GEYS4010 – Wu Yee Sun College Senior Seminar

Individual Project Report

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Submission date: 2nd May 2024

Word count: 2500

Introduction

In the service-learning program, *Intergeneration Digital Inclusion*, collaborated with Hong Kong Polytechnic University of Institute of Active Aging, my colleagues and I assisted with elderly participants' learning on smartphone use. I again realized how older generations are willing and interested in interacting with their peers and the younger generations in this rapidly digitalized society. While acknowledging older adults' high willingness to learn smartphones, computer literacy among the elderly population remains lower than expected as statistics showed. I also found their passion was more on interaction than simply learning apps. These reveal some room for improvement in programs that educate the elderly about smartphone use.

Problem Definition (Emphasize)

I interviewed 4 elderly aged between 70 and 90. They commonly expressed their reason for learning smartphones as the want of connection and acknowledgment from the younger generations, especially their grandchildren. They said they would love to learn persistently as long as their physical condition allows. This conveys that those older adults who are still active and value the relationship with people around them would love to learn technology as they understand that it is useful in bringing values into their lives in old age.

However, they also revealed some barriers to learning smartphones:

Problem 1: Self-degradation

When interviewees described their smartphone learning process, they often criticized themselves as stupid, not being able to remember anything, and annoying for asking questions frequently. Despite the existing cognitive incapabilities in older people, their deteriorative self-image in old age seemed to intensify these incapabilities actually happening in reality. They also observed their younger family members such as grandkids showing impatience when teaching them smartphones. This further strengthens their perception that they are incapable of handling things well. Their self-fulfilling prophecy is hence intensified by the lack of understanding in youngsters to a certain extent.

Problem 2: Lacking general computer concepts

It is common for elderlies to ask the question 'What's next' when learning smartphones. They often request writing down every single step of operating a function without knowing why they have to press a specific button or why something disappears on the screen. Interviewees shared that they are usually taught how to use a certain app and use it by memorizing each accurate step. Yet when something that was not in their memorized routine popped up, they felt lost and stopped right there. Youngsters may help them finish their wanted action, but operate too quickly and fail to provide them opportunities to learn. This resulted in the maintenance of low computer literacy.

Given the self-fulfilling prophecy intensified by younger close ones failing to comprehend the specific difficulties the elderly face in using smartphones, and the elderly's struggle to

grasp fundamental concepts related to digital technology, the elderly face the problem of low smartphone use proficiency and low confidence in using smartphones.

Ideation

Existing services related to elderly smartphone use learning are as follows:

Service Title	Content	Characteristics
長者進階數碼培訓計劃 「樂齡·智醒」數碼站	Free advanced training in digital (specifically smartphone) use for the elderly.	Require participants to have acquired basic digital knowledge. Youth volunteers and elder participants who completed training are recruited as tutors.
長者智能電話班 by Hong Kong Young Women's Christian Association (YWCA)	Online self-learning of social use apps for the elderly; face-to-face teaching of Facebook and Zoom.	Youth volunteers are invited as assistants.
香港中國婦女會 「喜」動·網「樂」計劃	Teaching frail older adults about Facetime software and social use apps.	Elder participants form groups and complete missions related to cognitive training and music production.

After reviewing several existing related services, I noticed some commonalities of existing elderly smartphone use programs. Elderly smartphone use courses in general incorporate ideas of intergenerational interaction by including youth tutors and peer support by recruiting similar-aged tutors. These may help increase confidence and satisfy the desire for interaction with younger generations in the elderly. There are yet limitations in certain program designs. Existing courses usually focus on teaching certain specific apps instead of teaching general and basic knowledge of digital language which fails to provide comprehensive knowledge of smartphone operation. They are usually organized for advanced instead of beginner learning. While the elderly emphasize interaction with their younger close ones, existing courses also lack the participation of family members. Taking the strengths and limitations of existing services into account, I utilized the SCAMPER approach to stimulate my project's design thinking.

Adopt	Considering the needs and benefits of learning smartphones, a program would be held to teach the elderly smartphone use on communicational functions/apps.

