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OPPORTUNITIES

OF TUTORING FOR DIGITAL INCLUSION IN OLDER ADULTS IN HIDALGO

OPORTUNIDADES DE TUTORÍA PARA LA INCLUSIÓN DIGITAL EN ADULTOS MAYORES EN HIDALGO

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ABSTRACT

The present work is focused in a Diagnostic study to describe the digital inclusion of older adults and the opportunities for tutoring that they present. A semi-structured interview was used to identify the perceptions, regarding the use of technology and the learning priorities of the devices, tools and / or applications that allow them to be included in society on a more daily basis. The sample of 41 people over 65 was intentionally selected. A qualitative analysis that allowed to categorize the answers was carried out and with this a curricular scheme was developed which establishes the training needs (proper use of the cell phone to communicate, use of applications that require electronic registration, such as making an appointment in the insurance, giving high to perform a procedure, etc., use of devices that offer services such as ATMs, payment machines for basic services, such as water, electricity, etc., and to make inquiries of information on the Internet) which will allow to present a Tutorial Action Plan, that seeks to include digitally this population.

Keywords: Digital inclusion, older adults, technology, tutoring.

RESUMEN

Estudio de diagnóstico para describir la inclusión digital de adultos mayores y las oportunidades de tutoría que presentan. Se utilizó una entrevista semiestructurada para identificar las percepciones sobre el uso de la tecnología y las prioridades de aprendizaje de los dispositivos, herramientas y / o aplicaciones que les permiten ser incluidos en la sociedad de manera más diaria. La muestra de 41 personas mayores de 65 años fue seleccionada intencionalmente. Se llevó a cabo un análisis cualitativo que permitió clasificar las respuestas y con esto se desarrolló un esquema curricular que establece las necesidades de capacitación (uso adecuado del teléfono celular para comunicarse, uso de aplicaciones que requieren registro electrónico, como hacer una cita en el seguros, alta para realizar un procedimiento, etc., uso de dispositivos que ofrecen servicios como cajeros automáticos, máquinas de pago para servicios básicos, como agua, electricidad, etc., y realizar consultas de información en Internet). Lo que permitirá presentar un Plan de Acción Tutorial, que busca incluir esta población digitalmente.

Palabras clave: Inclusión digital, adultos mayores, tecnología, tutoría.

INTRODUCTION

Study needs on population aging should increase in Mexico because there are clear demographic projections according to the Consejo Nacional de la Población of Mexico (2014), that indicates that the population of older adults will continue growing and the number will quadruple in a period of 20 years.

According to the National Council of Populations (2014), for the year 2030 a projection is proposed in the State of Hidalgo of 117,257 women and 195,065 men over 60 years of age, a total of 372,322; considering that life expectancy for 2030 will be 76 years of age. And all these people should be served in a digital world so it is justified that the present study focuses on this type of population.

It is important to foresee in addition to the physical changes of an older adult, all other aspects, such as cognitive, economic, emotional, cultural and social ones. Among which we can point to the inclusion in the face of the technological changes of the current society, which presents a recurrent update; term that for the purposes of this study we call digital inclusion.

In this respect Pavón & Castellanos (2000), conducted a research in which they found that older adults are motivated by the use of Information and Communication Technologies (ICT) when they relate them to their needs; despite the fear and uncertainty that they might have. On the other hand Muñoz (2011), also in an evaluative study confirms that motivation plays a relevant role of social integration; while the use of technologies is linked with daily activities.

In addition, Millán (2011), mentions that to reduce social and digital marginalization it is necessary to consider older adults as users of ICT with real technological needs and that these tools can increase brain functioning, cognitive; in addition to self-esteem and quality of life.

Patiño-Agudo & Faba-Pérez (2015), also describe some studies where they found that the use of technologies is mostly related to home and communication with their family. These same authors also begin to address research related to the use of ICT whose purpose was to reduce the social and technological exclusion suffered by older adults.

Therefore, older adults should be considered as a vulnerable social group and have the right to be included in the social, economic, cultural and technological sector in the same way as the rest of the population; as well as enjoy health services and job opportunities.

In this sense, digital inclusion is considered as the mechanism that seeks to strengthen both individual and territorial capacities, for which accessibility and connectivity become indispensable at this time (Mochi, 2012).

It is worth mentioning that the process of globalization has brought with it the segmentation of three key areas: value chains, global markets and technological competencies. For the latter, it is necessary to manipulate complex tools that favor a profile of people in a segment; so digital inclusion focuses on the use of the benefits offered by the information society to all citizens, regardless of their health, economic, age, gender or geographical location.

