

Project Wakanda

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Project type: Single Year

Section 1: Overview

1. Area of Concerns

We, Project Wakanda has noted the pressing issue of today's society, that elderly in Singapore are not proficient with technology (Including smartphones and computers). With the rapid development of technology, Singaporeans are making use of more technology in our daily lives. Elderly are thus struggling to keep up with the ever advancing society.

Researchers, from the Mayo Clinic found that U.S. adults ages 70 or older who engaged in mentally stimulating activities at least once or twice a week were less likely to develop mild cognitive impairment four years later than those who did not engage in mentally stimulating activities as frequently. This highlights the importance of constantly stimulating activities, which can be done by making full use of technology.

Tembusu Senior Activity Centre aims to provide basic activities to entertain the elderly as well as caring for their well-being and health, such as daily morning walks and weekly yoga sessions. They also invite external teachers to conduct lessons such as ukulele lessons. The elderly have a age range of 60-80, and approximately 70-80 people come daily. Elderly stay at rental or non-rental apartments, with 390 elderly registered as rental and 150 elderly registered as non-rental. They have numerous facilities at their disposal such as an Xbox One, a computer lab, tablets etc. However, we noticed that almost nobody is utilising these facilities, which stems from the fact that the elderly do not know how to use these technology.

2. Challenges Identified

Some of the difficulties in teaching seniors come from their physical limitations (movement disabilities, eyesight etc.) and a lower endurance (inability to concentrate). Another reason to learning difficulties could be due to diminishing mental capacity due to age. Older brains are usually slower in learn and remember new information, thus instructions need to be step-by-step and often repeated. Patience is definitely needed when teaching the seniors. Similarly, Elderly may not be interested or be willing to learn how to use technology. Furthermore, some elderly may forget about what they have learnt in previous lessons, making it essential for us to constantly recap what we have taught previously. Finally, we also noticed that the elderly at the centre were motivated

by incentives. Prize-orientated activities were able to attract a higher participation rate compared to activities that did not have any prizes involved. Prize-orientated games such as bingo saw a greater amount of elderly participating compared to ukulele lessons that did not have any prizes, despite the lessons being complementary.

3. Underlying Problem

Given that the elderly at Tembusu Senior Activity Centre lack proficiency in utilising technology, how could we enable them to utilise technology so that they can improve their lives in terms of physical health, mental health and social connectivity.

4. Plan of Action

Lesson	Action	Objective(s)
X-box (Lesson 1-3)	Lesson 1: Setting up xbox Lesson 2: Kinect games (<i>Just Dance 2018</i>) Lesson 3. Kinect games (<i>Zumba Fitness</i>)	Teach elderly simple kinect games to improve physical health
Computer (Lesson 4-6)	Lesson 4: How to set-up the computer Lesson 5: How to surf the web + Google maps Lesson 6: How to utilise Youtube and email	Give elderly Entertainment and improve Social-connectivity
Phone (Lesson 7-9)	Lesson 7: How to surf the web, and basic functions of a phone Lesson 8: How to use Google Maps Lesson 9: How to use whatsapp and Skype	Social-connectivity and increase convenience
Lesson 10	Lesson 10. Assessment of skills + Survey + Final Q&A	Recap skills learnt

Section 2: Implementation of Action Plan

1. Actions and outcomes to date

We conducted fortnightly lessons in small groups of 10 elderly, allowing us to build a closer relationship with the elderly, enabling us to have more effective sessions where the elderly are able to learn more. Small lesson groups also encouraged the elderly to be more open with us, which facilitated active two-way learning, making our project a useful and meaningful one.

In order to constantly motivate the elderly to participate actively during lessons, we provided incentives such as drinks and snacks throughout the 10 lessons that we conducted.

