems derived mostly about an elderly learning perception, the ability of external environment including confident, location, and income. A quarter of older people live in private household in rural area are in low income (Social Exclusion Unit, 2005). Additionally, physical problems would result into functional restriction in requirements on ICT product devices including elderly's sight problem in seeing fine detail on the computer monitor and hearing abilities which eventually not a big problem for operating a computer but create problem during communication with tutor at training session. On the other hand, technical problems vary from software, personal computer and mode of connection. At current stage significant of these barriers have yet to be truly defined for rural area, as it would be difficult to determine the estimation of barriers for each individual.

There were researches on the acceptance of Internet among elderly to social life of themselves and household happiness, focusing a major reason on communication with their own children particularly. Ito and colleagues (Swindell, 2002; cited by Ito *et al*. 1999) study shown people who are regular users of SeniorNet in the USA revealed positive effect on medium social interaction and individual empowerment. ICT could potentially improve communication with younger relative. Additionally, elderly who utilise Internet saw it as a tool to strengthen the social bonds (Trocchia and Janda, 2000). In contrast, Kraut and colleagues (Swindell, 2002; cited by Kraut *et al*. 1998) reviewed that limited access to Internet by elderly usually because of loneliness and significant research on adults Internet users shown obvious declines in everyday household communications, declines in the size of social circles, and increases in depression.

Elderly is likely to have pessimistic attitude finding learning as unavailable and unappealing at older age. Their perception indicating life experiences as sufficient

and stable would make the learning process become stunted, embedded as strong perceived values and taken granted as normal behavior among society. This would be the major reason, which result ICT encouragement among elderly to be slow. This culture is particularly difficult to change in depth when rooted in custom and attempts of modification would be resisted. They may have felt, or been made to feel, that learning is not for them (NAGCEL, 1998). Many of them might suffered from social exclusions, blinded by unawareness, neglecting pleasure and achievements that could be deserved cause by lacking of self confidence and opportunities.

3. The Survey

The study is conducted with 87 respondents from University Third Age (U3A) at Plymouth which is member of Third Age Trust, an independent association throughout the UK that consist of elderly member mostly in retirement stage or early retirement. The distributed survey consisted of 12 questions in 2 pages with further interview with 6 elderly communicate through telephone conversation and email. The whole survey and interview session were carried out within a month.

4. The Barriers for Elderly

The study revealed that majority of elderly had used personal computer with total of 78%. However, only 58% of them were equipped with personal computer and Internet connection at home while 33% having none of them. The elderly expressed their barrier by income constraints usually worrying on their ability of not earning anymore and spending on income received through pensioner scheme. The costs engaged with buying a new personal computer and its maintenance cost were major worry. 70% of elderly is using broadband while 30% remains subscribing to dial up. Some elderly felt that the cost of subscribing to broadband is rather high and felt the usability of dial up sufficient for their own personal use.

In another separate question asking about barriers, it was found top three barriers were confidence, no guidance/tutoring and follow by no personal computer. (Refer figure 1) Although income came fourth, it was thought that this barrier has indirectly spread to affect the ability of owning personal computer and landline telephone connection. Elderly were even worried about their confident and how all these ICT equipments works. It alerts the alarm bell on the urgent present of tutor to build the confident among elderly. Many elderly are afraid to be expose to Internet partly because they felt at their age; they would not be able to cope with new technology since they have been 'left behind too far'. There is also little evidence found through elderly interview on the help their seek from contemporaries who are computer educated. At the same time, those who are computer educated would not initiate to provide guidance.
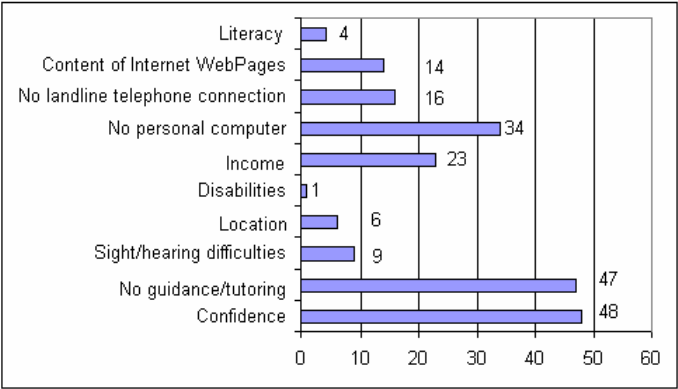
Figure 1: Barriers Preventing Internet for Elderly

