



Millennia 2025  
Women and Innovation  
Foundation, PUF

Our Lady of Fatima University  
Research Development and Innovation Center  
Philippines



Project Title

## Internet-based Telehealth Usability among the Elderly

Research Attributes

Field of Specialization	Geriatrics, Informatics
Research Approach	Quantitative
Research Design	Descriptive-correlational
Research Technique	Survey, Post Study System Usability Questionnaire (PSSUQ)
Research Domain	B741, F400
Delineated Factors	Internet, Usability, Usage, Elderly

Research Abstract

This quantitative study focuses on the usability of an internet-based health education system among the Filipino elderly. Twenty purposively selected respondents will be asked to provide their demographic information (age, gender, educational attainment, monthly income) and answer the Post Study System Usability Questionnaire (PSSUQ) after exposure to health education accessed through video conferencing. The purpose of this research is to provide generalized information regarding the usability and usage of telehealth technologies among older adults.

Introduction

With the rise in population of using internet in our country, some accept the fact that not only adolescents and young adults have the capability of using the internet. There is a certain fact that in the years to come, much technology will be developed. This will necessitate all generations, including the elderly to exploit the advantages it has to offer. At this present time, many elderly use the internet for communication, news information, health & dieting information, and sensitive health topic rather than playing online games, creating a blog, and buying things thru online shopping. Most of the gender using the internet are male than female (Labucay, 2011). The term "usability" is the other term for "user-friendly." The convenience of the person to use a certain product and the ability to adopt the system, while the term "usage" is the act, or the amount of using the manner of treating. It is an accepted practice nowadays.

In this modern era, technologies arise from modernization that included communication, equipment, and the internet. Most of the elderly concurrent in using technology but there were some problems among elderly facing in using internet. Most of the elderly suffer from a lack of social interaction due to a variety of factors. An investigation by the Children's, Women's and Seniors Health Branch, British Columbia Ministry of Health in 2004 stated that women were more risk for loneliness and men were more risk for isolation; some elderly lack computer skills in using the internet. Cognitive problems inhibiting computer used by seniors include difficulty learning an unfamiliar domain, forming cognitive models of computer applications, longer required training times, attention problems, interference from previously learned skills, and memory impairments. According to Hanson in 2010, at the age 65, half of us can experience some disability and one quarter of us can experience severe disability.

The aim of this study is to identify the usability of video conferencing as a means of providing health education to Filipino elderly. Older people constantly face the challenge of aging, of confronting bodily and environmental changes, and the ceaseless advancement of evolving technology around them. It is imperative that information that can provide support and guidance are produced through research studies in order to satisfactorily aid them with the difficulties of everyday living.

Literature Review  
(Synoptic and  
Argumentative)

*Usability of the Internet to the Elderly*

Through indefinite rise of the technology, it is safe to say that many people can adopt easily to these technology specially the internet. In this generation, the numbers of elderly using the internet has increased (Labucay, 2011). Because of the improving designed web sites of search engine and social networking, the elderly can easily adopt to use this kind of web sites. Despite of loneliness, most of the elderly diminish their loneliness through the use of the internet (Ali Haydar Şar, Gamze Yeşim Gökürk, Gülşah Tura, Nalan Kazazof, 2012).

*Elderly in the Internet World*

By developing technology and the internet, majority of us can use new technology and the internet. As technology fits to our society in the years to come, some elderly can adopt also with the used of new technology in their daily lives as they used electronic household appliances such as washing machine, wireless telephone, electrical kitchen, television and easy access in the internet (Roupa, Nikas, Gerasimou, Zafeiri, Giasyrani, Kazitori, Sotiropoulou, 2010).

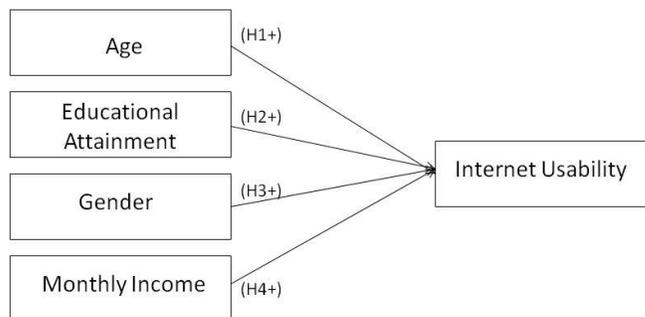
In performance and skills using the internet and new technology such as chatting and video conferencing among elderly, majority of them were not capable to adopt because of lack of knowledge, short term memory, and some cases they rarely develop form of dementia. Chrisnell in 2005 mentioned that the Web is very difficult for the least expert among older adults and it is still frustrating for users with more expertise. Thus, most of the older adults have higher difficulty to adopt the internet. However, in the Philippines majority of the older adults used internet for social media network. According to Labucay in 2011, the age 55 and above used social networking than 54 and below, most of them been in the rural area. The largest internet activity in the Philippines was social networking, followed by share things online, and to get news information.

