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Emerald

Working with
Older People

Computer classes for older people: motivations and outcomes.

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Keywords:	computer classes, technology, older people, community centre, ageing in place, internet

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Review

Computer classes for older people: motivations and outcomes.

ABSTRACT

Purpose: A ‘digital divide’ exists between older and younger people in terms of computer use and older people’s uptake of computer training programmes in the UK remains low. This study aims to identify the motivations and outcomes of computer classes for some older people and the contributory factors.

Design/methodology/approach: One-to-one qualitative semi-structured interviews were conducted with eight participants at a computer class in a London community centre. Using a topic guide interview transcripts underwent thematic analysis. The theoretical perspective of ‘ageing in place’ (the ability to stay in one’s own home in later life) was used when interpreting the findings.

Findings: Participants had been motivated to attend the class initially to gain computer skills. Initial motivation was influenced by the death of a spouse and the desire to remain mentally active. The main outcome by the class was acquisition of computer skills. Psychological and social benefits were also reported, the latter constituting motivation for continued attendance. Computer ownership and gender differences in preferred teaching style influenced class outcomes.

Research limitations and implications: Although this was a small sample comprising older people solely from one community, participant backgrounds varied and the findings suggest that further research with a larger, more culturally heterogeneous sample would be valuable.

Originality/value: Computer classes benefit older people wishing to learn computer skills which may facilitate ‘ageing in place’. There has been little research in this area.

Key words: computer classes, technology, older people, community centre, ageing in place, internet

Paper type: Research paper

Introduction

Over the past 20 years, adults have become increasingly reliant on Information Technology (IT) for communication, business and education (Adler, 2002). IT is a broad term defined as any 'system (especially computers and telecommunications) for storing, retrieving and sending information' (Stevenson, 2010).

There has been a recent proliferation of IT use among older people in the UK (aged 65+), with daily computer use in this group rising from 9% to 42% between 2006 and 2014 (Office for National Statistics, 2014). However, there is a 'digital divide' in IT use between generations (Helsper and Eynon, 2010) insofar as daily computer use among 25-34 year olds rose from 61% to 86% over the same period. As a result of this generational 'digital divide' computer classes are now a regular feature of educational programmes offered by charities and educational organisations (Dickinson *et al.*, 2005).

A recent study claimed that older people will make greater use of IT in the future especially 'when it is helpful to them in performing everyday functions (such as shopping, banking and, playing games or in personal care) or in maintaining social networks' (Damant and Knapp, 2015, p. 6). IT can also support 'ageing in place' (Czaja and Lee, 2007; Normie, 2011), defined as 'the ability to live in one's own home and community safely, independently and comfortably, regardless of age, income or ability level' (Centers for Disease Control and Prevention, 2013). Ageing in one's own home has been shown to be important for older people, who are usually strongly attached to their home environment (Czaja and Lee, 2007).

The benefits of computer use for older people, including enhancing quality of life (Marston et al, 2015) are widely discussed but computer classes are seldom investigated in their own right. Establishing that computer classes teach skills necessary to promote 'ageing in place' would provide a spur to expand their provision.

This research aimed to explore older people’s initial motivations to attend computer classes and the perceived outcomes, which may assist ‘ageing in place’.

Learning in later life

It is accepted across the social sciences that later life education should become a societal imperative (Kunemund and Kolland, 2007). The outcomes of lifelong learning include improved cognition, occupational benefits and skill acquisition (Panayotoff, 1993; Bunyan and Jordan, 2005). Nevertheless, uptake of later life educational programmes is low. In the UK in 2013, only 19% of adults aged 65-74 and 10% of those aged 75+ participated in any form of learning programme (Aldridge and Hughes, 2013).

Gender differences exist in motivations to participate (Scala, 1996). Women tend to be motivated by enjoyment whereas men are motivated by the potential for career enhancement. Past education is the major determinant of participation in such programmes followed by health (Kunemund and Kolland, 2007). Improved access to education for younger generations might therefore increase the uptake of later life programmes by future cohorts of older people.

Computer classes for older people

There is scant research focussing specifically on computer classes for older people. Most of the relevant studies have a computer class setting but focus on the motivations and outcomes of computer use rather than on the classes themselves. This presents a problem for distinguishing between the effect of computer training and the effects of computer use. Kim (2008) states that older people’s motivation to enrol in a computer class is often rooted in motivation to use a computer and thus a significant overlap between the two could be expected. Existing literature in this field will now be discussed, followed by a consideration of the gaps in knowledge on this topic.

