

## CAT 4 RESOURCE DEVELOPMENT

# Interconnected: An Elderly's Guide to Technology

**4-86**

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## **ABSTRACT**

Interconnected: An Elderly's Guide to Technology was a project dedicated to assisting the elderly in their journey of learning how to use technology. The resource package created contained what the team believed to be paramount in today's digitised environment, spanning over 10 topics, touching across 4 overarching themes: Basic Functions of a Phone, Social Media, Health and Convenience Applications, and Cyber-Wellness. The team ensured that the resource package was easy to refer to, with concepts concisely presented through the PowerPoint slides, and reinforced with constant reference to the Full Course Manual.

Through this double-pronged approach, the team had kept the elderly demographic in mind, delivering a resource package that would greatly benefit and impart knowledge to the elderly.

# **1. INTRODUCTION**

## **1.1 Rationale**

Firstly, the elderly were often cooped up in their homes or Senior Activity Centers, rarely having opportunity to interact with people outside their social circle. Technological breakthroughs would encourage the elderly to be mentally and physically active, curbing the onset of dementia.

Secondly, E-services had become a norm in Singapore, with the government spearheading a big push towards digitisation. As society rapidly surged ahead with technological advancements, the elderly constantly struggled to cope with the ever-widening digital divide and had to rely on their children or more tech-savvy peers, leading to a growing generation gap between the old and the young.

## **1.2 Objectives**

The objectives of Interconnected: An Elderly's Guide to Technology were to:

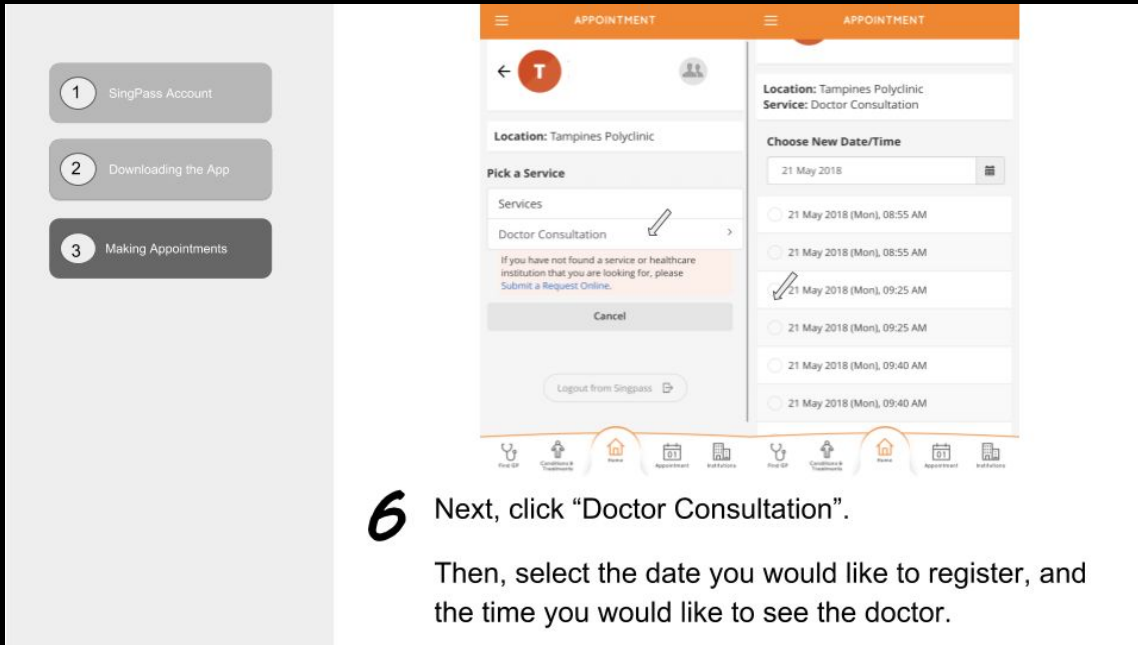
1. Increase the elderly's convenience
2. Help the elderly gain better knowledge of technology
3. Allow the elderly to better adapt to the ever-changing technological landscape

## **1.3 Target Audience**

The target audience were the elderly above 60 years old that were interested to know more about technology.

## 1.4 Resources

The resources created for this project included a Full Course Manual, and PowerPoint slides used as teaching aid.



