

Assistive Technology for Seniors



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Introduction

As a natural process, aging is inevitably linked with the increased incidence of disability, which is the harsh reality that all individuals have to encounter with eventually. As we age, farsightedness happens to affect our reading, hearing loss blocks our communication with others, and we will find it much harder with mobility. At last, lots of seniors have to hire professional assistants to help them in daily life. However, most of seniors still prefer to be in control of their lives independently and conduct their own activities they have ever enjoyed (Honaker et al., 2012, p.3). Nowadays, various productions of assistive technology, instead of personal assistants, have been invented to assist seniors who are intended to live in their own homes with enhanced life quality.

“The use of assistive technology and home modification is rising sharply while the long-term use of personal assistants is declining significantly.” –Langio (Honaker et al., 2012, p.3)

In terms of assistive technology, it “refers to a broad range of devices, services, strategies, and practices that are conceived and applied to ameliorate the problems faced by individuals who have disabilities” (Cook & Hussey, 2002). Considering the basic needs of daily life, seniors are not able to live without certain tasks, such as shopping, an indispensable part for all individuals regardless of any age groups (Kiyota, 2009, p.211). This report particularly aims to explore the assistive technologies available for seniors to achieve shopping task.

Option of Online Shopping

Living in the internet age, most of us have found it difficult to stay in a place without online service. As a student studying in university, I use email to communicate with my colleagues and professors everyday, share documents with others by dropbox, and do the reports by various programs. In addition, by online tech, I search all kinds of information, skim news instead of newspaper, and play online games with others in my spare time. Moreover, I also buy products by online shopping regardless of geographic locations, which is convenient for me to access to those stuffs as needed.





Computer Class for Seniors

For seniors and those with mobility⁸ issues, online shopping provides an alternative opportunity to purchase stuffs without going out to access to the shopping stores in person, which saves time and energy for them to do other activities⁵. (Kiyota, 2009, p.215). For instance, Zippy Cart establishes an online platform for many merchants such as Wal-Mart to provide their online-shopping services, through which seniors are able to take order easily by delivery (Zippycart, 2010). Due to the limited knowledge about computer, it can be a challenge for seniors to apply online tech to their daily life. Related training classes are recommended to provide opportunity for seniors to learn basic computer skills (Devoto, E). In order to make the on-line shopping service friendlier for seniors to handle, more features, such as “easy font-size adjustment, color contrast, simple and intuitive Web site design, screen reader, voice activation, and a simple and safe checkout process”, are in need of enhancement (Kiyota, 2009, p.215). With the development of automatic technology, an internet order can be conducted by refrigerator through regular inspection of the remaining food, and the information of complete food list will be received by shopping stores for delivery if necessary (Kiyota, 2009, p.215).

Assistive technologies for elderly drivers

Social isolation¹⁰ will be caused if seniors always base on online shopping service. Thus, more information of social activities² should be accessible on the internet to encourage seniors to approach open spaces, accelerating the integration² of seniors with the society. Driving⁶ is a common preference for seniors to access to their destinations for certain tasks, such as shopping (Kiyota, 2009, p.218). With mobility issues, elderly drivers are more likely to have worse reaction and judgment than younger drivers. It is reported that people over 65 have the second most accidents³, following the teenager group (Paterson, J). Some adaptive devices with low-techs enable seniors to drive safely³. According to the research (Paterson, J), they include “extenders for seat belts to make it easier to buckle up, steering-wheel covers that provide a better grip for aging hands, bigger side mirrors, pedal extenders, and leverage devices to help people get in and out of their cars.” In terms of high-technology devices, Global Positioning Systems (GPS) and GIS can be linked to assist seniors. The former one provides navigation through either vocal guide or maps viewed via a screen, while the latter device indicates the drivers’ location to their family members in case of accidents (Kiyota, 2009, p.218). The photo on the right shows an example of a self-driving car that may popularize as a high-technology assistant for seniors with serious mobility issues in the future. (See <http://blog.catea.gatech.edu/>)



Example of a Self-driving Car

Visual Check for Seniors



Click on Photo to See Larger Image

Assistive technologies for seniors with visual loss

Without appropriate vision, seniors have to contend with more inconvenience whatever they do; even online shopping may become a thorny issue due to visual loss. Unfortunately, most seniors will experience this problem as they age. Certain assistive techs for those seniors with visual loss may be helpful if they are intended to live independently, either shopping online or going out to grocery stores.

Vision Enhancers (Honaker et al., 2012, p.7):

Problem	Potential Assistive Devices
Low Vision	Eye glasses, card holders, screen magnifier for computer or TV, large button telephone, bright colored objects
Blind	Braille books, books on tape, guide cane, screen reader



Closed Circuit Television (CCTV)

The table above is merely a portion of equipments that can help seniors with visual issues to carry out essential daily activities. Besides, there are still many alternative assistive technologies for seniors according to their own conditions. These include: closed circuit televisions (CCTV) which can project a magnified image; hand held magnifiers which is easier to take along; and coming lenses which help those with light-sensitive eyes (Petty & Husnani, p.15).

Conclusion

“An age-friendly city encourages active ageing by optimizing opportunities for health, participation and security in order to enhance quality of life as people age.” - WHO

To establish an age-friendly city, it is far from sufficient to merely improve the assistive technologies for seniors to use. Assisted by equipments, they are even in need of more care from their family members, friends and neighbors¹⁰. Integration² of seniors with social networks through active engagements and interaction in neighborhoods is indispensable to make our society more age-friendly.

References

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Hyperlinks:

1. Rural transportation
2. Intergenerational interactions
3. Neighbourhood safety
4. Urban design
5. Recreation
6. Personal transportation
7. Housing
8. Walkability
9. Online lifestyles
10. Social isolation