The Adoption and Usage of Digital Technology by the Elderly

Adedamola Badejo

April 2019

Abstract

Digital technologies have the capacity to contribute to the health, social and physical wellbeing of the elderly. Based on empirical data, the use of digital technologies is not wholly embraced by the elderly. Factors preventing the use of these digital technologies include poverty, poor health or disability, social isolation and lack of access. Though there are policies set in place to promote the engagement of the elderly with digital technologies, they fail to incorporate the need to promote the awareness and the benefits of digital technologies to the elderly using an approach that directly considers their needs, social and physical capabilities. This paper thus examines the limitations as well as the benefits of the use of digital technologies by the elderly. By so doing it seeks to proffer a solution aimed at promoting acceptance and the usage of digital technology by the elderly.

Keywords

Introduction

Digital technologies have evolved time to time from the use of the conventional landline telephones to mobile phones, personal computers, interactive TVs, video games and robotics. Its innovation has been primarily to drive development. They promote not only the lives of the young population but also that of the elderly. A study undertaken by Damodaran et al, 2014 shows that digital devices mostly used by older people aged 50 years and above are mobile phones, CDs and desktop computers. 'Social digital divide' a term used to describe the exclusion of the elderly from digital technologies is seen in the many discussions of papers promulgating the importance of digital technologies among the elderly. Thus, different propositions have been offered to bridge this digital divide between the young and the elderly. Digital technologies have been proven to promote healthcare, information sharing, develop new skills among this group of people. However, according to the findings of a recent study written in the news and blog section of the Lancaster University, UK, personally held values on the use of technology and the fears of making mistakes when using software are factors preventing the use of technology among the elderly. Other factors include poverty, disability or poor health, and social isolation (Olphert et al, 2005; Millward, 2003). The main consideration in this context is how to get the elderly involved in the use of digital technologies to improve their wellbeing. Starting from the situational context, this paper offers an evidenced-based theoretical overview of the literature on the benefits of digital technologies.

The fact that there is a social digital divide does not equate to a non-existence use of digital technologies among the elderly. A Eurostat's data on Internet usage (2011), in 2010, estimated that 37% of individuals between 55 and 74 years of age used the Internet on average at least once a week, in the 27 countries of the European Union. As of 2017, 41% of the elderly aged 75 and over use the internet in the UK (Office of National Statistics). A slightly higher percentage of 48% aged over 70 were internet users in France in the year 2016. However, they seemed more receptive to the use of other digital technologies such as smartphones and tablets computers. While the use of digital technologies can benefit wellbeing, its capacity to improve the quality of life for the elderly is yet to be fully explored. By considering the limitations of the elderly to the use of digital technologies, approaches toward improving use could be formulated and established.

Limitations of the use of digital technologies

A low belief in the capabilities of performing certain tasks to produce positive outcomes influence the elderly perception and subsequent use of technology as proposed by Hsu & Chiu, 2004. Studies that directly questioned the elderly on internet use reveal that lack of Internet attitude, feeling too old, a lack of Internet experience or Internet skills, insufficient time and high connection costs (Helsper and Reisdorf, 2013; Millward, 2003; Morris et al., 2007; Peacock and Künemund, 2007) deter them from the use of the internet. Furthermore, a strong sense of social responsibility to society and the fear of

social isolation contribute to the elderly rejection of internet use (Knowles, and Hanson, 2018). Technology is becoming more ingrained in everyday life activities, thus ways of connecting digitally with the elderly needs to be explored for it to become a part of the elderly people's life. The Danish Government, in an effort to promote the use of digital technologies by the elderly introduced, in 1999, a research and development program called the 'Old People's Use of ICT'. Findings from the program revealed a lack of fear of digital technologies, and an eagerness to learn how to use technologies as a tool and access to information (Jaeger, 2004). It thus adds credence to the premise that the elderly can be prevented from being trapped in the digital divide.

Apart from attitudinal barriers, physical accessibility, skills, support, and content are also barriers to the use of the internet. Physical equipment and infrastructure without bandwidth for internet connections could hinder rather than amplify the use of technology by the elderly. In the UK, cost and the need to sign contracts for regular payment of bandwidth use might play a significant role in the non-use of this equipment by the elderly. People with disabilities also need physical access to digital equipment. Physical assistive technologies for the disabled have been proven to create independence thus enhancing the wellbeing of the user (Gamberini et al., 2006). The Digital Britain White Paper identifies that even with the availability of this physical equipment, without skills and motivation, access might be unattainable. Older people hardly seek support when they lack the capabilities or skill in the use of digital technologies. Some, according

to the Digital Inclusion Evidence Review of 2018 compiled by Age UK, seek help from family or friends for digital access. However, the risk of financial abuse might occur when financial or personal issues are exposed because of vulnerability. Furthermore, the elderly choose not to access the internet because the content is not appropriate or appealing to them. Rather, they feel that the contents are targeted at the younger population. One notable scheme that seems to put this into consideration is The Centre for Applied Special Technology (CAST) established to maintain a web-based validation service as a world standard required by countries like the United Kingdom, New Zealand and the USA for web document design targeted at different users (Cullen, 2001).