The screenshot displays the SingPass Appointment app interface. On the left, a vertical navigation menu contains three steps: 1. SingPass Account, 2. Downloading the App, and 3. Making Appointments. The main content area is split into two panels. The left panel, titled 'Pick a Service', shows the location 'Tampines Polyclinic' and a list of services with 'Doctor Consultation' selected and highlighted by a pencil icon. Below the list is a 'Cancel' button and a 'Logout from Singpass' button. The right panel, titled 'Choose New Date/Time', shows the date '21 May 2018' and a list of available times: 08:55 AM, 08:55 AM, 09:25 AM (selected with a pencil icon), 09:25 AM, 09:40 AM, and 09:40 AM. At the bottom of the app, a navigation bar contains icons for Home, Appointment, and other services.

**6** Next, click “Doctor Consultation”.

Then, select the date you would like to register, and the time you would like to see the doctor.

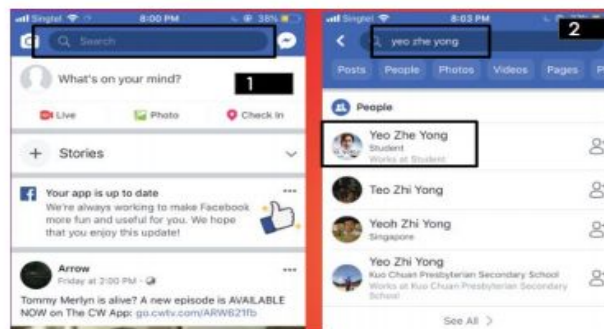
**Fig 1.1 A PowerPoint slide on “Online Polyclinic Appointments”**

## 在Facebook上交朋友

在Facebook 上交朋友是整个体验中不可缺少的一部分。在Facebook上交更多朋友会帮你扩大社交圈子，而你不需面对面见就能跟其他人沟通和联系。

只需简单的一次点击，身在远处的亲人和朋友就可以立刻看到你的发帖。有了Facebook上的朋友，沟通上的困难便能立即被解决。

## 如何发出好友请求



1. 点击搜索栏，搜出你想加为好友的人（图1）
2. 找出相配你朋友的账户（图1）
3. 点击他的个人资料页，检查他的个人资料是否正确，确保他正是你想加为好友的人（图2）
4. 点击“加为好友”的按键，好友请求并会被发出

Fig 1.2 A page from the Chinese Full Course Manual on Facebook friends

## B. Kemas Kini Perisian

Pencipta perisian Android akan mencipta perisian yang baru untuk memberi ciri-ciri yang baru untuk telefon awak sekali. Untuk mendapat ciri-ciri ini yang terbaru, anda harus kemas kini perisian dengan kerap. Jika anda tiada buat begini, masalah telefon awak seperti masalah keselamatan tidak akan dibaiki.

Untuk kemas kini kepada perisian yang terbaru:

1. Tekan Kemas Kini Perisian dalam Seting
2. Pastikan telefon anda disambungkan dengan Wi-Fi
3. Jika perisian yang baru boleh didapati, tekan Muat Turun
4. Selepas muat turun habis, tekan Masang. Telefon anda akan reboot.



## C. Tukar Papan Kekunci

Anda boleh menggunakan telefon bijak untuk menaip dalam pelbagai bahasa. Anda dapat tambah papan kekunci untuk bahasa yang lain selain Bahasa Inggeris.

1. Tekan Seting di skrin utama
2. Tekan "bahasa dan input"
3. Tekan "Papan Kekunci Lalai"
4. Pilih papan kekunci yang anda ingin gunakan