	The involvement of youth tutors and similar-aged tutors would be reserved to promote intergenerational interaction and provide peer support.
Substitute and Modify	Youth volunteers who are strangers to elder participants would be substituted or modified into the elderly's young close ones to promote more intimate interaction between the elder and younger members of their real family, which is what the elderly truly desire.
Reverse	Taking care of those who are not advanced enough in digital operation, the components of program would focus more on foundational digital knowledge (e.g. how a smartphone works; commonly seen symbols) rather than complicated mobile app operations. Hence, the target audience of program would be changed to preliminary rather than advanced learners.
Put to other use and Modify	Taking the characteristics of「喜」動·網「樂」計劃 as a reference, the idea of 'mission' which may provide a sense of achievement could be incorporated into the general elderly but not limited to the frail ones. The mission content can be modified into a booklet creation about computer concepts and essential symbols. The mission collaboration is also revised into grandchild-grandparent dyads to promote intimate communications.

Ideation result - proposed project design

The project would target elderlies who are interested and willing to learn regardless of specific age groups, and any of their young close ones (e.g. grandchildren). In the program, the elderly would be taught about the mechanism behind how smartphones work with similar-aged tutors incorporated to explain concepts in the language that the elderly may understand better. They would develop their visual learning booklet to record commonly seen symbols in digital devices in any format that is simple and intuitive (e.g. infographics, flashcards). Following the learning of certain symbols, they would explore the symbols in various apps that they are interested in trying to test the symbols out. Throughout the program, collaboration between the family dyads would be emphasized where youngsters could share their knowledge and assist their grandparents in understanding the concepts and symbols before making their learning booklets.

Objectives of the proposed project design

To elderlies, the proposed project aims to involve intergenerational interaction between them and their family close ones, whom they want to be connected to more than a random youth volunteer. The setting of inviting grandparent-grandchild dyad participants also allows the elderlies to receive more personalized care and support in their smartphone learning journey. Meanwhile, the learning goal focusing on general computer concepts and essential symbols is designed to let the elderly who struggle in operating new phone applications acquire comprehensive computer language by asking them to start from the basics. Building up a common sense towards digital technologies would require time, yet this design would like to provide the starting point for them to grasp a basic sense of their smart devices first before proceeding to learn an entirely alienated app or function that involves complicated operations.

Other than the elderly, the proposed project also aims to educate the youth. Take note that sometimes the youth's unintended attitude may also deprive the elderly of their confidence in asking about smartphone use, the design of asking grandchildren to be there is hoped to encourage their acknowledgment and deeper understanding of the hardships that their close grandparents face when learning digital devices. Youth would be also given a chance to learn to share their digital knowledge, do problem-shooting, and address questions raised by their grandparents more appropriately, layfriendly, in a slow-paced and patient manner. Promoting active listening to their close elderly's experience and fostering mutual respect in turn may also help reduce the self-degradation in the elderly aforementioned.

Prototyping

There are several novel elements surrounding 'interaction', 'knowledge', and 'future learning' to be considered in the proposed project.

The first thing is whether youngsters are able to observe the elderly's difficulties in learning digital devices and input suitable help by accompanying their grandparents. This is an important element to reduce self-degradation by unintentionally educating the younger generation through shadowing. To ensure their interactions are not further degrading the elderly's self-value and confidence, it would be great to ask the elderly regularly about their thoughts on participating in the project with their grandchildren. Careful checking and adequate corrections on youngsters' way of interaction, such as whether they are very controlling, complaining, or autonomy-supporting, harmonious, would be essential during lessons. The input of similar-aged tutors may also help monitor any disgraceful behaviours of youngsters as long as to cheer the elderly participants up.

Another thing is whether the digital symbols and apps the elderly explore are included in the confusion they desire and are interested in solving in the first place. While the purpose of smartphone use is very extensive and diverse, elderlies may have their own interest and personalized struggles in certain functions and aspects of operating smartphones. To ensure the contents of program suit the elderly's needs and wants, questionnaires could be distributed before the program and after each lesson to ask about their expectations to the

program as well as to receive their opinions on the lesson contents for better pre-lesson arrangements.

One more thing is whether the elderly really understand the digital knowledge (e.g. common digital icons taught and recorded in their learning booklets) instead of blindly copying the steps as they did previously when learning a certain mobile application. This is essential to ensure the elderly would no longer be stuck in the previous vicious cycle of frequently asking only for the next step of operation instead of grasping the idea of mechanical rationale behind smart device usage. This partly could be tested through their process of exploring the actual use of symbols in mobile apps, and partly by adding other elements such as brief sharing within dyads or even in class. Surveys might also be useful in testing whether they think they reach the goals of the program after all.