Motivation for attending computer classes

Older learners in a computer class in Spain were predominantly motivated to attend by the desire for lifelong learning and to keep their minds active (Gonzalez *et al.*, 2012). In Hong Kong the motivation was shown to be social (Ng, 2008). Macro-social factors (such as societal norms) and micro-social factors (including familial encouragement and peer support) were reported. Cultural differences between Spain and Hong Kong may explain the difference in motivations as cultural values influence learning needs and may affect learning motivations (Kim, 2008)

Outcomes of computer classes

The existing literature on computer classes for older people focuses mainly on psychological outcomes. White *et al.* (2002) evaluated the effect of computer classes on loneliness and depression using a randomised controlled trial (RCT) involving 51 older people with minimum computer experience at baseline. The authors reported a trend of reduced depression and loneliness in participants but the trends were not statistically significant. Another RCT explored the effect of six week one-to-one computer training on computer attitudes and self-efficacy (Laganà, 2008). The participants assigned to the intervention group showed statistically significant improvement in attitudinal scores and computer competencies compared with the control group. However the number of participants was small (n=32) and the balance of participant ethnicities uneven.

Sanders *et al.* (2013) showed that computer classes improve confidence and reduce nervousness in subjects when using computers. However this study showed that negative attitudes towards computers and a perceived lack of control over them are unchanged by computer training. This suggests that attitudes towards computers and the Internet are more entrenched than can be modified by a short computer course.

Teacher-student interactions are important for older people's computer learning outcomes (Nycyk and Redsell, 2006). In one ethnographic study, older learners reported improved self-perceived wellbeing and increased confidence with computers, as a result of interaction with tutors (Nycyk and Redsell, 2006).

The social benefits of computer classes for older people are as for computer use generally (e.g. learning to communicate with family online) (Seals *et al.*, 2008). However, the social benefits of classes go beyond the benefits merely of computer use: older students in one class acquired online material like jokes which they could share and discuss with other students (Shapira *et al.*, 2007). This demonstrates the role of the social environment in class outcomes.

Heterogeneity in computer class design makes it difficult to compare studies assessing outcomes. Class designs range from one-to-one tuition (Laganà, 2008) to small group teaching (White *et al.*, 2002) with varying levels of participant prior knowledge, programme duration and goal setting (Kim, 2008). The differing training experience of teachers from one study to another also complicates comparison.

In summary, the outcomes of computer classes can largely be considered psychological or social. It is difficult to compare different studies because of varying programme designs and prior experience of both students and teachers.

Gaps in knowledge base

There are a number of gaps in the literature on older people and computer classes. Perhaps most pertinent, the fact that the studies tend to use socially homogeneous samples of middle-class, well-educated, healthy adults in the United States limits the generalisability of the findings to culturally more diverse groups.

This paper explores older people’s motivations for attending weekly IT classes and examines the perceived outcomes, highlighting contributory factors.

Method

Overall Design

Qualitative semi-structured interviews with the use of a topic guide were used as this can capture the rich contextual data necessary for assessing motivation (Charmaz,

1995). A quantitative method would not adequately evaluate culturally and socially defined motivations and their interplay with perceived class outcomes (Silverman, 2013). Moreover, semi-structured interviews empower interviewees, foster rapport between the interviewer and interviewee and facilitate reflection on the learning experience (Leane *et al.*, 2002; Randall, 2002).

Study Setting

The study setting was a community centre in London provided by a charity providing health and social care services.

Six computer classes are held at the centre every week with five students in each class. Classes last for three hours, including a 20-minute tea break during which students and teachers congregate in the community centre café. The classes are held in a newly renovated computer suite housing several desktop computers.

No formal class structure or curriculum is followed and the volunteer teachers simply pass on their lay computer knowledge with no prior teacher training. Students are encouraged to direct their own learning by posing questions and defining the skills they wish to learn.

This was a pragmatic choice of study setting, based on the author's knowledge of the area. Initial telephone enquires with the organisation led to contact with the computer centre manager. He then issued information sheets inviting participation in the research. The centre members could respond directly to the researcher.

The Participants

The participants were a varied group (Table 1). Four were women and four men. Half were aged 85 – 89 with one over 90 and three between 70 -84.

[TABLE 1 TO BE INSERTED HERE]

Data Collection

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The one-to-one interviews lasted between 45 and 60 minutes in the community centre recording studio which provided a soundproof environment with minimum audio or visual distraction.

