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Our Lady of Fatima University
Research Development and Innovation Center
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OUR LADY OF FATIMA UNIVERSITY

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Project Title

Elderly Views about Telehealth-mediated Lifelong Learning

Research Attributes

Field of Specialization	Geriatrics
Research Approach	Mixed
Research Design	Q-Methodology
Research Technique	Q-Methodology
Research Domain	B741
Delineated Factors	Elderly, Telehealth, Lifelong Learning, Q methodology

Research Abstract

The study aims to determine the views of the elderly regarding lifelong learning accompanied by teleheath technologies. Furthermore, this study aims to determine the fields of which they would prefer to learn, the obstacles or hindrances that they encounter, and the ways of which they would find acceptable to learn. Standard Q-methodology protocol will be adopted in this study. This technique is highly applicable to healthcare research. Its use of rigorous and established quantitative analysis of rich subjective data makes the technique epistemologically acceptable to a range of healthcare professionals. Twenty (20) purposively selected elderly will participate the study. The study requires that the participants are competent and sufficiently fit to participate and able to provide informed consent. The researchers design a self-administered Q cards for the data gathering process to get qualitative and quantitative data. Eighteen statements were developed by the researchers which were individually distinct. Each statement was printed on a separate card; the cards will then be randomly arranged, and each was numbered on the reverse. PQM software will be utilized for analysis. Continuous pursuance of knowledge is imperative to all generations.

Introduction

Education is very important and should be available to all individuals regardless of their age. Nowadays, when people gets older and retire from their job, they just stay home and do nothing. For them, they are too old to learn new things as innovation or modern technology. Elderly, when doing nothing, becomes irritable and sometimes irrational. It is advantageous for the elders to learn activities that will give them healthy and long life because learning is an essential activity in daily life.

Lifelong learning is the process of keeping your mind and body engaged—at any age by actively pursuing knowledge and experience. While many companies encourage lifelong learning in their employees to keep their skills up-to-date, you don't need a job to enjoy lifelong learning. In fact, learning something just for fun can be a more rewarding experience (O'Brien, 2013).

Telehealth provides many promises to various range of ages, from childrent to elderly. Homebased telehealth has always been its highlight because it provides easier access to may technological services particularly to the population in dire need of them – the elderly. Various researches have also pointed the advantages of telehealth usage in medicine and education, though little has been observed in the Philippine setting (Strachana, Grosa, Yuena, Ruggieroa, Foac, and Aciernoa, 2012; Koch, 2006).

It has been a known fact that as our medical and technological capacities as humans increase, so is the life expectancy of us people, therefore, an increase in the number of the elderly population. The rise in pharmaceuticals, medical and surgical technologies, therapies and other ways involving maintaining and

improving health and preventing sickness as well as death, has led to an increase in the aged population. In addition, the declining of birth rate had also caused the ratio of aged population to increase even more.

This remarkable global demographic transformation of population structure has profound effects on all stratifications and aspects of the individuals, communities, national and international operations and developments. As a result, many countries, actively established a variety of non-government and non-profit organizations to improve financial provision, the health care and the social participation of the elderly as well as to confront with the political, economic, social, cultural, and educational challenges of the ageing society.

Governments have drawn upon related policies and plans to take care of not only the physical but also the psychological conditions of the older people to adopt to the rapid social changes, to assist them with independency to affirm their self-value, to pursue their self-growth and to achieve self-realization.

This study will address the scarcity of research studies focusing on the lifelong learning tendencies of the elderly among developing countries like the Philippines. A guiding rationale is vital as national policy makers around the globe address the increasing number of the elderly population..

Literature Review (Synoptic and Argumentative)	According to Crawford (2004), adults are very capable of learning well into their seventies which is a good reason to accept lifelong learning as more than just a pleasant mantra. Likewise, it seems beneficial for faculty in the higher educational setting to be aware of differences between the older learner and the traditional college age student. The differences are somewhat subtle, so it will take effort on the part of the instructor to understand and implement strategies appropriate to the nuances of the adult learner. Even though it takes time and energy to explore for the optimal environment and teaching methodology, the payoff could be well worth the effort if the result is an enjoyable and satisfying learning experience for the student. While it may be true that adults will learn in spite of the professor's shortcomings, faculty that choose to ignore learner differences run the inherent risk of mediocrity in their teaching.

