Ageing, Empowerment and Technology New Opportunities for Cultural Traditions?

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Abstract

As computers become an increasingly integral part of the lives of older adults, the study of computer used by older adults is becoming an increasingly relevant field of study. The aim of the study is a bibliographic review to better understand the relationship of new technologies with the population of older adults. One of the consequences that appears is that to encourage and facilitate the use of new technologies by this important age group, for both personal and professional benefit, it is necessary to understand its implication in the term of cultural traditions. It should be noted that all the researches consulted insist on the increasingly important role of the new technologis in the life of old people, and far from assuming that ageing people would have a rejection to the same, is possible to perceptive an operative and surprising use of the new technologies

Keywords: ageing; new technologies; cultural traditions

1. Introduction

This study develops the hypothesis that older adults are embedded in a society of technology and therefore to a greater or lesser degree cannot disengage from it. We could say that there are "everyday" technologies, like mobile phones and more "sophisticated" technologies such as the use of computers and related devices that pose different challenges.

It seems that the greater the use of "sophisticated" technologies, the higher the level of life

satisfaction, with older adults experiencing less anxiety and a greater sense of self-efficacy. The literature also indicates that there are gender differences in this respect, with women feeling more anxious about computer use. In this respect, their life domain seems to be restricted more to "everyday" than "sophisticated" technology (Ahlawat, 2022)

Although many authors consider that the use of computers and their derivations (such as chats, skype, youtube, others) increase the quality of life with less feelings of loneliness and isolation, we consider on the other hand that there is a certain "forcing" and social pressure for the older adult to learn and know these new technologies in the understanding (which may be false) that they help the process of socialisation and progress. On the contrary, we understand that along with sophisticated technologies, traditional modes of communication and exchange are maintained (Amaral & Flores, 2023)

2.The "information" age

The ability to use information and communication technologies (ICT) is increasingly seen as an essential requirement for living in the so-called "information age". Thus, it has been proclaimed that the use of information technologies is part of the modern grammar for all adults, including old people (Blasco & Meléndez, 2006). In this sense, we speak of digital literacy as the effort that the population, especially older adults, must make to reformulate their cognitive and literacy structures based on the new strategies of thought, action and psychomotor coordination that the new technologies imply (Cerda, 2005; Ogozalek, 1991; Lawhorn, Ennis, & Lawhorn, 1996).

Thus, there are multiple challenges to guarantee access to these new technologies, understanding that their diffusion ensures greater degrees of citizenship and social integration for older adults (Bernard & Phillips, 2000). There has even been talk of "silversurfers" to describe this situation (Brayfield, 2000; Cody, Dunn, Hoppin & Wendt, 1999).

The notion of "silversurfers" implies an understanding that older adults benefit from ICT in several ways, one of which is "bridging the generation gap" (Burdick, 2001). Other benefits relate to better problem management, health information, improved interactions, help with work, travel planning, shopping and financial management (Adler, 1996; Cody et al., 1999; Loges & Jung, 2001; White et al., 1999).

Other studies seem to indicate a decrease in stress, which helps to improve relationships and quality of life (Irizarry & Downing, 1997). Despite these positive aspects, there is still a majority of older adults excluded from ICTs (Hanley, 2002; Madden & Savage, 2000; Teo, 2001), which raises concern (Jara, 2008), understanding that new technologies can help the process of social integration.

3. Increasingly Ingrained Habits

Older adults are also increasingly learning and interacting with different forms of technology, understanding that it is an achievement that maintains their independence and reduces their need for care. In terms of medical treatment, it offers the possibility of managing medical conditions remotely, reducing the use of drugs and poor procedures in the treatment of

illnesses. It also implies a significant reduction in healthcare costs (Field et al., 2005).

However, the process remains ambiguous. If on the one hand, the process is understood as "expanding" boundaries, on the other hand, it does not fail to reinforce established habits of older adults that go beyond new technologies. In fact, the use of these technologies reinforces the preference of this population to remain in their own homes, living independently (US Census Bureau, 2000; AARP, 1996). Technology allows most activities to take place within the "protection" of the home (Baltes, Maas, Wilms, Borchelt, & Little, 1999).

From this point of view, we can only assimilate social connections with the security of the home (AARP, 2008). It is not surprising, then, that in principle the attitude of this population, although not positive, is not wary of "advanced" technologies, as long as they are practised within the home. This might be related to the perception of older adults that new technologies generate more benefits than costs (Melenhorst, Rogers and Bouwhuis, 2006),

Despite this, the percentage of older adults using technology is very low: 25% aged 65 and over, 56% aged 55-64 and 68% aged 25-54 (US Census, 2003). However, recent research indicates that this number is steadily increasing in the 65+ population (Silva Santana, 2015; Taiuani Marquine et al, 2015; The Global Information Technology Report, 2014; Woolrych, 2016; Nascimento & Prates, 2020).