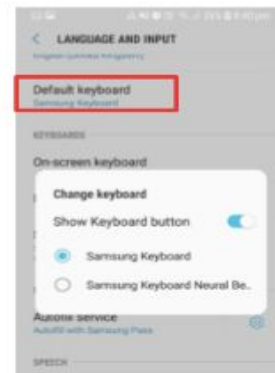
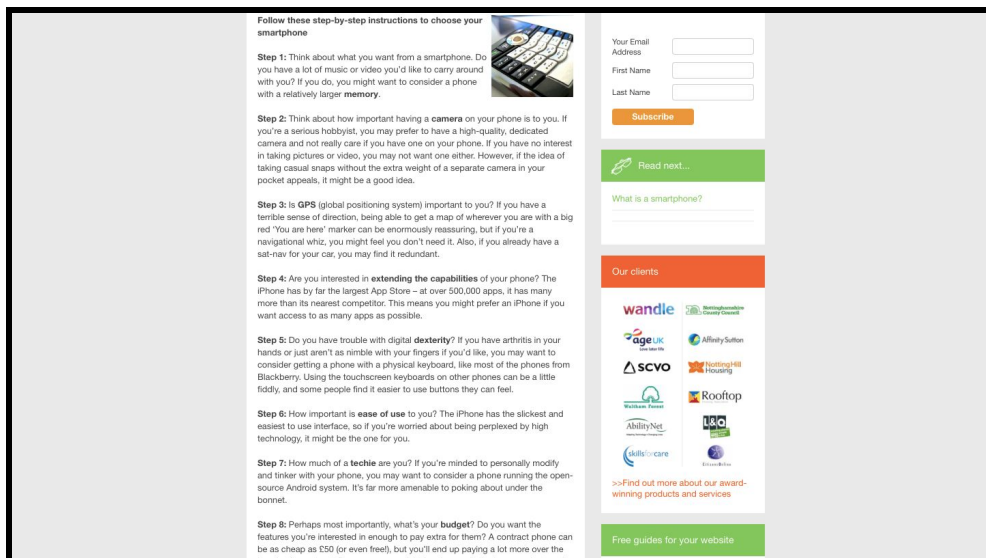
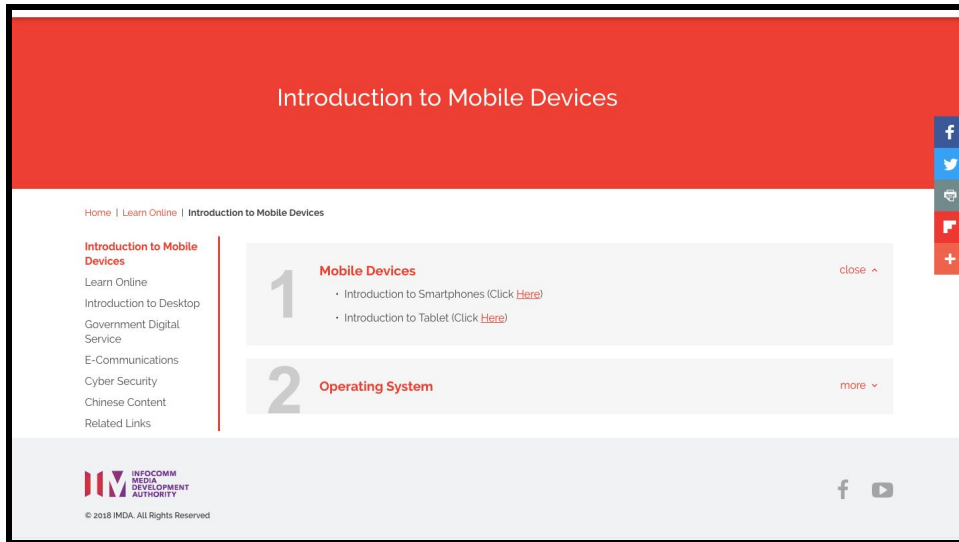


Fig 1.3 A page from the Malay Full Course Manual on System Settings

## 2. REVIEW

The website the IMDA created for the elderly to learn basic technological skills, such as the basic functions of a phone and Facebook, was used as a basis for comparison.

The following were snapshots from the website.



As seen, articles from different websites were linked to the government portal. These articles were disorganised, poorly designed, cluttered, making the information difficult for the elderly to absorb.

Information could be presented in a systematic manner, making it easier for the elderly to understand, refer to, and follow. It should also encompass all areas important for the seniors, maximising the impact the resource would have on the elderly.