Benefits

Policy formulation on technologies and the elderly consider the many benefits of the use of technologies by the elderly. For example, the UK Government in understanding that technology has the ability to reduce waiting hours and acts as a preventive measure against hospital admission has committed a lot of money into programmes driving this course, for example, Preventative Technologies Grant programme. Some of the benefits mostly under discussion are:

Reducing Isolation and loneliness

An article published in The Guardian on the 21st of March, 2017 reported that according to a survey, three-quarters of the older people in the UK are lonely. Loneliness among the elderly is a growing concern both to the government and the public. Depression (Iliffe. et al., 2007), self-harm (Berkman LF et al, 2000), cognitive or physical disability (Haven, and Hall, 2001) and mortality are some of the

ills of social isolation among the elderly. While there is evidence that older people do not see access to internet services as a means of alleviating loneliness and social isolation, there are some that use it as a way of communicating with friends and relatives. Furthermore, evidence has revealed that increased social support through technology devices in residential homes can lead to reduced level of social isolation and depression in the elderly thus impacting positively on health and wellbeing (Garbin et al,2017).

Accessing goods and services

Buying and selling of goods and services are now more online than onsite as it makes access easier, faster and cheaper. However, there is a risk of excluding the elderly who do not use the internet thereby making them vulnerable to paying more for their goods and services (Tatnall, and Lepa, 2003). In data from the Office of National Statistics, Britain reported a higher proportion of older people aged 65 years and above who shop online from the year 2008 to 2018. Goods and services purchased online include newspapers, books, household goods, hotel accommodation, travel arrangements. Access to websites, meeting the physical, economic and social needs of the elderly needs to be properly analysed and evaluated.

Quality of life and wellbeing

Promoting the quality of life and

wellbeing seems to be the objective of many social and health services given to the elderly population. Evidence has revealed that the use of digital technologies has improved the quality of life of the elderly in the aspect of access to transportation and healthcare (See Pangbourne et al,2010). The digital era is relying more on assistive technologies to maintain or promote the capabilities of people with medical or healthcare problems. Gamberini et al, 2006 talk about the uses of assistive technologies as bonding equipment between the medical specialists and the elderly and as a supervisory aid on the cognitive and physical conditions of individuals with disabilities (cognitive and physical). Telehealth, a form of assistive technology used to monitor vital signs that medical professionals use as a diagnostic and preventive tool is gradually growing in use in the healthcare system of the UK. In Scotland, the population of those aged 65 and above using community alarm and another telecare service in the 2016/17 was 128,750 (Scottish Government Social Care Survey,2017). Telecare services have also been known to reduce the number of elderly people admitted into care homes thus promoting home care and independent living. A pilot study in Scotland revealed that the length of stay in the care home was halved as a result of the use of telecare, thus saving cost and resources.

Conclusion and Recommendations

Research clearly understands the many benefits of the use of digital technologies by the elderly. It not only improves the health of the elderly but also promotes independence and facilitates social networks with the aim of reducing isolation and loneliness. Following the declaration of the World Summit on the Information Society in December 2003, digital technology has enabled people and communities to achieve their full potential through creating, accessing, utilizing and sharing information and knowledge. There are a number of services that were established to facilitate the use of digital technology among the elderly. The Moose in the House Project implemented by Age Concern Edinburgh; the Citizen's Online's Everybody Online Programme; and different campaigns run by Age UK. are some of the activities that focused on engaging the elderly living in care homes and attending day-care centres with digital technologies especially the internet (Age UK). Despite these activities, there still exists a social digital divide that excludes the elderly from digital technologies.

Policies formulated by the UK government focus on engaging the elderly in digital technologies through easy access to internets and provision of computers to bridge the social divide that exists between the young and the elderly in the use of digital technologies. However, despite this political will, promoting the awareness and potential benefits of the use of digital technologies to the elderly seem not to be within the guidelines set to achieve this aim of engagement.