Last but not least, is whether they would review and use the booklet after the program. Although the acknowledgment that building up a common sense for digital knowledge would not be achieved in a short duration as if an ordinary person learning a new language, the program would like to encourage the elderly to at least proactively explore what they do not know and be at some confidence in something they have acquired in the program. To make sure the booklet is useful, collaboration with youngsters may allow the program to make necessary refinements and adjustments of pace to make sure the teaching progress and booklet creation are optimized for the elderly. Post-program surveys could be also distributed directly to the elderly or young participants to know their updates on the use of booklets in terms of clarity, ease, and willingness to use.

Insights

Promises in implementing the proposed project

The program, firstly, hopes to foster meaningful intergenerational connections between the elderly population and the younger generation, especially those who share intimate relationships with the elderly. The dyad design creates opportunities for mutual learning and understanding among different ages in society and hopefully helps enhance empathy and appreciation between generations.

The program also hopes to simplify learning to address the challenges the elderly face in understanding smartphone symbols and technical systems. The 'starting from basics' design may make smartphones or in general digital technology more of an accessible tool that the elderly are more confident in using.

By offering one-on-one guidance and dyad collaboration, the program hopes to cater to individual learning needs. Personalized support helps ensure that each elderly participant receives necessary and suitable assistance to overcome their specific difficulties in smartphone learning.

Challenges in implementing the proposed project

Despite the possible values the program could bring, there are several challenges in its implementation.

One challenge is the availability of youngsters. The program design relies heavily on the commitment of the elderly's close young ones as accompaniment. Youngsters, who could be students or the working population might have different constraints and personal difficulties in committing to the program. A consistent availability of the young ones could be a challenge which may affect the continual support for the elderly participants. Solutions such as recruiting extra youth volunteers, providing flexibility for different dyad combinations, or adjusting program days could be possible.

Another challenge is the generation gap over technology. While a technological gap between young and elder generations undoubtedly exists, overcoming it could be a challenge in this program which requires youngsters' effective communication and adaption of appropriate teaching methods to suit the elderly's cognitive abilities and styles of learning. The generation gap in technological common sense may even arouse quarrels between dyads. Yet, the incorporation of similar-aged peer tutors may help reduce such situations by relieving emotional uplifts and providing extra help when communicational problems are observed.

One more challenge is the potential variation in the pace and abilities of learning in the elderly. As the program does not restrict a specific age range among the elderly which can differ largely in their capabilities, the varying personal criteria may create an imbalance in teaching pace. Logistic problems may happen when some can grasp the concepts rather quickly while some need more practice and time. Accommodating different learning styles could be difficult but less troublesome with fixed youngsters providing tailored support in or off class to the elderly participants.

Possible changes the proposed project can create

The program proposed could potentially empower the elderly in using smartphones by promoting their confidence through, on one hand, providing essential foundation computer knowledge, and on the other hand, educating the youngsters on proper attitudes assisting the elderly's learning. Helping the elderly to overcome their self-fulfilling prophecy problem would encourage their further learning of smartphones.

The program could also contribute to bridge the digital divide experienced by the elderly in society. Giving a start to acquire basic digital literacy tries to reduce the gap between the nowadays generations who are used to having technology since born and those who are not frequently exposed to technology. Equipping the elderly with basic digital knowledge may make technology no longer alien to them so to be more open to getting in touch with the digital world.

Moreover, the intergenerational collaborative nature of program design allows the strengthening of interconnectedness in generations. Bilateral sharing of experiences provides opportunities for youngsters to gain a deeper understanding of the elderly to respect them more, and for the elderly to experience more qualified and useful interaction with the younger

generation. This builds stronger interconnectedness in dyads as well as among generations in society.

Conclusion

Gaining insights from a service-learning program, adopting design thinking strategies to brainstorm improvements to existing services, to proposing some innovative ideas is an interesting and inspiring process. It is hoped that courses that teach the elderly smartphone use could continually develop by keeping the existing strengths and amending the limitations.

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