

CATEGORY 4 RESOURCE DEVELOPMENT

Group 4-19

Project Phone Teacher

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Abstract

Singapore is a technologically advanced country. However, there is still a segment of the population (ie. elderly) having little exposure or having difficulty keeping up with this pace.

Our resource package comprises 2 components - A teacher's guide and video guides. The former serves as reference for teachers at senior activity centres. The latter covers the basic functions of smartphones from changing background to calling and messaging segmented into small bite-size part, to support the learning of the elderly in a more interactive manner.

1. Introduction

1.1 Ideation

This idea was conceived after observing that the elderly around us, including our grandparents, are unfamiliar with the smartphones. With the cessation of 2G network on 1 April 2017, the main users, the elderly, who are less tech-savvy, have no alternatives but to switch to smartphones. Coupled with the rapid change in the technology, the functions of smartphones have vastly expanded, adding on to their confusion which may further alienate them. This will be misaligned with Prime Minister's National Day Rally speech in 2017 envisioning Singapore to be a "Smart Nation" highlighting the many benefits of smartphones from car parking, ibanking, cashless payment for hawker food and so on.

1.2 Objective

Our aim is to equip the elderly with the basic skills to utilise their smartphones more effectively in their daily lives.

1.3 Target audience

Our target audience are elderly (aged 50 and above).

1.4 Resource

We categorised our resource package into 2 components: a teacher's guide and video guides which are 'interactive'.

The teacher's guide provides teachers with simple instructions for reference when they encounter problems when teaching the elderly.

Video guides are good interactive visual learning tool with simple instructions and demonstrations which may captivate the elderly's interest. The videos cover basic tasks

and are further subdivided into 3 sections, namely “Basic”, “Tips & Trick” and “Advanced”. The content of each section is outlined as follows:

<u>Basic</u>	<u>Tips and Tricks</u>	<u>Advanced</u>
Calling	Multi-tasking	Downloading Applications
Adding Contacts	Searching apps	Adding keyboards
Messaging		Setting Reminders
Setting password		Youtube
Increasing Size of Text		Whatsapp
Moving Applications		Alarm clock
Creating Folders		
Deleting Applications		
Camera		
Changing Wallpaper		

1.4.1 Links to resource

Teachers Guide:

<https://docs.google.com/presentation/d/1eis82PrbXcWQG-Pa6if2AyaN-aUz1qrzOymj1gDt8vE/edit?usp=sharing>

Video Google Sites:

<https://sites.google.com/student.hci.edu.sg/projectphoneteacher4192018>

2. Review of existing resources

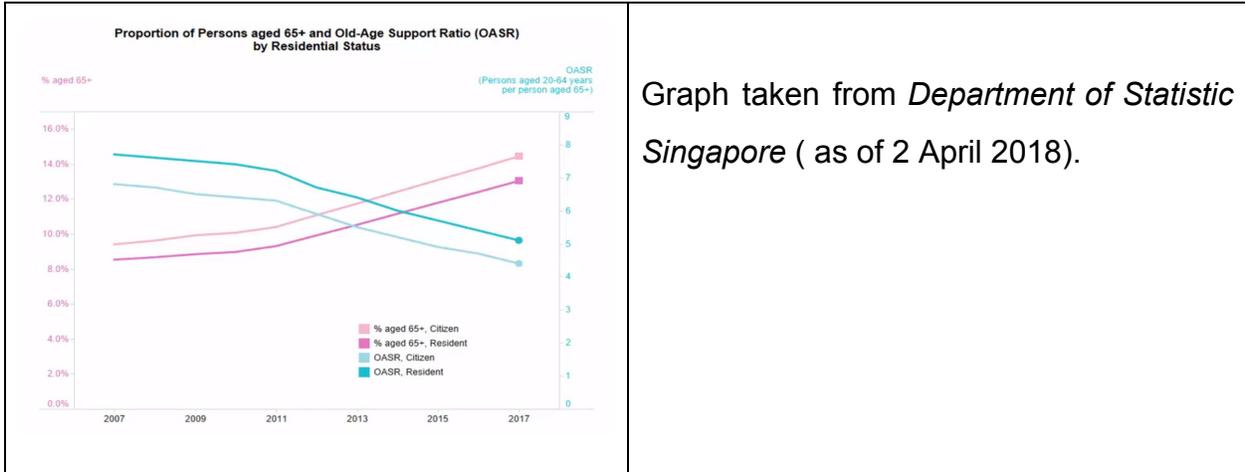
The available existing resources include online and YouTube guides with the assumption that the elderly have prior knowledge. Also, some elderly may prefer the 'traditional' style of having a teacher.