### **3. METHODOLOGY**

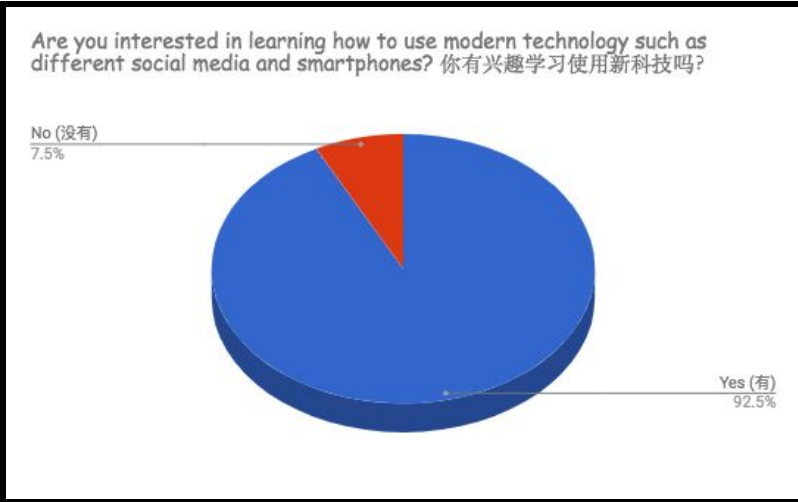
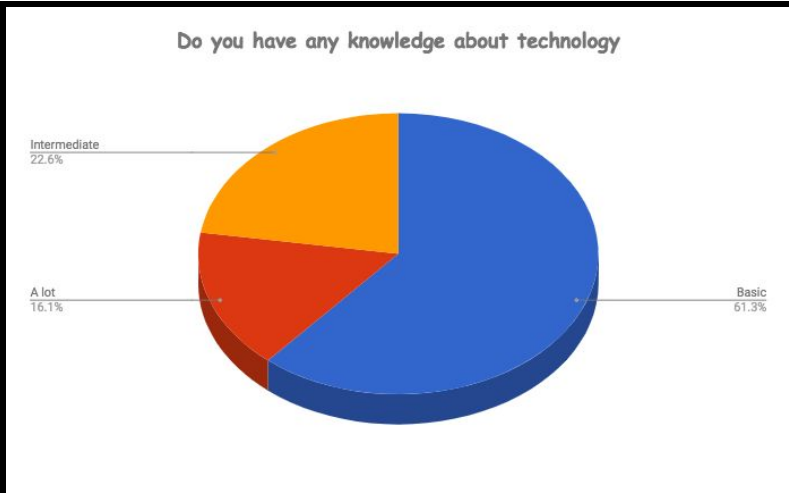
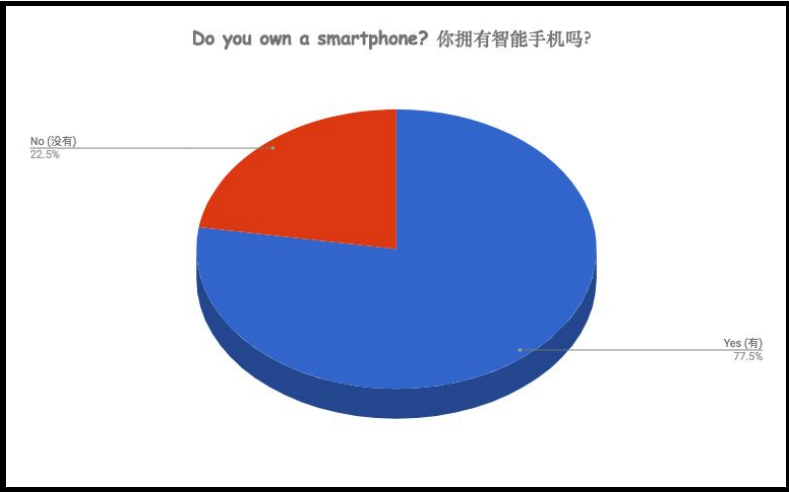
#### **3.1 Needs Analysis**

First, an interview session was conducted with Mr Jeremy Mok, coordinator of the Lion Befrienders Senior Activity Center. Mr Mok complimented the idea of the project, and showed much enthusiasm and interest in working with the team. He also gave the team valuable input on how to ensure the concepts taught were effectively conveyed to the elderly.

Second, a reconnaissance session was initiated during the March holidays, to establish the elderly's position on learning how to use technology. This was done through a focus group discussion and an interaction session, with the elderly present. A needs analysis was conducted to ascertain the relevance of such a project. Through this focus group discussion, the team managed to flesh out the problems faced by the elderly when using technology in their daily lives.

The feedback confirmed the feasibility of the project, and how useful it would be if this well-rounded package was created for the elderly.

### 3.2 Survey Results



Respondents were also asked about the types of applications they were interested to learn more about. These were some of the responses:

Uber and Grab
OFO
Online Payment
Online Polyclinic Appointment
Facebook
Create Email Account

### **3.3 Development of Resources**

Possible topics and themes were brainstormed to tackle the issues raised by the elderly. Applications and websites that could pique their interest, and remain relevant with time, were selected.