On the research carried by Richard Gerald Associates Ltd (2002), it concluded that the activities most frequently provided for older people are based on literature, craft, visual art (particularly photography and painting) and music. Architecture, new media, opera, design, puppetry and storytelling are not catered for particularly strongly. It should also be noted that many groups do not participate in the arts directly; rather involvement is at a more passive level such as a music appreciation or a play reading group. Nearly half of activities take place on a weekly basis, with a quarter occurring fortnightly or monthly. Over two-thirds of groups break during the summer, although 22% do not break at all. The high number of groups stopping for breaks may be explained by the high presence of U3A groups in the sample. U3As tend to follow a typical university-style "term" system with breaks for Christmas, Easter and the summer. Just over half of the sample charge a fee to members, although in many cases this is a nominal amount to cover coffee and administration. The average price paid per session across the sample is 75p. Just over one-third of activities occur in private houses, suggesting that supply is fragmented and facilities may not always be ideal. Again the high number of U3A groups, where it is traditional to hold meetings in members' houses, accounts for much of this trend. One-quarter of activities take place in an arts venue, such as a theatre or dance space, with a further quarter in community centres. Most groups are very small; nearly three quarters have less than 20 members. The average attendance during a typical week across the sample is 23. Women outnumber men by approximately 3:1 overall, reflecting the demographic characteristics of the older population and existing research into arts participation. Some activities seem to attract men in greater numbers: these include architecture, drama, traditional music and visual art, particularly photography. However only one group in the sample (the U3A Edinburgh architecture group) contained more men than women.

Nyhan (2006) stated that the European population is ageing rapidly due to an increase in life expectation and a fall in birth rates. This means growth among older age groups, both absolutely and as a proportion of the population. From a working life perspective, Europe is facing a dramatic change in the balance among the different age groups at work. This has been the subject of policy debates stimulated by the European Commission and the different Member States. The central message arising from all of these different sources is that there is a need for radical new thinking about how to envisage the relationship between ageing, working and learning. Changes in the demand for skills and the polarisation of labour markets, give strong indications that older people may be becoming a more vulnerable group in the labour market, partly because of skill obsolescence and average lower qualifications. In addition, the ageing population generates an increase in the relative proportion of older workers within the working age population. Thus, the number of older workers with obsolete skills will increase. Unless labour markets and lifelong learning adapt effectively, long-term difficulties are to be expected. In addition, the ageing population generates an increase in the relative proportion of older workers within the working age population. Thus, the number of older workers with obsolete skills will increase. Unless labour markets and lifelong learning adapt effectively, long-term difficulties are to be expected. The need for older people to update and adapt their skills is a serious challenge, particularly since they tend to have fewer formal qualifications than younger workers and are under-represented in the uptake of training. Informal and non-formal types of learning at work tend to be preferred forms of training among older workers.

Ostiguy, L., Hopp, R. and MacNeil, R. (1998) lifelong access to education is increasingly accepted as both a right and a necessity in society. Research indicates that older adults want to need educational opportunities, and

benefit from participation. While education may not be a new concept for older adult, policy makers have just begun to make conscious attempts to design educational experiences that have the needs and interests of older adult learners in mind. The most important reason given by those over the age of sixty in participating in a lifelong learning program was that it gave them an interest outside the home; they also cited learning more about a special interest and making a contribution to the community, intellectual stimulation and acquiring new knowledge. Other important reasons included meeting new people, the opportunity to socialize, and the opportunity to travel. In terms of frequency of participation, there is a tendency for women to participate in education more often than men. Meanwhile, health is cited in numerous studies as a variable that influences older adult participation in educational opportunities.

Withnall (2008) indicates that a range of collective, individual and contextual influences interact to affect people's propensity to learn across the life course. Older people define 'learning' in a wide variety of ways but perceive it to have a number of positive outcomes. Older learners, especially those learning informally, need more support to develop their interests in the context of their beliefs about the overall benefits of learning. To widen choice and stimulate interest, older people's diversity, varied circumstances and different learning preferences need to be acknowledged. Many older people maintain a variety of interests well into old age and enjoy learning in a range of different ways. Educators need awareness of the historical and social contexts of older people's lives and how these affect their engagement with learning in all its forms.

