

**NANYANG
TECHNOLOGICAL
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Wee Kim Wee School of Communication and Information

IS6799: Critical Inquiry

Proposal

Information Inequality: Digital Divide of Singapore's Elderly

JS-03-01:

Ng Xiu Qi Christopher (Matric No)

Wang Xiang (Matric No)

Hu Yu (Matric No)

Assoc. Prof Joanna Sin

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1. Introduction & motivation

With the advent of the information age and the emergence of the Internet, accelerated technological developments have introduced a dramatic evolution in the ways of information communication and dissemination. However, "Technology can be a huge, tremendous enabler but technology can also divide if it is not accessible, [says Halimah]" (Goh, 2020).

As one of the most digitalized countries in the world (IMD, 2022), Singapore has employed digital technology to assist its residents in striking a better trade-off point between health and communication during the Covid-19 pandemic. On the other hand, accelerated shift to digital information exacerbates the digital divide among seniors in Singapore. During the pandemic, social isolation due to social distancing often leave elderlies feeling lonely and helpless. In particular, elderlies who live alone report more anxiety and depression symptoms, which can raise the risk of suicide (Cocuzzo et al., 2022).

Furthermore, it is worth noting that Singapore is also a nation that faces a serious aging problem, with about one-third of the population over the age of 65 in 2035 (Statista, 2022). More than half of elderlies did not use the Internet in 2020, compared to all youth population who are Internet users (Statista, 2022). In response to the digital inequality, the SG Digital Office and InfoComm Media Development Authority launched "Smart Nation" initiative to engage elderlies in digital information acquisition and communication. Nevertheless, engaging elderlies in digitalization has not been an easy process. Some elderlies report of having to struggle when interacting with an unfamiliar digitized world and some elderly people who do not hold Singapore citizenship are also excluded from the telecom concession scheme.

Therefore, it might seem that some elderly might have been left out amidst the technological advancements. It is important to investigate and understand their challenges and bring light to their needs.

2. Problem statement

The problem of information inequality is one that has been constantly associated with the elderly due to the issue of the digital divide. This is particularly so during and after the Covid-19 pandemic where there is a significant increase in dependence on technology. There is therefore a need to understand the extent that the elderly was affected and whether it pose a challenge for them to accept further technological advancements.

3. Research objective

The main goal of this study is to investigate the impact of technological development on the information inequality of Singaporean elders during and after the Covid-19 pandemic. Particularly,

this study will look at how emerging technologies have affected various elder groups in Singapore differently, including education levels, and ethnic minorities elderly. This study will focus on the information accessibility of the elderly in Singapore and investigate the primary methods and preferences of different groups of elderly to obtain information, to study the main aspects of technology that exacerbate information inequality among older people in Singapore. It will also look at the government policies attempting to help the elderly and whether these policies are effective in addressing the digital divide.

4. Research question

In order to accomplish the research objectives, the research question that this study will examine are:

How is digital divide a problem of Information inequality?

What are some effects of the digital divide on the elderly?

What are the factors influencing the digital divide for the elderly in Singapore?

What are some policies that attempt to bridge this divide?

5. Methodology

5.1 Constructs & Conceptualization

5.1.1 Singapore's Elderly

In Singapore, people over the age of 65 are defined as elderly in the existing literature (Luyt & Ho, 2011). And in our study, we will define elderly as those who are 55 years old or above for the purpose of what are the factors influencing the digital divide for the elderly in Singapore. In Singapore, the Central Provident Fund (CPF) (2022) converts the CPF account of a Singapore citizen or permanent resident into a retirement account when a person reaches the age of 55.

5.1.2 Information Equality

Information inequality refers to the huge gap between information subjects in the information society in terms of access to and use of information technology and information resources. Nowadays, Current information inequalities in Singapore are widespread, especially among older age groups.

5.1.3 Digital Divide

It is the practice of human societies to create new political, economic, and cultural problems with each innovative technology. The high level of development and widespread use of digital

technology has brought new inequalities and new social divisions while bringing benefits to all people, which is called digital divide (Cao, 2001).