The team narrowed the package down to 4 overarching themes: Basic Functions, Social Media, Health and Convenience and Cyber-Wellness. After reading through many articles and learning about numerous cases of elderly-targeted scams, the team believed that online fraud was becoming increasingly rampant in today's world, and devoted a portion of the resources to teaching the elderly how to maintain online safety.

Information was sourced from the "Help" sections of various websites and platforms, and was reorganised to form a coherent Full Course Manual. The team carefully selected applications to download and test, ensuring that these applications were elderly-friendly and usable.

Snapshots were taken to provide visual support and close guidance in the PowerPoint slides and the Full Course Manual.

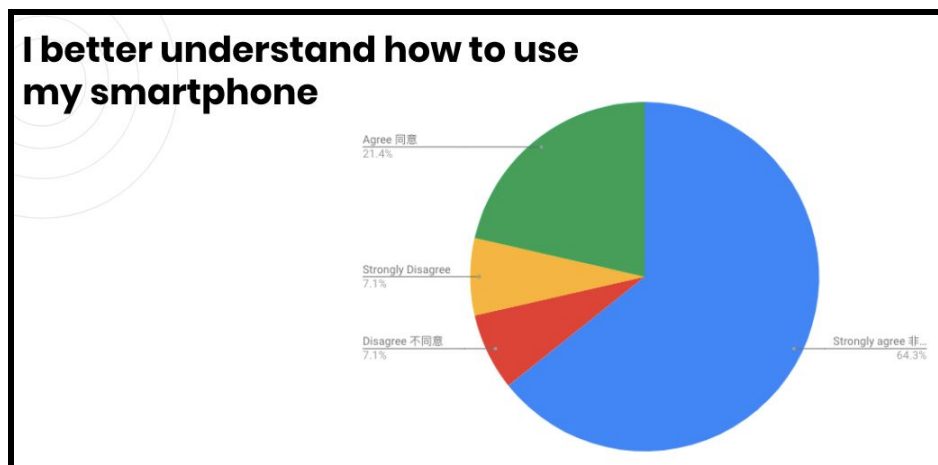
Finally, all of these were emailed to Mr Jeremy Mok for vetting, before the pilot test was administered.

### 3.4 Pilot Test

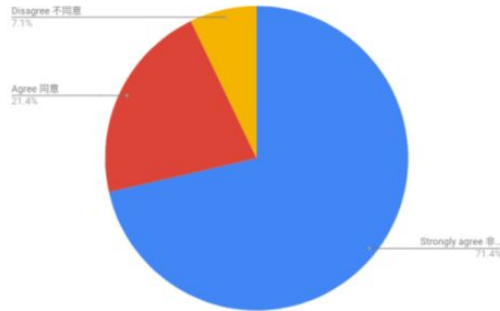
Pilot tests were administered to 20 seniors per session in the Lion Befrienders' Senior Activity Center at Tampines West during the June Holidays. A total of four sessions was conducted, with each overarching topic spanning a session long.

The elderly were given handouts in the first week, and a small volunteer-to-elderly ratio was maintained. The group teachings were effective, with the elderly being able to keep up with the pace and understand the concepts taught.

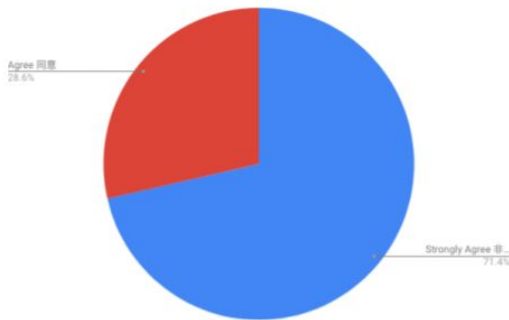
Feedback received was overwhelmingly positive, as the respondents said the applications taught would be useful in their daily lives.