Various studies of telehealth utilization have emerged since the technology had developed. And because of this study, the internet has improved more to fit on our society. In some cases, majority of older adults had difficult to adopt the internet because most of the web sites seeking to serve a wide audience encompassing many ages, abilities, and aptitudes fail to support older adults (Chisnell, 2005). Thus, according to Chadwick-Dias, Tedsco, Tullis in 2004, older adults suffer more internet usability problems; it is needed need to consider providing them more opportunities for collaborative learning. Older Adults felt frustrated because of the font size of less than or equal to 12 point which there cannot read the text even they had on their eyeglass and they have difficult completing a task successfully due to issues with navigation, treatment of links, label choices, and content placement (Kerber, 2012).

Research Questions

1. What is the profile of the elderly as to age, gender, monthly income and educational attainment?
2. What is the usability of the video conferencing education sessions as perceived by the Filipino elderly?
3. Does the demographic data of the elderly affect their perception of usability?

Research Simulacrum  
(Bins and Graphical  
Hypothesizing)



Research Methods

Research Design	A descriptive-correlational design will be utilized in the study. Researchers aim to determine the usability of the internet among older Filipino adult. The researchers will also inquire on the respondents’ educational attainment, age, gender and monthly income to determine its relationship to their internet usability.
Locale	Researchers pleasure to reform this study. Researchers shall pursue various barangays from Valenzuela City.
Population and Sampling	Twenty (20) respondents will be selected through purposive sampling. The criteria set by the researchers in the identification of the participants are the following: male or female; 60 years old and above; residing in Valenzuela City; willing to participate; and proficient in utilizing computer. Proficiency in computer in this study means that the respondent is using the computer and internet in their daily life of communicating with other people.
Research Instruments	This paper will use Post Study System Usability Questionnaire (PSSUQ) to determine the usability of the session. The PSSUQ is a questionnaire designed to assess users’ perceived satisfaction as well as usability through utilizes

the internet. In the questionnaire, Post Study System Usability Questionnaire will be used to determine if the respondent agree or disagree in a statement. The items are written in Filipino to address the culture sensitivity of the tool. The instrument will be subjected to validity and reliability tests.

Data Collection Collection of data begins after signing of the informed consent, wherein the respondents will be asked of their time of convenience for the completion of the survey form. Every detail of the research activity will be explained thoroughly to the respondents. The researchers will personally administer the instruments to the respondents. Any queries will be accommodated by the researchers.

Data Analysis Tallying of collected data will done with the use of Microsoft Excel. After tallying, analysis shall ensue. All collected data and information will be destroyed by the researchers after the actual presentation of the research results.

Ethical Consideration This study dictates proper research decorum and observation of ethical principles that virtually affect the respondents. Through the researchers' informed consent and explanation of all the necessary activities, details and requirements for participation, the participants are duly provided and ascertained of their rights. Among the ethical principles held by the researchers for the participants are as follows: (1) Right to Confidentiality, that the participants' identities are eternally withheld; (2) Right to Anonymity, that the participants' identity will not be disclosed and referred to their true identities; (3) Right of Full Disclosure, that no information shall not be made available for the respondent's knowledge; (4) Right to Self-Determination, that the respondents shall decide for the participation or non-participation after advantages and disadvantages are fully enumerated, and lastly; (5) Veracity, that all information gathered are presented as they are acquired without any form of fabrication that shall potentially disrupt the integrity and honesty of the study. And this study will secure clearance from the Institutional Review Board of the institution.

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Journals Reviewed

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Hanson, V. L. (2010). Web Access for Elderly Citizens.  
Kerber, N. (2012). Web Usability for Seniors: A Literature Review.  
Labucay, I. D. (2011). Internet Use in the Philippines.  
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Şar, A. H., Göktürk, G. Y., Tura, G., & Kazaz, N. (2012). Is The Internet Use An Effectivew Method To Cope With Elderly Loneliness And Decrease Loneliness Symptom?

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