Currently, some community centres organise smartphone courses for elderly at a fee but the take-up rate may be low as most may not want to travel.

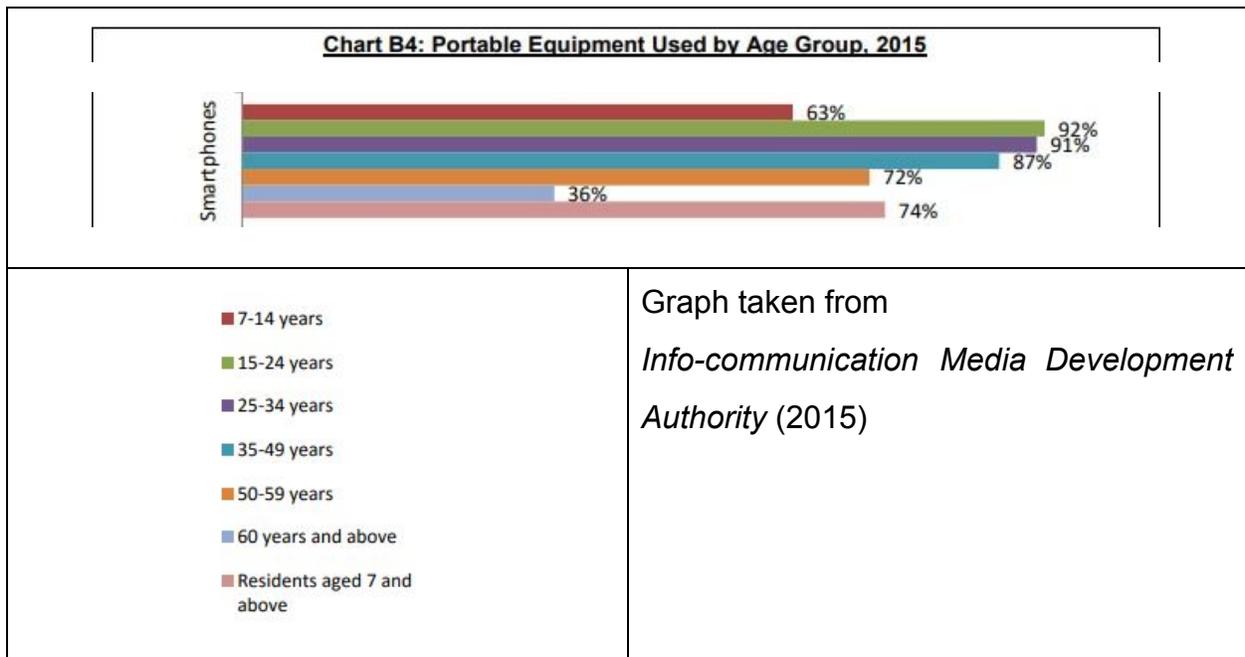
3. Methodology

3.1 Background research data

Singapore is facing a rapidly ageing population with an estimated 1 in 4 will be aged 65 and above by 2030.



Next, Info-communications Media Development Authority’s survey reveals that only 36% of people aged 60 years and above use their smartphones, significantly lower compared to all other age groups.



The reason cited by this group for the low usage is the lack of knowledge/skills/confidence (71%).