Although it was initially thought that older adults would be indifferent or anxious about new technologies, this has not been proven (Silva Santana, 2015). However, there are still difficulties in understanding older adults' use of ICTs, especially about the reasons and motivations that indicate their use or non-use (Green & McAdams, 2003). However, other evidence suggests that a growing percentage of older adults are beginning to explore the world of technology, especially in their use of the Internet (Hart, Chaparro, & Halcomb, 2008). They are also becoming increasingly accustomed to online services, shopping, banking and planning leisure activities (Vuori & Holmlund-Rytkönen, 2005; Dutwin & Buskirk, 2022).

Another is the situation of older adults who continue to be part of the labour force. In the specific case of the United States, the US Department of Labor Statistics (2008) indicates a growing participation of older adults in the labour market. It can be indicated that between 1977 and 2007 there is an increase of 101% of workers over 65 years of age and projections indicate an increase of 80% between 2006 and 2016 (US Department of Labor, 2008).

These older workers who still wish to remain competitive in the labour market must use - voluntarily or involuntarily - new technologies (Kooij, deLange, Jansen, & Dikkers, 2008), where computer use is an essential element in the performance of their work (Nord, McCubbins, & Nord, 2006).

4. Factors Predicting Technology Use

It is important to be able to predict which factors facilitate or hinder the use of technology (Technology Acceptance Model - TAM). Research seems to indicate that these aspects are multidimensional, and depending on the context they may increase or decrease (Davis, 1989;

Blasco & Meléndez, 2006; Köttl, Gallistl, Rohner, Ayalon, 2021).

In general, age, education, race and flexible intelligence are understood to be predictors of technology use. It should also be noted that physical and cognitive impairments are factors in the difficulty of computer use, such as poorer vision, hearing loss or deafness, psychomotor coordination and concentration problems (Hawthorn, 2000). Therefore, a relevant factor to consider in the ease of use of computers is larger print, appropriate differentiated sounds and less need for mouse movements. If the older adult has to adapt to the computer, the computer also has to adapt to the older adult ...

Undoubtedly, an essential factor is motivation and the associated feeling of comfort, competence and control of the process (Czaja & Sharit, 1989). Other studies insist that attitudes towards new technologies are not harmful per se (Festervand & Meinert, 1994); and what predominates is heterogeneity between older adults who find benefits from the computer and those who find none (Saunders, 2004); other older adults feeling too old to learn about the subject (Turner, Turner, & Van de Walle, 2007), and especially apprehensive about making mistakes (Birdi & Zapf, 1997; Saunders, 2004).

A decisive factor is undoubtedly the type and quality of instruction received on computer use (Puig, 2000; Calero, 2003; Zamarrón, Tárraga & Fernández-Ballesteros, 2008; Garamendi, Delgado & Amaya, 2010); what for younger generations seems to be an immediate and instantaneous relationship, for older adults involves a greater investment of time and effort (Charness, Schumann, & Boritz, 1992; Czaja, Hammond, Blascovich, & Swede, 1989; Bowers, 1986).

Older adults make more errors, require more help, and score lower on test training (Gomez et al., 1986; Charness et al., 1992). However, these factors can be compensated for with appropriate psychoeducational programmes (Davicino, Muñoz, De la Barrera, & Donolo, 2009; Binotti, Spina, De la Barrera, & Donolo, 2009).

On the other hand, another research highlight that learning ability is maintained even in older adults (Yuni & Urbano, 2005). Perhaps it has not been taken into account that older adults learn especially by trial and error, while younger adults learn more by anticipation. This is related to various cognitive deficits (Cerella, Poon, & Williams, 1980), which make it imperative to insist on the link with "advanced" technologies, in the sense that it does not become persecutory, but comforting (Berridge & Grigorovich, 2022; Fernández-Ardèvol & Grenier, 2022)

5. Attitudes Towards Computers

Most research seems to indicate that there is a gender difference in the use of new technologies. Women seem to have a less positive attitude towards computers than men, seeing them as a male domain (Gomez et al., 1986). However, studies are far from conclusive and show that this is a matter of unfinished debate (Dukes, Discenza & Couger, 1989; Gilroy & Desai, 1986; Koohang, 1989; Massoud, 1991; Morrow, Prell & McElroy, 1986). Other studies indicate that there are no demonstrable gender differences in computer attitudes and anxiety (Heinssen, Glass & Knight, 1987; Loyd & Gressard, 1984; Woodrow, 1991).

At the same time, there seems to be a prevailing trend that older adults are able to hold progressively less anxious and positive attitudes towards computers than adults in general (Dyck & Smither, 1994). However, other studies indicate that, after a short period of training, anxiety levels do not decrease even with increasing levels of computer literacy (Temple & Gavillet, 1990).