The study also revealed that the elderly that felt for extremely interested and very interested attitude to learn Internet, were those who basically used a computer before which eventually explain their high preference to Internet. Perhaps unsurprisingly, those who have not used a computer before show moderate interest to no interest at all. It revealed that elderly that has not experienced with computer and Internet before would not have the curiosity about learning them. Internet simply does not exist as attractive learning tool for them to improve the life that they are having right now.

The current atmosphere sees encouragement of ICT being promoted by government and private institution where many online training centres were setup. However, elderly still preferred to get online at home supported by 93% of the respondents. A rather disappointing result illustrating only 4% of respondents would go to online centres to get online. It certainly marks the failure of public online centres, which claimed to make remarkable statistic in these few years providing online centre to national coverage. Elderly found traveling problem did contribute to the access of online centre. Many of them did not own transportation and felt traveling by public transports simply kills the desire to reach the destination. This would be even worst for elderly that have disabilities physically.

Some elderly felt reluctant on their pace of learning if being put into training at learning centre. The public online centre, typically, public libraries did not target specifically in elderly but member of the public. Therefore, it is likely everyone in the public online centre would be including learners in various age. It would easily create illusionary exclusion for them for their lower response rate and possibly higher attention being put on younger people. However, the survey indicates no request being rise on the need for learners to be at the similar age as the elderly. Some identified they rather preferred to have training at home, however, most of this training service are make available by private institutions which in deed required consuming of income.

The sample respondents showed little problem of sight and hearing difficulties with relatively small groups of them were engaged with these barriers. It was found that some elderly have problem seeing fine details in monitor screen while complaint on

glare and flicker were among the sight problem. In term of hearing, it was not prove with the sample respondents as much of the time Internet communication with user is based on text although multimedia started to involve in as one of the media; majority of the WebPages content is still pure text. It might be alternative method of communication for elderly that have hearing difficulties, ICT could do more than normal conversation through telephone but with text based, chatting and could allows the impossible to become reality.

Elderly that is inexperienced with computer and Internet is usually lack of motivation to allows themselves to be expose to ICT and advanced of technology. Generally they have accepted the change and admits new technology simply did things differently compare to older days. Nevertheless, they themselves are not emotionally prepared or interested in participation in term of learning by themselves. The need for changes, which do not stand out strongly to urge them on the reason for adapting ICT in their life. Many of them are regular user of reading newspapers, books and watching television that are the major source of information they felt comfortable and reliable of continue practice.

5. Impact of ICT to Elderly's Social Life

When looking matter at different perspectives by putting aside of ICT advantages to elderly, majority of elderly that have not adapting to ICT might be suffering from loneliness, depression and isolation. Over the years, elderly in social exclusion is not a new area or topic that catches society attention. It is there but the seriousness of it is unpredictable with many national statistic continues to revealed the increasing number. It is also at the same time, ICT failed to show evidence on improvements to current elderly's social life. In most of the cases, elderly felt that ICT is destructing the society. They felt many people would be just sitting in front of computer communicating to the never known other person. Despite the other person communicating at the opposite side is someone known in real life, it would doubtful whether communication through the web could provide the level intimacy and stimulation they expected.

In contrast, many active elderly that gathered with their contemporaries regularly shown positive social life helping them from loneliness, isolation and showed tangible benefits such as bringing them happiness and the interest of continuing their participation in future activities. These include language classes, group exercises, playing games together, exchanging information on cooking, gardening and pets. It drew the human contact closer and with real life face-to-face communication. Elderly very often stresses the need to communicate with real people where relationship is established through communication. However, many of them do not realise that they could be communicating with someone they known through ICT. The idea of ICT does not appear to be an alternative solution in many of elderly daily communication life.