Therefore, the purpose of this study is to identify tutoring opportunities regarding tools and technological resources that contribute to the digital inclusion of older adults in Pachuca de Soto, Hidalgo. The above in order to contribute to giving attention to the integration, production, autonomy and welfare needs of the elderly; and be recognized in an active society immersed in the use of technology.

When linking places and people separated by time and space through a “connected presence”, digital technologies, for example, can help reduce social isolation by uniting people. Current older people did not learn about ICT when they were in school, and the ICT skills they come to possess have been acquired during life, some as part of paid work or through access to support in the community. As a result, the nature and quality of ICT training and support are essential to support the development of “Internet self-efficacy” by older people.

In this sense, it is worth mentioning that older adults have to face emotional and social needs regarding the challenges that this age proposes or imposes before the use of technologies, which in high percentage are directed to other age groups, which makes integration possibilities. However, the problems and consequences of integration are different and one of the main ones is the prejudice that the rest of the people have about them and that frequently becomes an obstacle that they must face.

These changes according to Krassoievitch (2008), are related to social aging as a result of beliefs, prejudices against the refusal to reach an advanced age. The author identifies two factors that intervene in the devaluation of older adults: the first related to social and technological systems that evolve quickly; and the second with the inability to transmit their knowledge through digital media, mainly in technologically backward countries.

Given this situation, there are currently a number of training-related backgrounds that allow older adults to be included in society throughout their lives. For example, there

are different organizations and institutions that can range from governmental, educational institutions or civil organizations that offer training and / or updating programs in different areas and disciplines; even focused precisely on the use of technology.

Thus, in some countries and contexts, digital inclusion is being made possible through some of the activities supported by the European Commission such as:

- Accessible ICTs: Making ICT more accessible for all and fostering new methodologies for technological development (design for all).
- Support technologies: Support the development of ICT that helps people with disabilities so that they can carry out activities that they have not been able to do before and to interact better with technologies.
- Digital skills: Empower citizens to fight against marginalization and social exclusion, including careers through ICT in education.
- Social inclusion: Increase the participation rate of disadvantaged people in public, social and economic activities through social inclusion projects.

In this same sense and located within the framework of the information and communication society, it can be asserted, according to Mochi (2012), that digital inclusion allows thinking strategies mediated by the use of computers, the ability to use computer networks, deepen expressive and communicative possibilities, as well as strengthen personal autonomy.

Thus, digital inclusion plays at the same time a role of exclusion when not all people can adapt in a simple way to the use of technologies, this is the case of older adults who according to their physical, biological and cognitive development they encounter difficulties and to a certain extent they exclude themselves under the self-perception that they are not capable of learning; Refusing or showing disinterest.

For all the above, digital inclusion will depend on the context conditions of the users of the technology; that is to say that the citizens of the big cities have greater and better possibilities and conditions for the adaptation of the use of ICT; while rural areas are in unfavorable scenarios.

It can be said that every day, people have more and better access to teaching and learning tools with the new means of communication. Therefore, the inclusion of older adults to the use of technologies for various purposes is necessary; through methodologies and / or supports that guarantee the operational use of resources considering the characteristics of the people of this particular generation, according to the needs of use that are presented in their context.

With regard to older adults and their relationship with technology, it becomes very important because, as previously mentioned, this age group encounters obstacles that hinder its use and that, at the same time, increases the digital gap between them. and those known as “digital natives”.

DEVELOPMENT

This research has a diagnostic approach that uses qualitative techniques because it seeks to make an interpretative exercise of understanding the reality of a specific context and from that, describe the training needs of a group of older adults to promote their digital inclusion.

The design that corresponds to this research is descriptive, as Arias (2012), mentions it is the characterization of a fact, phenomenon, individual or group, in order to establish its structure or behavior. In this way, it is intended to identify the needs of tutoring around the tools and technological resources that contribute to the digital insertion, and consequently to the social inclusion, of a group of older adults in the context of a region of Mexico, which counts with economic and social backwardness, with a high degree of migration to the United States.

The participants are older adults (over 65 years old), of both sexes, with any level of education, without considering a level of income; who reside in the City of Pachuca de Soto, Hidalgo and nearby municipalities, and who are currently enrolled in a Community Development Center or similar to it, in which they take a class and / or activity of any kind, except the use of the technology.

The sample is intentional because it is not intended to perform an explanation exercise to generalize results, if not an understanding of a specific reality.