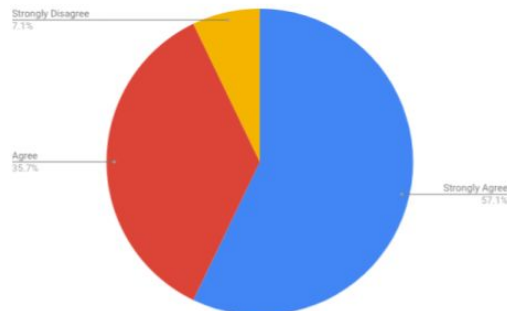
**I understood the basics of Whatsapp, Youtube and Facebook.**



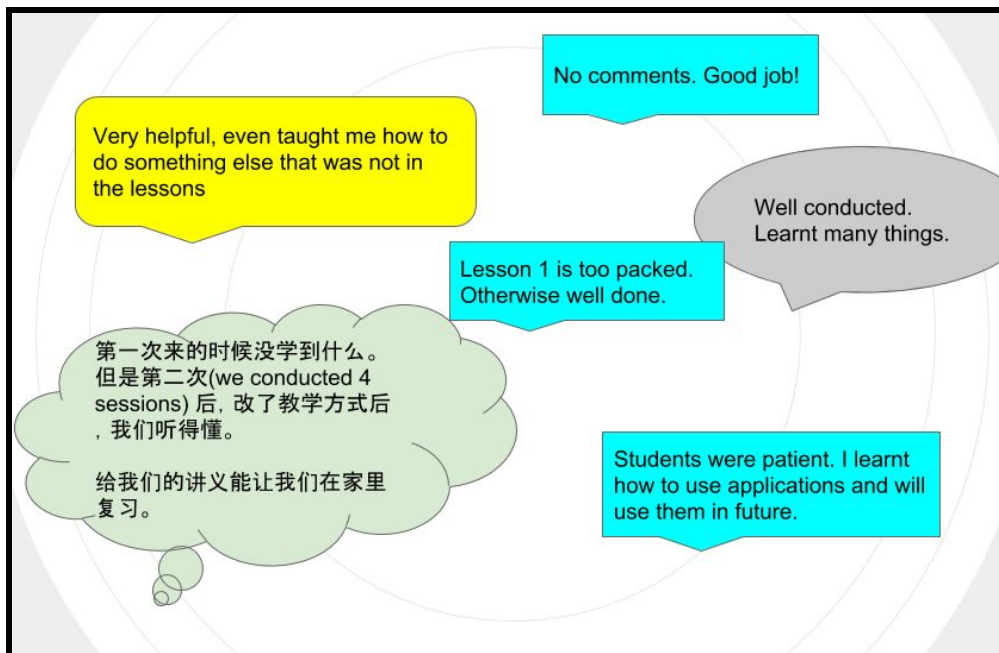
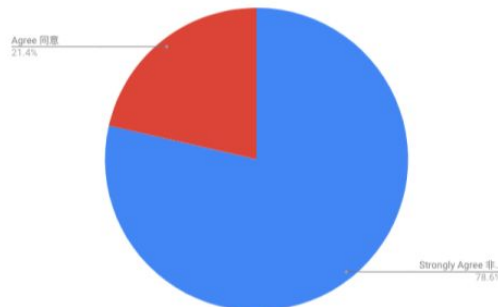
**I understood how to use apps that are useful in our daily lives like the bus apps and online polyclinic appointment system, Grab.**



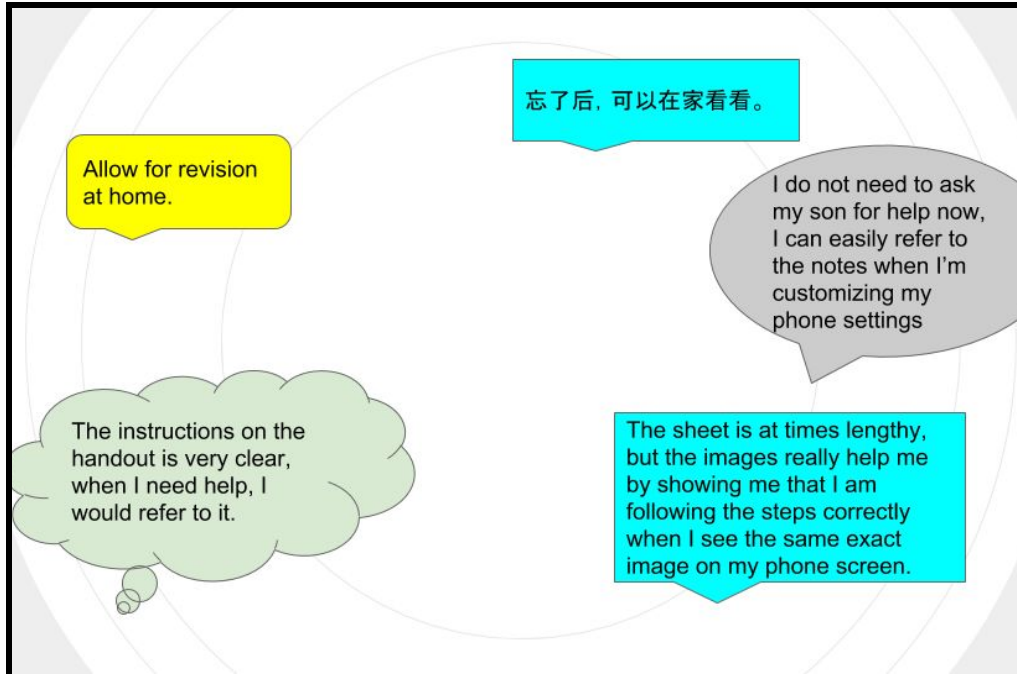
**I better understand how to guard against cyber threats**