On the other hand, ICT has not been showing the strong impact to improve current social life for elderly. Although there is possibly many things to be done through the

Internet to help bringing communication closer such as email replacing letter, online chatting replacing telephone conversation. Online chatting is currently available in different approach not only limited to text based but also handwriting functionalities with assist of web camera and voice chat are among the changes that could possibly suite different elderly with or without disabilities. Elderly might or might not know the existence of all these, they might just limit their thinking into saying chatting is complete lack of human contact but at the end of the day, we could now chat and see someone through monitor screen despite limited by geographical area in real time. There is a lack of acknowledge for elderly to know, they might simply subjective to certain thinking presumably not to be change in a short period of time. There could be possibility that they not knowing what ICT could provide to them.

The survey describes that email is second highest activities did online. (Refer figure 2) Elderly expressed that email functionality of capable attaching photos has help them to exchange photos with their children that lives abroad. They would not be worrying on mailing letters anymore where now they trusted the electronic version of mail could perform better and it helps to save money too. It was agreeable that email has help better communication between elderly parents with their working children. In the same question, it also revealed that chatting as the lowest activities performed online. It proves the prediction that many elderly seldom uses online chatting service even for those elderly who are regular users of Internet. It could be possibly relate that not knowing exactly what chatting service could offer and perception in believing chatting as complete waste of time has limit the benefit that elderly could have.
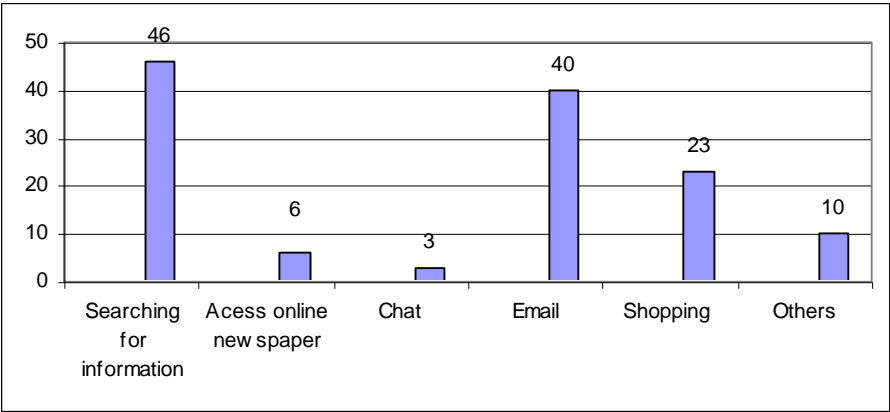

Figure 2: Activities Done Online by Elderly

6. The Failure of ICT Attractiveness

The failure of ICT to attract participants typically from elderly group could constitute a wide variety of reasons. It could be from the state of elderly themselves not keen into learning ICT. There is simply no reason, need or purpose for elderly to learn personal computer and Internet when the alternative method is not prove to them of being helpful and to be able to run the computer system and Internet requires more

effort and time dedicated in learning process more than completing the task. There is a need for comparison to be done by elderly themselves by letting them to feel in reality the benefits of ICT could provide to them. Spreading the word is not enough to make elderly felt the same as touching the devices themselves, operating with guidance and working on it independently. It is absolutely crucial to let the satisfaction override the hesitation before elderly could engage in ICT. The perception of learning plays an important role in motivating elderly considering their age to start learning again. It certainly requires a push of encouragements from many responsible parties, effectively from family member for this momentum to start and keep moving.

Elderly population is usually in retirement period where they are particularly careful in spending, considering the fixed cost of their life and inability of being employ anymore. Income consuming to adapt into ICT could be high for them especially those who are small pensioners or elderly living alone. They might not be willing to buy the personal computer and spend on subscribing Internet connection for something that they have not been used to and something definitely invested to learn. They would not know whether the learning process would result in positive manner or otherwise. The uncertainty leads them to worries and resistance. Additionally, this investigation indicates income problem would spread into many other problems which could not provide them in their preference learning ambience, their home. Limitation of income would not be able to provide elderly with assistive technology such as hardware or devices specialise for elderly with disability. These devices certainly not produce in mass production, difficult to access and come with high price. The ill equipped environment certainly would not be able to teach elderly or suitable for elderly to learn as well.