Lack of knowledge, skills or confidence was still the top reason cited by non-internet users in 2015 (Table B1)

Table B1: Main Reason for not using Internet, 2013 – 2015

No.	Main Reason	2013	2014	2015
1	Lack of knowledge /skills / confidence	60%	76%	71%
	Do not know how to use computer, internet-enabled feature phone	-	26%	39%
	Do not know how to use the internet	-	24%	26%
	Lack of confidence	-	19%	2%
	Language skills are inadequate	-	7%	4%
2	Too old to learn	-	12%	14%
3	Not interested / No need to use	36%	10%	16%

Graph taken from

Info-communication Media Development Authority (2015)

3.2 Needs Analysis

A needs analysis is conducted to establish the need for this resource. A survey was conducted on 112 respondents aged 50 and above. Chart B1 shows the age profile distribution of our respondents.

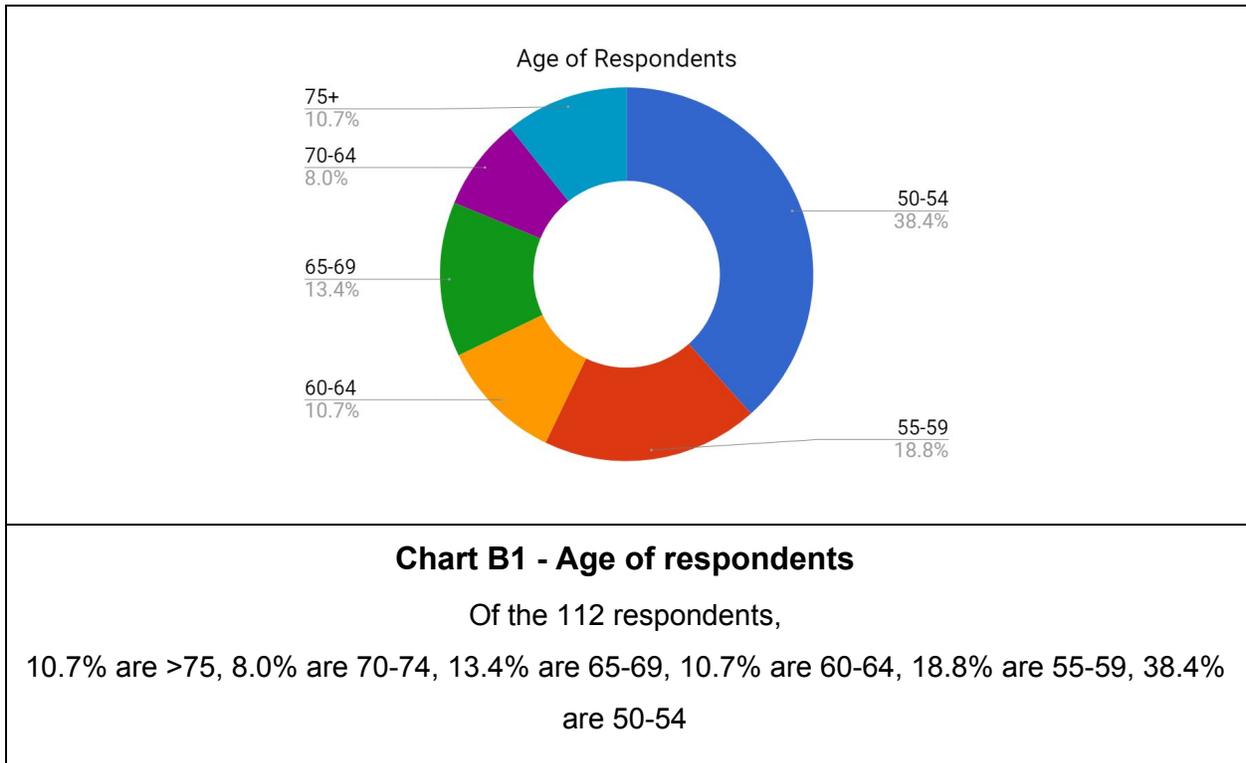
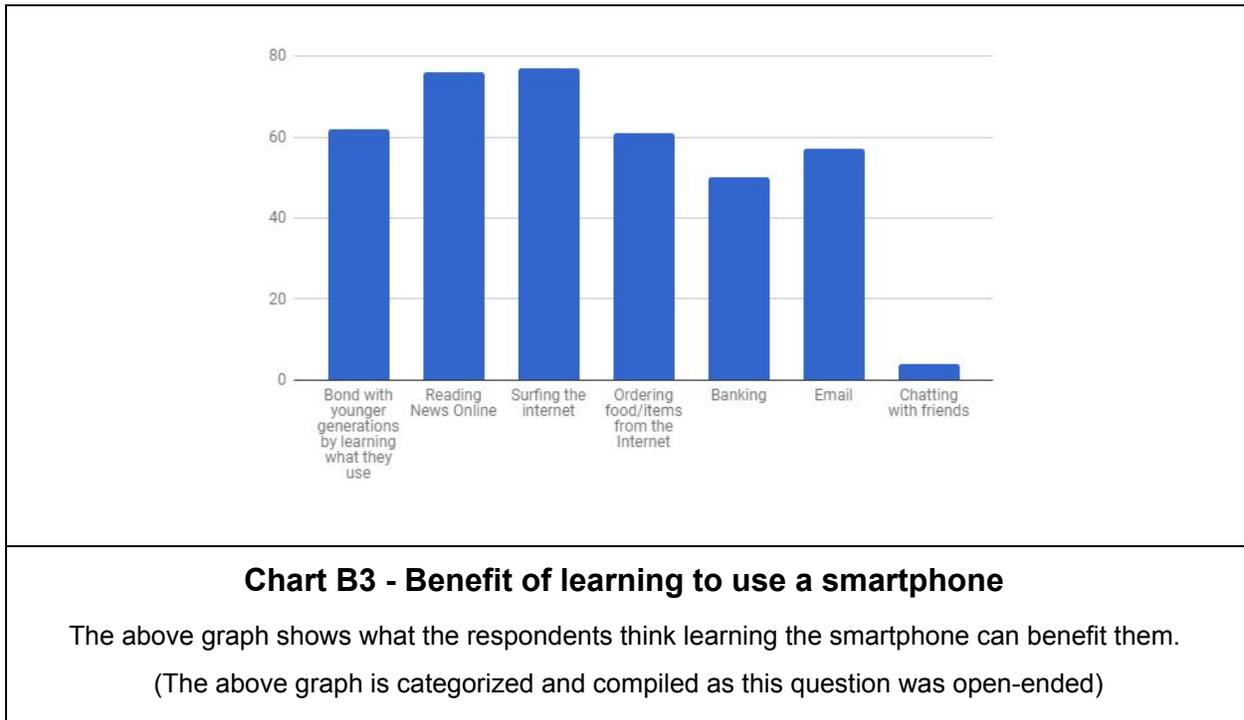