To carry out the diagnosis, a qualitative instrument designed in the form of a semi-structured interview was designed to identify the skills in the use of ICTs and their social perception regarding their use of certain devices that would provide evidence and understanding of digital inclusion.

The dimensions of the instrument are the following:

- Identification data and health status: to know its origin, educational level and general health status.
- Recognition of digital devices: to locate which devices are associated as part of the new generations of electronic devices.
- Usefulness of ICT: to identify what use was perceived in electronic devices and above all to know if they had

a sense of use for them. • Network of support in the use and / or learning of ICTs: to know if they had a family member that will help them use ICT or be willing to teach them how to use them.

- Usability: to detect if they had access to electronic devices and / or services, mainly with Internet.
- Social uses of ICT: to identify if they knew what types of social or entertainment uses can be given to ICT and especially if they had used them or were interested in using them.
- Priority of learning about ICT: to establish what were the main priorities or immediate needs of learning how to use ICT tools and for what purpose.

A piloting and a second version of the instrument was applied to 41 elderly people. This allowed to have a wide data collection and improve the understanding of the reality during the second semester of 2018.

Regarding the general data of the sample, the following aspects are identified:

- The majority of interviewees are women represented by 70.73%, which confirms the tendency in this sex to carry out activities in community development centers (Vasconcelos, Ramos, Fernandes, Rodrigues, De Melo & Azevedo, 2016).

From those 41 people according to their medical reports were all in optimal health, only 17 of them with slight overweight, without any sign of cognitive impairment.

- Of the 41 older adults, 34.16% live with their partner or spouse, while 36.58% live with a relative and the rest 29.26% live alone.
- 87.80% said that they do not have close and permanent support with whom they can learn to use digital devices, while 85.36% of those interviewed said they belonged to the middle class.
- 90.24% of the sample stated that their income is exclusive to maintain themselves, while the rest manifested at least one other person who depends on their income.

With regard to the results of the semi-structured interview section, the most important findings are described below, the results of a qualitative analysis of the information through the Atlas-ti application:

a) Older adults recognize technological devices such as a blender, washing machine, shower, etc., so the answers were grouped into: Appliances, school and office devices, communication devices and finally digital devices of last generation. Among the last generation will be mentioned: television, cell phone, tablet, computer and / or laptop.

In this sense it can be confirmed that older adults have knowledge about the advancement of technology, which is constant and dynamic according to the advances in this field, that is, they know that there are new devices, but they do not know how to use them.

b) They are perceived as inexperienced in the use of digital devices and are concerned because their social inclusion and / or independence depend on it, since they only incorporate them into their lives as a need to communicate with their families in the case of cell phones, the ATM to collect your pensions and / or withdrawal of cash; in another case presented is the use of television.

c) In the case of the computer, they say that it is the grandchildren who use them most and dominate their use. However, for them it is very complicated to do it. Because despite having relatives who use the technology they perceive that they do not have a person to help them handle them and that even exposes them to crimes, (reported to have been a victim of theft when asking for help from strangers when wanting to use the ATM automatic).

d) The usability dimension is focused on knowing the frequency of use of the devices and in this aspect it is expressed that television uses it every day, while the cell phone only uses it when someone dialed them but did not use all the applications they have, for example, do not use the games or the camera that comes integrated in the cell phone. They also report that many times they resort to support when they have difficulties with the cell phone. For example, to delete messages, to restore memory, etc.

e) Regarding the use of the computer, laptop and tablet report that they do not know how to use it; and, when they have needed to use it, they have always had to resort to support to do so, for example to communicate through applications with relatives who live abroad.

f) In the case of the social dimension, they report as an essential element of their digital inclusion learning to use applications or technological tools that have being necessary in their daily life, such as the ATM, which are forced to use them to collect their pensions. And use applications for procedures, such as requesting a service, communication applications to connect with family members, etc.

a) Use of the cell phone to be able to communicate

b) Use of applications that require registration, such as making an appointment in the insurance, registering for a procedure, etc.

c) Use of devices that offer services such as ATMs, payment machines for basic services, such as water, electricity, etc.

d) Make information inquiries on the Internet.

According to the Bulletin of the Ibero-American Cooperation Program on Adults, once they reach old age, these people lose interaction in places where they can be socialized, so integrating themselves to the use of technology can again represent a space for social participation; as well as diminish or eliminate mental states such as prejudice and unfounded fear that lead to social self-exclusion.