The rural area is usually difficult to reach where attention and encouragement are among the slowest being facilitated. In order for the elderly people to have changes in their life, they require the tools to make changes. These are basic requirements including personal computer, Internet connection, the availability of tutor or guidance and the existence of training or online centre convenient for elderly to access. It is obviously the basic requirements for an elderly to start stepping forward to new technology. The need for online centre is not only for the benefit of having a person there to teach but it also provide opportunity for elderly that could not afford buying personal computer and subscribing Internet connection to try how is it to function the equipments and what is all about WebPages on the web. The effort to provide all these requires participation of government and other private institutions as this is not only concern about elderly, it involves rural area development, public facilities, infrastructure, human resource and business collaborations.
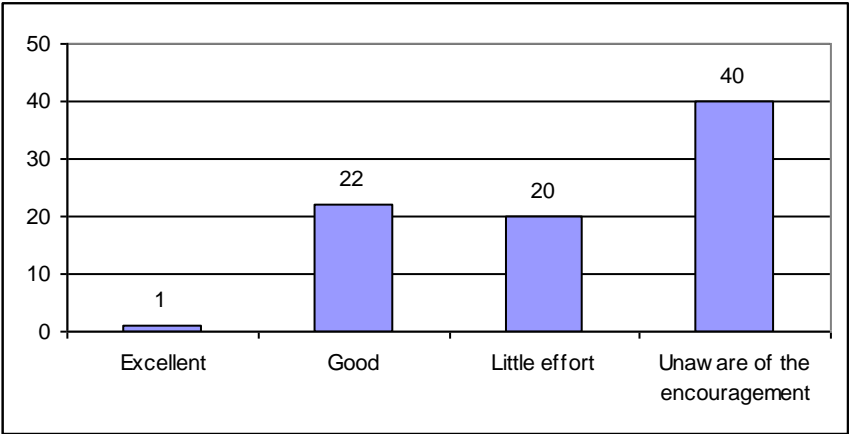
Figure 3: Elderly Rating on Government IT Encouragement for over 50s

The current IT encouragement done by government is targeted to member of the public rather specifically to elderly. In this study it also revealed that 48% of the respondent stated that they were unaware of government encouragement directly reflect the failure of government encouragements. (Refer figure 3) Elderly has to compete for a place to learn Internet when most of the time, they are only capable of reaching Internet access at public libraries and taster course at private institution because majority of them would not prefer to pay and learn in a course usually run by private institutions. Government effort in elderly has been seen little in ICT but life long learning programme which target to learning at older age has been promote since 1998. IT has been part of the learning area but not in attention and receiving low responses. Regardless of learning programme or ICT encouragements, it definitely fails to catch the attention of elderly in the method of addressing the problem or accessing the elderly at rural area.

The major fall of existing encouragements organised by either government or private organisations is due to lack of commitment for continuous development. When problems are there, the responsible bodies are aware of it, this is where all the activities, training, encouragements programmes took place catching the eye of everyone including elderly. It was a complete success for many programmes collaborated by private organisations but it soon dies out over period of time. There is no progress reporting, it is treated as something occurred in the past. There is lack of responsibility for further communication with the elderly, local organiser and trainers. There is an urgent need of local training officer to coordinate the plan, constantly communicate to elderly and reporting the condition to organisers so that the promotion would suite the local elderly needs. There is also the problem with lack of coordination of trainers in public access points. This eventually limits the number of training programmes a location could offer to the elderly. Trainers should be trained in term of technical knowledge and the way they communicate during teaching session with elderly because some of them might have disabilities.

7. Conclusion

ICT could do more for elderly if only elderly is aware of it and is given the opportunity in learning. Although elderly might felt many barriers prevented their participation, the government, ICT industry and society could do more to help in term of solving the problems and making the basic requirements ready. It would be an effort by everyone in order to encourage elderly participation. Learning attitude must be promoted by life long learning programmes, which should accommodate more ICT courses and organisations to take part. There is alternative way of enhancing social life with ICT through virtual communities created for a local area and encouragement to learn through group of elderly so that they would not feel neglected in the process of learning. It is important that before carrying out any promotion catered for elderly, the effort was spend on understanding the local elderly needs, follow by spreading the ICT culture step by step then into the depth courses.

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