Chart B2 shows that a significant portion (ie. 75%) think that there is a need for such resource.



Chart B3 shows what the benefits that elderly think of learning how to use the smartphone



3.3 Development of resource

We reset our phones to film step-by-step recording instructions. In the video recording, “*Ilios screen recorder*” and “*QuickTime*” are used on Samsung and Apple devices respectively. Video editing was done using “*Adobe Premiere Pro CC*”, enhanced with audio and visual effects such as “red boxes”, voice-reading instructions with accompanying simple text for reference.

For our teacher’s guide, Google Slides is chosen as it is easily accessible by teachers.

3.4 Pilot Test

3.4.1 Pilot Test 1

Our first pilot test was conducted on 7-8 of July, with 6 elderly relatives who were classified into 3 categories: “Beginner” (2), “Intermediate” (2) and “Advanced” (2). “Beginner” defined as no prior knowledge; “Intermediate” defined as having some prior knowledge (e.g. calling) and “Advanced” defined as having good knowledge (e.g. Youtube). They also expressed interests to learn Maps, GPS, Bus Arrival Timing app, listening to music, etc

3.4.2 Feedback 1

<u>Beginner</u>	<u>Intermediate</u>	<u>Advanced</u>
Pace of videos was too fast	The language is difficult to understand, not familiar with English	Pace of videos was too fast.
Some contents were too hard to understand.	Pace of the learning is manageable.	Some contents were irrelevant.
Prefer resource in other languages.		Prefer to understand the rationale of each action instead of being told.