Acceptance and the use of digital technology by the elderly can only come about when policies and programme promote awareness and the benefits of the use of digital technology to the elderly taking into cognizance their needs, physical and social capabilities, and environmental factors. This is

achievable when a person-centred approach to the use of digital technology especially related to their health is employed which will give the elderly a sense of ownership, a feeling of being in control and able to make choices. This person-centred approach is feasible through some good practice principles. Day care centres and residential homes need to incorporate trainings on digital technologies, relevant to the wellbeing of the elderly into activities set out for them. Digital support on a one to one basis should be encouraged to promote confidence and allow learners to learn with ease. Furthermore, technical innovations should be structured to use the right language that focus on the needs of the elderly. A digital strategy for Scotland, which includes closing the gap by working with third sector organisation and community groups to model affordable internet access at trusted locations (Scottish Government, 2017) should include these principles.

Berkman, L. F., Glass, T., Brissette, I., & Seeman, T. E. (2000). From social integration to health: Durkheim in the new millennium. *Social Science & Medicine*, 51(6), 843–857

Cullen, Rowena (2001), "Addressing the Digital Divide", *Online Information Review*, Vol. 25, No. 5, pp. 311-320.

Damodaran, L., Olphert, C.W. and Sandhu, J., 2014. Falling off the bandwagon? Exploring the challenges to sustained digital engagement by older people. *Gerontology*, 60(2), pp.163-173.

Gamberini, L., Raya, M.A., Barresi, G., Fabregat, M., Ibanez, F. and Prontu, L., 2006. Cognition, technology and games for the elderly: An introduction to ELDERGAMES Project. *PsychNology Journal*, 4(3), pp.285-308.

GarbinPraničević, D., Peterlin, J. and Bućan, M.J., 2017, October. Do older people benefit from digital services? In *DIEM: Dubrovnik International Economic Meeting* (Vol. 3, No. 1, pp. 145-160). Sveučilište u Dubrovniku.

Hall, M., & Havens, B. (2001). The effect of social isolation and loneliness on the health of older women In P.-o. projects (Ed.), *Older women's health* (Vol. 2005). Manitoba: Prairie women's health centre of excellence (PWHCE)

Helsper, E.J. and Reisdorf, B.C., 2013. A quantitative examination of explanations for reasons for internet non-use. *Cyberpsychology, Behaviour, and Social Networking*, 16(2), pp.94-99.

Hsu, M.H. and Chiu, C.M., 2004. Internet self-efficacy and electronic service acceptance. *Decision support systems*, 38(3), pp.369-381.

Iliffe, S., Kharicha, K., Harari, D., Swift, C., Gillmann, G. and Stuck, A.E., 2007. Health risk appraisal in older people 2: the implications for clinicians and commissioners of social isolation risk in older people. *Br J Gen Pract*, 57(537), pp.277-282.

Jæger, B., 2004. Trapped in the digital divide? Old people in the information society. *Science & Technology Studies*.

Knowles, B.H. and Hanson, V.L., 2018. The Wisdom of Older Technology (Non-) Users. *Communications of the ACM*, 61(3), pp.72-77.

Millward, P., 2003. The 'grey digital divide': Perception, exclusion and barriers of access to the Internet for older people. *First Monday*, 8(7).

Morris, A., 2007. E-literacy and the grey digital divide: a review with recommendations. *Journal of information literacy*, 1(3), pp.13-28.

OLPHERT, C. W., DAMODARAN, L. and MAY, A. J., 2005, Towards digital inclusion – engaging older people in the 'digital world'. In Accessible Design in the Digital World Conference 2005, Dundee, Scotland. Electronic workshops in computing (eWIC). Available online at: https://www.bcs.org/upload/pdf/ewic_ad05_s7paper1.pdf (accessed

21 September 2006).

Pangbourne, K., Aditjandra, P.T. and Nelson, J.D., 2010. New technology and quality of life for older people: Exploring health and transport dimensions in the UK context. *IET Intelligent transport systems*, 4(4), pp.318-327.

Peacock, S.E. and Künemund, H., 2007. Senior citizens and Internet technology. *European journal of ageing*, 4(4), pp.191-200.

Scottish Government Social Care Survey, 2017

Scottish Government, 2017. Realising Scotland's full potential in a digital world: A Digital Strategy for Scotland

Tatnall, A. and Lepa, J., 2003. The Internet, e-commerce and older people: an actor-network approach to researching reasons for adoption and use. *Logistics information management*, 16(1), pp.56-63.