Although the data are not clear, they suggest that emotional and cultural factors should also be included in further research. On the other hand, when older adults have had the opportunity to be in contact with technology or computers in their working lives, there is a positive correlation that facilitates their use (e.g. retired engineers) (Loyd & Gressard, 1984).

However, the learning that takes place is also crucial, although again this is a matter of debate. While research by Gilroy & Desai (1986) finds a positive correlation, Czaja et al. (1989) find no fundamental differences in attitudes towards the computer as a result of training processes.

There are few studies on cognitive factors in the acquisition of computer skills, but they seem to have a decisive influence (Mayer, Dyck & Vilberg, 1986; Shute, 1991; Van der Veer, 1989). The importance of spatial ability has been particularly emphasised, especially for the use of the text editor (Egan, 1988). On the other hand, deductive and reasoning skills have received little attention and inconclusive results, especially with regard to inductive factors (Gomez et al., 1986).

One factor that appears to be important in changing attitudes towards computers is the time devoted to learning them, beyond the actual content being used (Charness et al., 1992; Czaja et al., 1989; Dyck & Smither, 1994). This research seems to suggest that there is not necessarily an "a priori" prejudice of older adults towards computers, even if they do not have sufficient experience with them (Harrington, McElroy & Morrow, 1990; Jackson, Vollmer & Stuurman, 1985; Marcoulides, 1988).

In addition, it seems important to mention also the support that older adults have in their support networks, especially family members, such as children or grandchildren (Klein, 2009), relevant factors that are not sufficiently taken into account (Barrantes, Manrique & Ugarte, 2023).

6. Computer Use

Although their activities are similar, research seems to indicate that older adults - unlike younger people - do not take full advantage of all the possibilities offered by new technologies (Bucur, Renold, & Henke, 1999; Chu et al., 2022).

One element that comes first is communication and social supports (McMellon & Schiffman, 2000; Morrell et al, 2000), with interests in hobbies such as genealogy (McMellon & Schiffman, 2000; White & Weatherall, 2000); health information (Tak & Hong, 2005; Flynn, Smith, & Freese; 2006; Campbell, 2008; Macias & McMillan, 2008); education (Dorin, 2007); productivity (Campbell, 2008), seeking to be productive and maintain intellectual work (Rosenthal, 2008; Blake, 1998).

Research indicates that the most common use of computers also relates to communication

and social supports, including contact with family and friends (Thayer & Ray, 2006), and especially grandchildren (White & Weatherall, 2000), bereavement situations (Opalinski, 2001), or dealing with spatial limits and limited mobility (Alexy, 2000).

This point needs to be explored further, as computers often present a unique opportunity for older adults to socialise and establish social networks that can help socialise and establish social networks that can alleviate loneliness and alienation. The loss of family members, close friends or the loss of social connections due to the problems of age and the passage of time are painful realities that the older adult must face. Therefore, forging new relationships is often one of the challenges that the older adult must face in order not to fall into depression and loneliness (Ryan & Heaven, 1986).

Computers and the Internet provide a neutral space where one can find topics of interest and other people with similar problems (Coulson, 2000; Lawhorn et al., 1996; Ogozalek, 1991; Alpass & Neville, 2003) investigated the relationship between loneliness, greetings and depression. However, a study by White et al. (2002) indicates that the reduction of these factors with computer and Internet use is not statistically significant.

7. Personal Motivations

Although we can find certain trends in the motivations that lead to computer use, and these seem to be verified at a global level, it seems more accurate to try to accommodate also personal motivations for computer use that are not always quantifiable. In other words: it is impoverishing to consider that there is a consistent general scheme for all computer users (Green & McAdams, 2003).

And even what we call "user" is perhaps an anachronistic term more relevant to younger generations. As we have already indicated, it is not "use" but the relationship with technology that is key to understanding behaviours and attitudes. Older adults, rather than learning technology, come into contact with it (Loges & Jung, 2001; Garavaglia, Caliandro, Sala, Melis & Zaccaria, 2023).

Being a computer user does not necessarily imply a permanent state of activity in relation to technology. Learning is a necessary but not sufficient condition that guarantees the creation of a permanent user of technology. On the other hand, those who do not use the computer do not imply that they are on the fringes of technology, since technology is to a greater or lesser extent omnipresent (from the use of mobile phones among others). In other words: rejection of the computer is not rejection of the technological world (Murdock, 2002).

Throughout their life cycle, older adults go through different technological experiences, not always with the awareness that it is "technology", which depends on contexts and circumstances (Negroponte, 1995). In this sense, attitudes of ambivalence should not be ruled out, nor should attitudes of bewilderment (Weingardt, 2000).