3.4.3 Our takeaways from our first pilot test

First, the pace of our videos had to be adjusted. However, it was too time-consuming to redo the filming and editing from scratch. An alternative solution was to 'timestamp' the videos accompanied with instructions to allow the elderly to select the segments. Second, they prefer to have more languages. Third, one elderly feedbacked that our teaching method may not cater to all the elderly due to different learning styles.

3.4.4 Pilot Test 2

Our second pilot test was conducted on 5 elderly at the NTUC Health SilverACE Seniors' Activity Centre (Telok Blangah) on 4 Aug 2018 together with 3 other student volunteers.

3.4.5 Feedback 2

<u>Elderly</u>	<u>Milestones of course completed</u>	<u>Feedback</u>
<u>Elderly 1</u>	Entire course	Okay.
<u>Elderly 2</u>	Call, message, contacts, camera, wallpaper, whatsapp, Wifi only	Prefer a Chinese version.
<u>Elderly 3</u>	Entire course + clarified all her queries, including advanced features like bus arrival timings apps and MySingtel app,.	Resource was sufficient, Teachers were extremely knowledgeable.
<u>Elderly 4</u>	Entire course, facebook, google, internet, youtube	Slower videos, like the coaching style, 4 languages
<u>Elderly 5</u>	Entire course	Good



3.4.6 Further takeaways from our second pilot test

First, coaching is another method to teach elderly to learn smartphones. Hence, we should not 'compress' all the contents into one continuous video. We further reaffirmed that besides videos, a teacher plays a crucial role in the elderly's learning journey. For example, Elderly 4 preferred the coaching style as he was afraid of making mistakes. After the session, the elderly were able to manoeuvre their smartphones more confidently and complimented us for our patience and knowledge.

Second, the resource can be extended to commonly spoken languages.

Third, we would like to develop the WhatsApp resource to enable them to make free calls via WhatsApp when internet connection is available.

4 Outcome and discussion

Through our partnership with the senior activity centre, we had the opportunity to conduct 'live' trials and test the effectiveness of our resources. We hope this will help them to adapt in this digital era and become more receptive in embracing technology in their everyday lives which is not confined to smartphones but other electronic devices (e.g. computers).

The senior activity centre requested for a copy of our resource which we happily shared. In all, our resource package fulfills the objective of teaching elderly the basic functions of smartphones. In order to reach out to a wider audience, we need to further enhance to develop more languages and design more useful features (ie. Whatsapp call).

4.1 Limitations and future plans

First, it is challenging to find accurate translations. For example, there is no translation for "WhatsApp", and hard to ascertain the authenticity of online sources. Second, the translation process is tedious and time-consuming and resulted in insufficient time to extend to other languages which was eventually aborted. Third, the 'lean' team strength (2 members) and limited expertise (as only 1 member knows the editing of videos), resulted in an uneven workload distribution. To overcome this hurdle, we segmentalise the contents in our English videos.

In the future, we plan to refine the resource package to include translations in the teacher's guide and make videos in other languages (eg. Malay and Hokkien/Cantonese dialects), making our resource more comprehensive with real-life application.

5 Conclusion

In this project, we faced several uphill tasks. From conceptualising the idea, ensuring sufficient sample size, collating voluminous survey data, multiple trial and error in the videos editing process are just some examples. The 'lean' 2-member team exacerbated the situation. We had to re-prioritise our work taking into account project deadline and capability of the team member.

In addition, the whole process of coordination work from writing proposal, organising the event, executing the pilot run, fine tuning the resources and handling difficult elderly took up much time.

In summary, besides improving our resource package, it is important to monitor the milestones of the project to meet deadline, how to communicate with a group with limited skills/knowledge and slower learning pace further constrained by language barrier as most elderly are conversant in dialects, how to engage them by listening and understanding their fears and to be more patient with them. Also, we need to stay open-minded and manage team conflicts/expectations. Nonetheless, it is rewarding to know that we are trying to provide a real-life solution to address existing problems.

6. **References**

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