Sloane-Seale and Kops (2008) suggested that participation in educational activities has positive effects on successful aging and potentially contributes to both physical and psychological well-being. In partnership with seniors' organizations, focus-group interviews were conducted on seniors' involvement in learning and their perceptions of its influence on successful aging.

According to Formosa (2010), late-life learning is no longer an exotic terrain within the field of adult education. Older adults are not only participating in lifelong learning avenues in increasing numbers, but recent decades also witnessed the emergence of learning opportunities targeting specifically older cohorts. In Malta, the government not only communicates its support to late-life learning, but also put forward age friendly policies that facilitate the inclusion of older adults in learning programmes. This paper conducts a critical overview of the Maltese experience in older adult learning, analyzing both its guiding rationale and participation rates. It notes that late-life learning in Malta occurs in the absence of a national policy framework that directs and supports the efforts of formal and non-formal bodies in providing learning opportunities for older persons. The paper also proposes an agenda for the late-life learning based on the values of social justice, social leveling and social cohesion.

There are four "lifelong learning" segments in the 55+ population in the United States, including Focused Mental Achievers (13% of the population), Contented Recreational Learners (34 %), Anxious Searchers (23%), and Isolated Homebodies (18%), and one segment, the Pessimists (11.0%), with minimal participation in lifelong learning because of poor health or scant resources. Focused Mental Achievers and Contented Recreational Learners, comprising together 47% of the 55+ population, are characterized by extraordinarily high levels of activity, high levels of formal education, and high measures of optimism and life satisfaction. Elderhostel participants fall overwhelmingly into the Focused Mental Achiever (49%) and Contented Recreational Learner (35%) segments. Elderhostel participants are involved in a wide range of activities in addition to educational travel. Many of these activities combine two or A wide array of games and other regimens have emerged purporting to provide "mental exercise" and all but promising to prevent brain decay and, by implication, Alzheimer's disease and other forms of senile dementia (Elderhostel Inc, 2007).

Roberson (2005) posited that the positive description of living in a rural area. Despite literature that often describes rural areas in a negative light; all of the participants spoke about the positive aspect of living in a rural area. These positive characteristics were discussed as simplicity, quiet, community, and nature. Negative aspects of rural life were mentioned as lack of resources and fewer people. Ten participants were purposefully chosen who were identified as active older adults who continue to learn. Two interviews with each person were conducted and the interviews were transcribed verbatim. Public schools can contribute to the continued education of older adults by holding various classes as well as incorporating volunteerism. This qualitative research was based on twenty interviews with older adults. All of the participants lived in the same rural county in South Georgia (USA).

According to Wolff (2000), the greatest social challenges of the 21st century will be the aging of human society. By the year 2025 the number of persons aged 60 and over (the "third age") will increase from today's 590 million to 1.2 billion. Lifelong learning for the "third age" will be an essential part of the new set of public policies and programs. There are four potential areas for learning which will help to meet the evolving economic and social needs of an aging population: (i) for individual health, (ii) to strengthen community and family, (iii) for productive employment, and (iv) for self enrichment. Learning for individual health will help to reduce the human and financial burden of chronic health problems. Learning can mobilize the elderly as a resource to strengthen communities and families and to enhance social cohesion. With the decreasing numbers of population aged 20-65, lifelong learning will help the elderly to increasingly remain in the work force, as a means of reducing poverty, increasing economic growth, and giving a stronger sense of self value to the elderly themselves.

According to the research of Hui Sze Sze (2005), a master thesis, lifelong learning (LL) has been widely regarded as one of the activities that can enhance well-being of the society and benefit older persons in terms of

psychological, physical, mental, and cognitive well-being. This research aims at constructing a LL model for older persons in Hong Kong. The theoretical framework of study focused on figuring out the breaches between satisfactory models proposed by older persons and the existing lifelong learning model in Hong Kong. Interview survey and documentary study have been employed in this study. Interview survey was carried out from March to April of 2005 in order to understand older persons' expectations towards LL. The findings show the gaps between older persons' expectations and present provision of LL programmes.

Field and Leicester (2000) stated in their book that Predictions about the burgeoning numbers of older people in all industrialized countries, the beginnings of changing patterns of retirement and the possible implications for educators of adults and other professions concerned with ageing began to attract attention in the 1970s, initially in the USA. A particular concern ever since has been to justify the post-work population as worthy of inclusion in educational policy decisions although only a somewhat limited number of attempts have been made to address the fundamental philosophical issues involved and the engage in theory building. Activity theory sees later life as a time of potential individual growth and renewed social relationships—life satisfaction derives from social interaction and active participation so that the post-work period can be a positive, creative and busy time.