## The apps taught were useful and can be used in our daily lives



The elderly who went through the one-month course complimented and warmly received the resource package, commenting that the improvements made after the first session greatly enriched their learning experience.



In addition, the feedback received for the Full Course Manual was largely positive, with many elderly praising the convenience it brought to them, allowing them to utilise this manual as a companion whilst using their phones.



#### **4. OUTCOMES AND DISCUSSION**

Although the project obtained positive feedback when pilot-tested, a decision was made to ensure that the Full Course Manual was translated to two other languages - Chinese and Malay. The translated course manual allowed those who were less proficient in English to understand the resource package, expanding the reach of the project. Malay and Chinese translations also allowed for easier retention of information, as the seniors would be able to recall the information in the long run.

However, it must be admitted that this project had its limitations. Interconnected was unable to address the fact that there was a multitude of applications that could too, enrich the elderly's lives. While sieving out applications to focus on, some were left out, like Instagram and Health Trackers. Due to logistical constraints, Interconnected was unable to translate the Course Manual to Tamil. As such, potential further works could be extended to designing lesson packages on a greater variety of applications, including games like Pokemon Go that had spurred a generation of physically inactive youths to get out of their homes and "Catch em All". This success could potentially be replicated on the elderly. Interconnected could also link up with an external organisation to translate the manual to Tamil.

Nevertheless, Interconnected: An Elderly's Guide to Technology had managed to reach the objectives set during the proposal stage. The elderly were able to learn new skills and concepts, and apply them in real life. While the elderly had previously felt left behind in catching up with technological advancements, they now felt confident of joining Singapore's push to become a smart nation.

## **5. CONCLUSION**

Creating the “Elderly’s Guide to Technology” package was challenging as it required many hours of rigorous work to collate useful and important information, designing the slides, and making them engaging. The entire project journey had enabled the group to develop many skills.

Critical thinking and a keen sense of observation were crucial during the initial stages of the project, especially during the phase of creating elderly-friendly slides that would tailor to their needs.

Presentation and verbal skills were required to teach the elderly about the various applications and functions of the smartphone, with bilingualism playing a major role in engaging the elderly of various backgrounds.

Perseverance and patience were the final elements that allowed for the completion of the project, as they encouraged the project group to constantly improve the resources to help the elderly better understand and more effectively utilise their smartphones.

## 6. ACKNOWLEDGEMENTS

We would like to thank the following parties for the success of this project:

*Lion Befrienders' Center* for accepting our proposal

*Mr Jeremy Mok, Mr Adrian Pang* for allowing us to carry out our project at the centre and enlisting the seniors' help in participating during our lessons

*Miss Elizabeth Lee*, our mentor, for her invaluable advice and assistance, as well as her faith in our ability to make this project a success

*Ng Wei En, Clarence Soh and Justin Tan* for voluntarily forking out time to translate the 73-page course manual

*The elderly in the Lion Befrienders' Club*, for willingly participating in our lessons and giving us feedback on improving the project

## 7. REFERENCES

### **Basic Functions of Android**

T-Mobile. (2018). *Samsung S8*. [Photograph]. Retrieved from <https://www.t-mobile.com/cell-phone/samsung-galaxy-s8>

Gadgets 360. (2016). *Samsung Galaxy s7*. [Photograph]. Retrieved from <https://gadgets.ndtv.com/samsung-galaxy-s7-3310>

Starhub. (2016). *Prepaid Cards*. [Photograph]. Retrieved from <http://www.starhub.com/personal/mobile/mobile-phones-plans/prepaid-cards.html>