Participants were interviewed using a topic guide with questions largely drawn from the literature search and research objectives. A short demographic questionnaire gathered information on the age and marital status of the participants.

Ethical Approval was granted by the 'King's College London Research Ethics Committee'. Informed consent was obtained from participants who were given an information leaflet, a consent form and the opportunity to ask questions after an introductory talk. Participant anonymity was achieved by allocating pseudonyms before transcription.

Data Analysis

Interviews were transcribed verbatim immediately. Transcripts underwent thematic analysis (Braun and Clarke, 2006). Codes were generated to represent interview content. These underwent constant comparison; many were redefined after subsequent transcript analyses. This created a harmonised set of codes used consistently across all transcripts. Codes were grouped into themes.

Findings and discussion

First, the initial motivations for attending computer classes are outlined below followed by the contributory factors. Second, the perceived outcomes of computer classes are presented followed, again, by the contributory factors.

Motivations for class attendance

Initially, seven of the eight participants were motivated to attend classes to gain basic or improved computer skills. The eighth participant simply attended for 'something to do'. Those with scant prior computer experience sought a basic familiarity:

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3 *'I realised that there were computer classes there and knowing my enormous*
4 *deficiency I thought I would have a go at it.'* Mr. Douglas
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8 Existing computer owners wanted to improve their basic knowledge to use it more
9 effectively.
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12 *'Yes, I got a computer, a laptop, struggled, didn't know what I was doing and needed*
13 *to improve my knowledge as quickly as possible.'* Mr. Bond
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17 Several participants were motivated to develop specific computer skills for their
18 occupation at the time or for financial reasons. Mrs. Davis said that after her
19 husband died she wanted to run his property business; she enrolled to learn how to
20 produce Microsoft Word documents. Mr. Atkins and Mr. Bond said they wanted to
21 make money online and to give to charity.
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27 Scala (1996), as reported earlier, found that older men tend to be motivated to study
28 for career enhancement whereas women tend to learn solely for enjoyment. Mrs.
29 Davis's occupational motives for attendance did not coincide with these
30 observations.
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35 Other participants claimed that they were motivated to enrol in computer classes to
36 communicate online with family and friends abroad. One participant reported:
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39 *'I heard about Skype and I wanted to get in touch with family, with my niece in*
40 *America and eh.... I've got friends all over'.* Mr. Atkins
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44 Communication with family abroad is a well-documented outcome of computer use
45 (Kim, 2008; Rosenthal, 2008) but is not a reported *motivation* for attending classes.
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49 In summary, the main motivation for attending computer classes was to acquire
50 computer competence for occupational, financial or communication purposes.
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53 *Factors influencing motivation*

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55 *1. Influence of the death of a spouse*

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Marital status was considered when interpreting individuals' motivation for attending classes. Three of the four widow(er)s directly related loss of a spouse to their initial attendance. Mrs. Allen joined the class after her husband's carer introduced her to the community centre following her husband's death. Mrs. Davis was motivated by the need to develop computer skills to take over her late husband's business. Mr. Douglas felt 'subconsciously' motivated to attend classes after losing his computer-competent wife:

'Possibly subconsciously I wanted to replace the ability she had and felt I ought to know something about it, you know.' Mr. Douglas

In the wider field of adult learning, major life events including divorce or widowhood have been shown to lead adults back to education (Compton *et al.*, 2006). However, it is argued that widow(er)s are motivated to learn in later life by the opportunity to study subjects previously unavailable in childhood or too time-consuming during working years and not solely by the desire to fill time after the death of a spouse (Compton *et al.*, 2006).

In summary, although not a direct initial motivation, widowhood appears to contribute in different ways to motivations for taking up classes.

2. Active Ageing

A number of participants expressed the belief that it is important to remain mentally active in later life and to have activities to look forward to such as computer classes.

'I think a big thing, as you get older...is to have something ahead of you to look forward to. If you have nothing ahead of you, what is the purpose in your life? And you decline and the mind ceases, and the cells...the neurones will decline, and therefore you have got to have a challenge in your life' Mr. Douglas.

Mr. Carroll also stressed the importance of staying mentally active in later life. Despite his physical disability and reliance on a carer he said it is imperative to remain as independent and mentally active as possible in later life. This corroborates

findings from Gonzalez *et al.* (2012) who reported that older people are motivated to attend computer classes to keep their minds active.