According to Koh (2012), the ageing population is currently one of the main issues facing UK healthcare systems. Nurses of the future will be faced with the task of caring for this elderly population. Meanwhile, care standards and government policies have emphasized the need for preparing students to care for the older people. Preparing nursing students to meet the care needs of an expanding ageing population is a challenge for nursing education. Moreover, caring for older people are often not seen by students as an attractive option, a perception that exerts a considerable influence on the values that inform their future professional practice.

Xie and Bugg (2009) investigated an innovative experiment to develop and evaluate a public library computer training program to teach older adults to access and use high-quality Internet health information involved a productive collaboration among public libraries, the National Institute on Aging and the National Library of Medicine of the National Institutes of Health (NIH), and a Library and Information Science (LIS) academic program at a state university. The findings have implications for public libraries, LIS academic programs, and other organizations interested in providing similar programs in their communities.

Research Questions	This study aims to determine the views of the elderly regarding lifelong learning using the technique of Q-methodology. It is guided by the question "What are the views of the elderly about lifelong learning accessed though telehealth technologies?"
Research Simulacrum (Bins and Graphical Hypothesizing)	n/a

Research Methods

Research Design	Standard Q-methodology protocol will be adopted in this study. This technique is highly applicable to healthcare research. Its use of rigorous and established quantitative analysis of rich subjective data makes the technique epistemologically acceptable to a range of healthcare professionals. Q-methodology captures subjective experiences and then organizes these into common perspectives or stories, which can then be used in a variety of ways, for example, to inform treatment-planning, information provision, and as the basis of risk-assessment tools. Q-methodology does not require large or representative samples, since the aim is to select participants who will potentially reflect a range of views and experiences. Because the task involves sorting prepared statements, the technique of sets many of the methodological problems faced by participants when attempting to introspect and report their own personal experiences
Locale	The site of the study will be in an urban community in the Philippines.
Population and Sampling	Twenty (20) elderly will be participating in the study. The study requires them to be competent and sufficiently fit to participate and able to provide informed consent. Regardless of their marital status, social standing, and education, participants will be subjected to the same set of questions to answer. This small purposive sample of elderly persons is consistent with the recommended protocol.

The researchers will employ purposive sampling technique. Purposive sampling starts with a purpose in mind and the sample is thus selected to include people of interest and exclude those who do not suit the purpose.

The criteria include: elderly ages ranging from 55 years old and above; male or female; must be a resident of the selected urban community; presently unemployed; and willing to participate. |
| Research Instruments | The researchers designed a self-administered Q cards for the data gathering process to get qualitative and quantitative data. The primary aim of the Q cards was to determine the views of the elderly about lifelong learning |

accessed though telehealth technologies. This research used a mixture of closed questions (Q cards) and more open comments in the questionnaire. A closed question is one that has pre-coded answers. Through closed questions, the researchers will be able able to limit responses that were within the scope of this study. The statements in the Q-cards will be subjected to validation.

Concourse Statement
Guided by the richness of literature pertaining to elderly and telehealth-mediated lifelong learning, eighteen statements were developed by the researchers which were individually distinct. Each statement was printed on a separate card; the cards were then randomly arranged, and each was numbered on the reverse.

Data Collection

The pack of eighteen (18) Q cards and instruction sheet will be given to individual participants. Each participant will read every individual statement and will sort these into four preliminary piles without constraint at this stage on the number of cards in each pile; the four piles will be normally labeled.

The Q-method protocol involves four stages namely:
(1) Development of a set of statements "the concourse,"
(2) Sorting the concourse statements into a normal distribution grid,
(3) Analysis of the sorted grids using case wise factor analysis,
(4) Interpretation of the results.

Data Analysis

As proposed by the statistician, the following statistical measures shall be employed in the analysis of the collected data.

Eigenvalues. The relative contribution each factor makes to explaining the total variance in the dataset is salient. The standard procedure for determining this is the eigenvalues, which are automatically produced by the software programme for each factor. It is recommended that only those factors with eigenvalues >1 are used in the final interpretation of the data, since these will explain more of the total variance than those factors with eigenvalues <1.