Wikihow. (n.d.) How to photograph Panoramas. Retrieved May 31, 2018 from <https://www.wikihow.com/Photograph-Panoramas>

Flickr (n.d.). Retrieved May 31, 2018, from <https://www.flickr.com/photos/badzmanaais/7272863568/in/photostream/lightbox/>

Uses of Computer: [Web log post]. (2010). Retrieved July 11, 2018, from <https://ict123.wordpress.com/topics/introduction-to-a-computer/uses-of-computer/>

### **Online Polyclinic Appointments**

Singpass.gov (n.d.) Register for Singpass Retrieved June 11, 2018 <https://www.singpass.gov.sg/singpass/register/instructions>

### **Grab**

E. (2017, May 11). The Risks and Rewards of Ridesharing. Retrieved from <https://www.cooneyconway.com/risks-and-rewards-of-ridesharing>

## **Ofo**

OFO (n.d.). Retrieved June 11 2018, from

<https://www.ofo.com/sg/en>

## **Cyber-Wellness**

M. (2018, February 08). Cyber-Security – 2018 Trends and Predictions - 21069.

Retrieved July 11, 2018, from

<https://www.mytechlogy.com/IT-blogs/21069/cyber-security-2018-trends-and-predictions/#.W0Yfgtj-jQQ>

Scam Alert (n.d.). Retrieved July 11, 2018, from

<https://www.scamalert.sg/>

Kapouti (2014, September) Αστυνομία : Οι 5 πιο συχνές απάτες στο διαδίκτυο.

Retrieved July 11, 2018, from

<http://www.kapouti.com/2014/09/5.html?spref=pi>

7 Rules for Online Etiquette. (2015, August 26). Retrieved July 11, 2018, from

<http://achievevirtual.org/7-rules-for-online-etiquette/>

B. (n.d.). Fake News, Real Consequences. Retrieved July 11, 2018, from

<http://www.library.stonybrook.edu/fake-news-real-consequences/>

WikiHow. (2017, November 02). How to Spot Advertising Scams on the Internet.

Retrieved July 11, 2018, from

<https://www.wikihow.com/Spot-Advertising-Scams-on-the-Internet>

UEFI malware in firmware is destructive and runs before the OS loads. (2018, June 26). Retrieved July 11, 2018, from <https://www.welivesecurity.com/2017/10/19/malware-firmware-exploit-sense-security/>

Summerson, C. (2018, January 28). How to Avoid Malware on Android. Retrieved July 11, 2018, from <https://www.howtogeek.com/140900/how-to-avoid-android-malware-and-other-android-security-threats/>

Singh, A. (2015, January 21). Cyber Safety. Retrieved July 11, 2018, from <https://www.slideshare.net/aayushiboisterous/cyber-safety-43734244>

Cyber Safety: An Interactive Guide To Staying Safe On The Internet. (n.d.). Retrieved July 11, 2018, from <https://www.opencolleges.edu.au/informed/cyber-safety/>

Min, C. H. (2017, March 17). Police warn of scam calls by operators impersonating police officers. Retrieved July 11, 2018, from <https://www.straitstimes.com/singapore/courts-crime/police-warn-of-scam-calls-by-operators-impersonating-police-officers>

## **Literature Review**

IM Silver. (n.d.). Retrieved August 16, 2018, from <https://www.imda.gov.sg/imsilver>

Morris, S. (2014, December 12). Study finds social media use beneficial to overall health of elderly. Retrieved March 23, 2018, from : <https://www.theguardian.com/media/2014/dec/12/study-finds-social-media-skype-facebook-use-beneficial-overall-health-elderly>

Toh, E. (2017, November 08). The Big Read: Feeling lost in a digital world, some elderly shun technology. Retrieved March 23, 2018, from:  
<https://www.todayonline.com/singapore/big-read-feeling-lost-digital-world-some-elderly-shun-technology>

Fong, J. H. (2017, January 03). Protecting the elderly from cyber attacks. Retrieved March 24, 2018, from:  
<https://www.todayonline.com/singapore/protecting-elderly-cyber-attacks>

Andy Ho (2014, October 07) . Law Needed to Protect the Elderly from Scams. Retrieved March 30, 2018 from:  
<http://www.straitstimes.com/opinion/law-needed-to-protect-the-elderly-from-scams>