From lessons 1-3, we conducted lessons on how to set-up the xbox, introducing kinect games such as *Just Dance 2018* and *Zumba Fitness* which give elderly an opportunity to move about and exercise. At the end of the xbox lessons, we put up a poster detailing instructions on how to use the xbox, From lessons 4-6, we taught the elderly how to utilise computer for utility and personal entertainment. From lessons 7-9, we taught the elderly the basic functions of a smartphone, introducing applications such as google maps and apps to track MRT/bus arrival times, to aid elderly when commuting.

By devoting 3 lessons to each component, we ensured that the elderly have a thorough understanding about the subject before beginning anything new. This prevented confusion and the elderly not being able to catch up with what we are teaching. We constantly recapped what we had covered in previous lessons to ensure that the elderly do not forget what they had learnt in previous weeks.

In the final lesson, we assessed elderly's ability to use the xbox, computer and smartphone.

The tasks tested and number of successful elderly are as follows:

Xbox:

1. Turning on the xbox - 8/10
2. Loading of kinect games - 9/10
3. Using of kinect games -9/10
4. Turning off the xbox - 9/10

Computer:

1. Turning on the computer - 10/10
2. Surfing the internet (entertainment) - 9/10
3. Surfing the internet (utility) - 8/10
4. Turning off the computer - 10/10

Phone

1. Basic functions of phone (settings/calling/camera/messaging) - 10/10
2. Downloading applications - 7/10 (some elderly did not know their password for downloads "Apple ID")
3. Surfing the internet (Google Maps) - 10/10

Section 3: Project Outcomes

1. Accomplishments

We successfully coached **10 elderly** (per lesson), imparting basic technology skills to them. They are able to utilise the xbox and computers at the centre, which includes turning them on and off, basic functions etc. This ensures that the gadgets available at the centre are put to good use. The elderly that we have coached will also act as guides for their peers even when we have ceased our lessons, ensuring the sustainability of our project. We also put up posters with instructions on how to use the xbox for future reference and learning.

2. Reflections

We have gained a newfound illumination as to how many elderly in our society are unable to effectively make use of technology in our ever-advancing society. The elderly are missing out on the potential convenience and benefits brought about by technology. We were pleased with the enthusiasm of the elderly which we worked with. Initially, we stereotyped most elderly to be uninterested in learning, and generally prefer to mind their own business such as playing bingo or reading the newspaper. However the elderly we worked with are a joyous bunch who actively engaged in learning discussion, and are as keen as us when it comes to learning as to we are teaching. Their enthusiasm has allowed our group's teaching experience to be much more pleasant and easier.

We are satisfied with the overall success of our project, as we were able to accomplish our objectives of teaching the elderly how to use technology more proficiently. We achieved our goals of teaching elderly basic technological skills

to allow them to utilise computers and smartphones effectively, improving social connectedness and health preservation. Our methods, such as the posters we created for the elderly's reference when utilising the xbox, were well received by the elderly.

In hindsight, we could have been better equipped in terms of being proficient in speaking the languages favored by the elderly such as dialects, which could have allowed us to communicate better with them and teach them more efficiently. However, our lessons and conversations with the elderly gave rise to dynamic two-way learning, allowing us to pick up some basic dialects and relate to elderly more, allowing us to better communicate with elderly in the future.

3. Scope of impact

Community Impact: The 10 elderly we taught has shown significant improvement in their technological proficiency. Initially they were unable to use the Xbox available at the centre and only able to use the very basic functions of their personal smartphones and computers (both personal and those available at the centre.) However, after attending our lessons, they are competent in using advanced functions of these technological devices independently.

Community involvement: The 10 elderly are able to act as mentors for their peers, imparting their knowledge in their peers. The elderly we have taught are more proficient and have gained a lot of knowledge through our lessons. Therefore, they are given the responsibility to aid their peers if they have any troubles. The elderly are familiar with this system, as the Tembusu activity centre uses a similar leadership system when handling the welfare and chores.

References

<https://www.livescience.com/57688-brain-stimulating-activities-seniors-memory.html>