Factor Rotation. To achieve the best solution to a dataset, factor analysis software automatically rotates the factors according to the purpose of the analysis; with Q-methodology, it is recommended that this rotation ensures that participants tend to be associated with only one factor or perspective, by maximizing the variance between each factor; this is known as varimax rotation.

Z-scores. Z-scores here are used as a measure of the salience of each statement to the factor on which it is loaded or associated; each statement that loads onto a factor will therefore have a z-score. As the zscore is a measure of standard deviation, a statement with a z-score of +3.0, for example, would suggest that this statement is 3 standard deviations above the midpoint of the data distribution and would therefore represent a high level of agreement with the statement (towards the right-hand pole of the Qgrid).

Ethical Consideration

The researchers shall discuss the nature of the study prior to the administration of Q card. The participants may stop the administering of Q cards anytime whenever they feel uncomfortable. Strict confidentiality (set of rules or a promise that limit access or places of restrictions on certain types of information) and anonymity (one that is unknown or unacknowledged) will be observed. All personal information will be omitted on the final manuscript. The researchers will maintain the respondent's identity highly confidential. Any questions raised by the participants shall be addressed and accommodated by the researchers prior to data collection. This study will secure clearance from the Institutional Review Board before the actual data collection.

Journals Reviewed

Crawford, D. (2004). The role of aging in adult learning: implications for instructors in higher education. *In John Hopkins School of Education*. Retrieved June 11, 2013 from http://education.jhu.edu/PD/newhorizons/lifelonglearning/higher-education/implications/

Elderhostel, Inc. (2007, February). *Mental Stimulation and Lifelong Learning Activities in the 55+ Population.*

Field, J. and Leicester, M. (2000). *Lifelong Learning: Education across the lifespan*. London: RoutledgeFalmer

Formosa, M. (2010). Older adult learning in Malta: Toward a policy agenda. *Mediterranean Journal of Educational Studies*, 15(1): 61-85.

Hui Sze Sze, S. (2005). *Lifelong learning for older persons in Hong Kong*. Master of Philosophy Thesis. Lingnan University, Hong Kong

Koch, S. (2006). Home telehealth—Current state and future trends. *International Journal of Medical Informatics*, 75(8), 565–576. doi:10.1016/j.ijmedinf.2005.09.002

Koh, Lai Chan (2012). Student attitudes and educational support in caring for older people e A review of literature, *Nurse Education in Practice 12* (2012) 16e20

Nyhan, B. (2006). Chapter 3: New policy thinking on the relationship between age, work and learning. In *Promoting lifelong learning for older workers: An international overview*. Tikkanen, T. and Nyhan, B. (eds.) Cedefop Reference series; 65 Luxembourg: Office for Official Publications of the European Communities, 2006

Ostiguy, L., Hopp, R. and MacNeil, R. (1998). Participation in lifelong learning programs by older adults. *Ageing International*.

Richard Gerald Associates Ltd. (2002, July). *Research into Lifelong Learning, the Arts and Older People* (Res15). Prepared for the Scottish Arts Council by Richard Gerald Associates Ltd in association with Scotinform Ltd.

Roberson Jr., D.N. (2005). Lifelong learning in the county: A context of nature, community, and simplicity. *The Rural Educator*, 29-40. Central Europena NGO – Hope and Life Zagreb University- Croatia.

Sloane-Seale, A. and Kops, B. (2008). Older Adults in Lifelong Learning: Participation and Successful Aging. *Canadian Journal of University Continuing Education*, 34 (1):37-62.

Strachan, M., Gros, D. F., Yuen, E., Ruggiero, K. J., Foa, E. B., & Acierno, R. (2012). Home-based telehealth to deliver evidence-based psychotherapy in veterans with PTSD. *Contemporary Clinical Trials*, 33(2), 402–409. doi:10.1016/j.cct.2011.11.007

Withnall, A. (2008). Older people and lifelong learning: choices and experiences. *Teaching and Learning Research Programme*, 58. www.tlrp.org

Wolff, L. (2000). Lifelong Learning For the Third Age. *Inter-American Development Bank*

Xie, Bo and Bugg, Julie M. (2009). Public library computer training for older adults to access high-quality Internet health information, Library & Information Science Research 31 (2009) 155–162

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