Outcomes of Classes

1. Computer Skills

Participants' perceived computer skill acquisition was the main class outcome, skills including document scanning and searching for information using Internet search engines. Several of these favour 'ageing in place' (Czaja and Lee, 2007; Normie, 2011). Mrs. Banks said that she now uses the Internet instead of a local directory to search for tradesmen:

'At the moment, my air conditioning isn't working and I need to find an air conditioning engineer...Someone said that you can't get the yellow pages for the whole of London anymore...you have to go online to yell.com which is what I found out today and that's typical of everything now'. Mrs. Banks

Despite several participants' citing Skyping family abroad as an initial motivation for attending, they were not taught to Skype at computer classes. However, this had not deterred those with dispersed families from learning. Four of the six participants with family abroad were taught to use Skype by family or friends. All four stressed its value in maintaining regular contact with family and feeling more 'socially in touch' despite living alone.

'I Skype everyday with my nephew in New York. You know, you live each other's lives like this. You are not 3000 miles away.' Mrs. Allen

'You can speak to anywhere round the world. My daughter in her home takes the camcorder, shows me the children, shows me the outside of the house, and you feel as if you're there with them...' Mr. Carroll

Online communication goes beyond physical interaction, offering dispersed families the opportunity for regular contact (Munoz *et al.*, 2013). Emails and Skype offer ways to remain socially active (Shapira *et al.*, 2007) and there is evidence that

maintaining a strong social support network plus intergenerational family relationships are important determinants of wellbeing (Walker, 2010).

2. Psychological Outcomes

Most participants reported positive psychological class outcomes including greater confidence when using a computer in the presence of a teacher and a greater tendency to experiment with the computer at home. Becoming more confident and experimental with technology is necessary for successful computer use at home where teacher support is not available.

'I can say I am more adventurous on the computer. Um, if suddenly somebody asks me how to get there, then I will put it on the computer and ask for information about transport or distance or possibilities. If I really want to know what is going on in the theatre land, maybe I will book it.' Mrs. Allen

A number of papers in the literature outline additional psychological outcomes including feelings of empowerment (Shapira *et al.*, 2007; Seals *et al.*, 2008). This was not reflected in the eight participants at the community centre.

3. Social Outcomes

For most participants, meeting new people and chatting with friends were important secondary outcomes. Three women and two men met friends through the class. There was a consensus that the tea break was of social value:

'I look forward to tea time when we sit and chat for 20 minutes or so, otherwise I don't talk to anyone all day.' Mrs. Banks

The social outcomes reported by the majority of participants were another motive for continuing to attend. The participants reporting the strongest positive social outcomes had attended the longest. Despite reporting that she is no longer improving her computer skills, Mrs. Cole, the longest attending participant, was still motivated to attend classes regularly to meet her friends.

By contrast, both Mr. Banks and Mrs. Davis had attended for less than two years and reported no social outcome. This may be because social outcomes take time to develop or may show the need to probe more deeply during the interviews. Alternatively, it is possible that some individuals simply do not experience social outcomes from classes; with the result their motivation is not reinforced and they drop out. Again, reasons for a lack of social outcome could be rooted in personality.

Factors influencing outcomes

1. Owning a laptop

Seven participants owned a laptop and a number discussed the benefits of training on them in class rather than using the desktop computers provided.

'They encourage you, if you've got a laptop, to bring it along, and you work with your own computer' Mr. Bond

After finding it difficult to apply the skills learnt on the class computer to his desktop at home, Mr. Douglas bought his own laptop to take to the class.

'(At the start) it was all very well using the computers... but it wasn't the same as the system I have at home....So that's what I did, so now I've got a laptop.' Mr Douglas

Computer ownership is not reported to influence class outcomes in the literature. However, the common goal of computer classes is to create independent users who can use a computer away from class (Xie, 2007); ownership is thus a prerequisite. Moreover, computer ownership is required for practice outside class time.

2. Teaching Style

Participants perceived teaching style and class format to impact on class outcomes. Although unreported in the existing literature, there were gender differences. Women generally disliked the lack of formal class structure. By contrast, men enjoyed the lack of formal structure and the opportunity to bring specific problems to discuss with the teachers

'I enjoying coming here and getting the help that they give me. It's amazing to have a problem that you know that during the week you can get sorted. They will help and get it sorted for you. It's lovely.' Mr. Bond

Despite gender differences over preferred teaching style, a number of participants of both genders were frustrated that some teachers solved their problems without showing them how:

'If I'm using the computer and I press the wrong button...I have got no idea how to get back....normally they get me back onto it. How they do it I don't know, so if it happened to me at home, I wouldn't know.' Mr. Carroll

A lack of written material posed a problem for a several participants who found it difficult to remember lessons learned from week to week.