Research seems to indicate that the computer has become a symbol of efficiency and participation in the information age and that it is shameful not to participate or not to be aware of it (Lupton & Noble, 2002). But on the other hand, it is possible to detect older adults

who are not interested in high ICT use at home or at work, among other factors because they do not find pleasure in using ICTs (Faulkner, 2001).

Therefore, it can by no means be claimed that older adults who use advanced technology are more effective or better socially integrated than those who do not (Wilson, 1973). The focus should be on providing the structural tools for the use of new technologies, renouncing the expectation that they will generate effective ICT users. The efficiency and productivity paradigm leads some authors to emphasise the term "relative advantage" (Rogers & Shoemaker, 1971) or "situational relevance" (Wilson, 1973) for older adult users.

But as already indicated, it has yet to be demonstrated that chronic use of advanced technology helps to solve the problems of social integration that affect older adults and which are traversed by multiple social, cultural and economic factors. Therefore, it is not just a matter of knowing what modifications computers need or how best to sell them to potential customers (Madden and Savage, 2000), but of understanding that technological factors have social contexts and circumstances that cannot be ignored (Woolgar, 1996).

8. Empowerment

The traditional focus of the issue has traditionally been on the benefits of computer use and especially how the computer solves the issue of the generation gap between the "new" and "old" generations. It is strongly insisted that it is imperative that both older men and women can "adapt" and learn to maintain the benefits of computer use (Knufer, 1997; Collis, 1985).

However, it is not clear that technology alone is capable of modifying cultural divides, which have multiple social, economic and cultural factors. Nor is it clear that the term "gap" can account for a society where distintion between age groups are beginning to blur (Klein, 2013).

It seems more interesting to visualise how the internet has become a relevant source of empowerment, contributing to autonomy, self-confidence and reduced levels of dependency (McMellon & Schiffman, 2002), for example, health anxieties can be better managed if the older adult feels that they have a more optimal acquisition of information about their concerns, which in turn results in the joy of being able to appreciate and experience reassuring and successful life experiences in terms of anticipation and "basic trust" (Winnicott, 1979). Beckers and Schmidt (2001) indicate that effective training programmes are those that aim to create a sense of self-efficacy. Many studies also point to the importance of providing adequate (emotional) support in these programmes (Rosenthal, 2008; Vuori & Holmlund-Rytkönen, 2005).

From another angle, we can think that a group culture is being consolidated where older adults feel more protagonists and decision-makers in their lives (Juncos, Pereiro & Facal, 2006); the networking that the internet allows ensures a permanent exchange of experiences, memories and information where the protagonism of all benefits the achievement of resilience. In this sense, new technologies will not facilitate the overcoming of generation gaps, but they will make adulthood a more gratifying and pleasant experience; in this sense, computers are not merely a machine for accessing information, but a vital experience where

vital experiences can be re-signified and subjective and social experiences can be elaborated.

9. Conclusion

The review presented here indicates that, despite the large amount of research carried out, there is still a lack of precise and clear information on the meaning, link and scope of new technologies in the lives of older adults. The contradictions found indicate that the multitude of factors at play may not be fully considered, due to the predominance of the paradigm that access to new technologies is essential for better adaptation and integration of older adults.

The pedagogical optimism that training that allows access to the computer world is enough is a utopia that fails to compensate for the indifference, perspective or fear of older adults. Undoubtedly, technology is perceived by older adults as a facilitator of information, achievements in managing their health, networking and social support, but this does not avoid mistrust and suspicion.

Technology is part of the home, it is subordinate to it, it develops in it. It is there that the older adult feels more relaxed and in control of the situation. On the other hand, there is an economic factor, since technology implies expenses in ink cartridges, mobile phones, help from technicians to solve the everlasting virus problems, among others. This is a factor of irritation and incomprehension in the face of the propaganda that presents new technologies as a panacea for all problems.

Perhaps we can say that the older adult is neither against nor in favour of technology. Developing this idea, we can hypothesise that the problem does not lie in the computer itself, but in what it means by imposing the abandonment of traditional forms of communication and transmission that are part of the identity of the older adult. We can speak in this sense of a factor of resistance and mourning for cultural forms that are being lost or becoming anachronistic.

Assuming that older people enjoy and take pleasure in the benefits of new technologies, which they should accept in a positive way, is not always the case. It is what social scientists would expect, but it is not what the older adult necessarily craves. The need to "adapt" to what is called the "technological revolution" (which should be analysed to what extent it is or is not a revolution...) is not something that the older adult perhaps believes to be indispensable or necessary.

Of course, social contact and networks are necessary, as in any age group (Cohen, 2001; Robinson et al., 2000; White et al., 1999), but it is worth asking whether computers are not expected to solve problems that they do not have to solve.

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