On the other hand, Garavelli (2015), mentions that societies that intend to define themselves as advanced must begin with the work to face aging as well as the implications that this has in the economic and social fields. This is how the prevailing search for solutions oriented mainly to the promotion of personal autonomy and social inclusion in this age group is based, which can be benefited with technological tools and products that support and complement the performance of activities of daily life both personally as in the social as well as benefiting its surrounding environment.

It can be assured that there is still a long way to go before digital inclusion is available to everyone. To do this, it is necessary that the programs and policies that aim to achieve this end be rethought with strategies that guarantee their functionality and operability under a contextualized analysis of the users. That is, we must teach them what is useful and beneficial according to their needs and the contexts in which they participate.

In order to promote this digital inclusion and support the training of older adults in the use of technologies, it must be remembered that adults do not learn in the same way as a child or adolescent, as a consequence of their life journey made up of their experiences and motivations that in many aspects (social, family, economic, emotional, etc.) are different to young students.

In this regard, Knowles (2001), explains that andragogy emerges as a science, which meets the different needs of adults with the understanding that an adult person can be classified as: a) mature; b) independent; and c) self-directed that has also accumulated diverse experiences that have enriched and consolidated his body of knowledge, which allows him to develop useful skills for his daily life.

It is important to mention that, at present, adult education is present in the various educational environments as formal, non-formal and informal and that has various purposes and purposes that can range from providing a simple instruction, specialization, literacy, training and work training.

Then, when designing a space of learning directed to the adult, these five important characteristics can be considered (Knowles, 1980):

1. Self-concept: Which is conceived as a mature that forms his self-concept moves from being a dependent personality to be conceived as a self-directed, that is, independent being.
2. Experience: Which is a mature person, who accumulates experiences that are a growing resource for learning.
3. Willingness to learn: As the person matures, their willingness to learn is geared more towards improving their tasks and social roles.
4. Orientation to learn: As the person reaches adulthood, their perspective of time changes from one where the application of knowledge is postponed to one where the application of knowledge is immediate and where it also changes from focusing on the content to focusing on its application to solve problems.
5. Motivation to learn: As the person become adult, the motivation to learn is adopted as a personal need.

In this regard Andragogy optimizes the conditions for the adult who decides to learn and participate actively in their learning in conditions of equality with their peers, participants and with the teacher. The Andragogo before the learning of older adults, should consider that at this stage there is a diversity regarding their behavior (curiosity, courtesy, memory, attention, shyness, spontaneity and extraversion).

In this sense, this research proposes that teaching in the use of ICT bring benefits to older adults since through appropriate learning strategies can achieve greater control and independence and strengthen the social environment through social networks. Furthermore, an improvement in social participation could be expected, especially in the family field and intergenerational relations.

CONCLUSIONS

In the first instance and in relation to the objective of this research, which was to identify tools and technological resources that contribute to the digital inclusion of older adults in Pachuca de Soto Hidalgo through the use of ICT, it can be affirmed that this purpose was achieved since needs of the sample participated could be identified.

And for the educational design that should be carried out based on this diagnosis, it should be considered that it is evident that the learning rate that older people have is very different from that of young people, so it is necessary to have specialized personnel in andragogy as well as

in the use of technologies that know the biopsychosocial changes that occur during aging and that demonstrate empathy with them in order to maintain a healthy instructor-student relationship so that the teaching and learning process is effective and efficient. For instance, it should be many exercises with simulators design specially according with the context.

In addition to considering 3 principles that apply in adult education:

1. Adults need to be involved in the planning and evaluation of their learning.
2. Experience (including mistakes) provides the basis for learning activities.
3. Adults are more interested in learning content with immediate relevance to their work or personal life (Knowles M., 1980).

In this regard, in Mexico, with the creation or integration of spaces for ICT training for older adults, training levels should be considered for their delivery. Those training levels divided from the basic level to the advanced one, with spaces to practice inside and outside of the cultural centers. For example, surfing the Internet, chatting, writing, researching topics of interest, entering game applications or generating social networks, among other services.

There is no doubt that older adults require support to be inserted in a satisfactory way to society, so the design of ICT training plans for older adults should consider the appropriate strategies and materials. Without forgetting that in constructivist terms the pedagogical aids that are offered must be expanded and enriched with a diversity of materials, through the constant practice of tasks that allow assuring the appropriation of technological skills.

On the other hand, there is also reflection on the quality of resources, materials and learning objects that are directly linked to the integration of Information and Communication technologies so that they are consistent with the theories of learning according to this population and contents.

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