Several agreed that the learning outcome would have been more positive if teachers had tended not just to solve their computer problems but also to teach them how to do so. Failure to recognise this limited the learning outcome and the ability to use the computer home unsupervised.

Summary of findings and discussion

In summary, participants were initially motivated to attend computer classes to gain computer skills. Factors contributing to initial motivation to attend included widowhood and the perceived importance of remaining mentally active in later life.

Skills learned include searching for information online, sending emails to family and friends and writing documents using word processing software. These are important skills for 'ageing in place' (Czaja and Lee, 2007). Positive psychological outcomes included increased confidence and a greater willingness to experiment with computers. These are useful outcomes for unsupervised home use and therefore important to 'ageing in place'. Social outcomes seem an important reason for continuing to attend.

Several participants felt that their class outcome related to being taught on their own laptop. Women complained of the lack of formal class structure but the men largely praised this. There was a general consensus that teachers solved computer problems without showing the students how to and this affected the perceived usefulness of classes.

Implications

The implications of this study are for the government, for local areas and for individuals.

For the government this study provides additional evidence of the role of IT (computers) in enabling 'ageing in place'. It also shows the value of asking older people for their views and what could be provided and where. If the increased confidence in using computers could be transferred to other technologies (e.g. telemedicine and mobile phones), this would further facilitate 'ageing in place'

At a local level there is a strong case for increased provision of computer classes for older people by charities and local councils. The place of the classes based in a local community centre was acceptable. The mixed feedback on the teaching style of the volunteers was also valuable. Given that the classes have no formal curriculum, it would be logical for the teachers to show students how to solve their computer problems instead of simply resolving them. A study of computer classes for older people in Australia showed the value of different types of teaching methods (Redsell and Nycyk, 2010). Moreover, whilst several participants used and valued Skype, they had been taught by family or friends outside. Skype training should be offered to all students.

For individuals it is notable that most participants relied on family for computer support outside classes. Problems may occur when participants have no such support. This may become of increasing importance in the future when patients may be able to access their own medical records.

Study limitations

There were a number of limitations to the study, the greatest being the size and homogeneity of the sample which limited the generalisability of the findings. The research was carried out in a faith community centre. However, this ostensible limitation might be considered a strength as studies of computer classes for older people report a lack of cultural diversity.

The purposive sample selected by the gate-keeper may have excluded participants with important characteristics influencing motivations and/or outcomes (Gray, 2013). The gate-keeper invited participants who he felt would represent the existing students. However, he may have introduced sampling bias by selecting those whose class outcomes best reflected the computer centre he manages. Most had attended for some years and this, according to the gate-keeper, was typical. Unfortunately, there was insufficient information on length of attendance to confirm this. Relative to similar studies, all participants had lengthy class histories, which limit the comparability between this study and others.

A thematic analysis threw up a superficial relationship between initial motivation, outcomes and continued social motivation. An alternative method such as Grounded Theory might have produced something more robust (Corbin and Strauss, 1994). Further research with a more heterogeneous sample (e.g. different religions and ethnicities) is required to develop a generalisable theory pertaining to these observations.

Conclusion

The main outcomes of computer classes for most participants were the acquisition of computer skills, increased confidence when using computers and social benefits. Factors influencing skill acquisition were computer ownership and gender differences over the preferred teaching style. Most participants stressed the importance of being taught to solve computer problems themselves rather than have the teachers do it.

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3 The findings largely support the existing literature on motivations and outcomes of
4 general computer use and computer training. Further research with a more deductive
5 stance to explore the impact of classes on 'ageing in place' using a larger, more
6 heterogeneous cohort in association with a cost-benefit analysis to justify increasing
7 the provision of similar computer classes for older people across the UK.
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[TABLE 1 TO BE INSERTED ON PAGE 7 OF ARTICLE]

Table 1: Participant Characteristics

Pseudonym	Age range	Marital Status	Length of Attendance
Mrs. Allen	85-89	Widowed	3 years
Mrs. Bond	90-94	Widowed	7 years
Mrs. Cole	85-89	Single	8 years
Mrs. Davis	80-84	Widowed	2 years
Mr. Atkins	85-89	Married	7 years
Mr. Banks	75-79	Divorced	18 months
Mr. Carroll	70-74	Divorced	7 years
Mr. Douglas	85-89	Widowed	18 months