5.2 Sampling Design

Our study is a quantitative study using a non-probabilistic, purposeful sampling sample of 100 healthy elderly, comprising an equal number of females and males. We will use gender, race, and education level as control variables. This age-focused, homogenous, purposeful sampling approach allows us to work within limited resources while still obtaining in-depth, rich, and nuanced findings specific to healthy elderly.

5.3 Data Collection Method

We will use survey research as our data collection method. In our study, we focus on elderly self-reported attitudes, beliefs, or behaviors and focus on correlation rather than causation. We plan to conduct a one-on-one and face-to-face survey with a fixed set of questions but leave room for discussion of other topics that arise, depending on the answers given. Besides, to avoid exhaustion of elderly during the survey, we will keep the questions as short as possible.

5.4 Data Analysis Method

Based on our data collection method, the questions answered by the elderly will be processed quantitatively to further explore which factors will affect information inequality in a statistical way. Those result of the survey will be the form of ratio to get the most precise and the highest level of measurement. After reviewing the survey, we will try to identify any new facts and see if there are any relationship patterns that stand out. And we use R or Jamovi to get the Cronbach's Alpha to prove equivalence reliability.

6. Significance of study

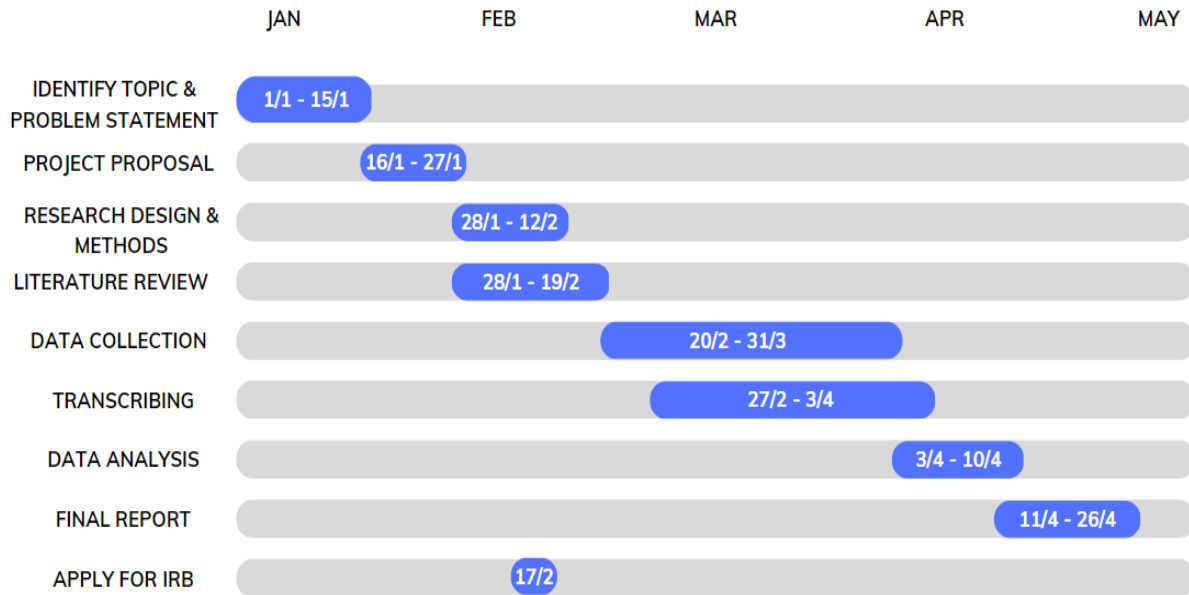
The issue of the digital divide is a longstanding one given the continuous technological advancements in Singapore. It also appears that current government policies have yet to bridge this gap. This problem is exacerbated during the time of the Covid-19 pandemic when a slew of digital measures has been introduced by the government. It is thus timely and necessary for our study to look at the effects of the digital divide among the elderly in post-pandemic Singapore. We hope that our research will bring new insights into the factors and effects of the digital divide and highlight any new changes brought by the pandemic. With the statistics provided by our quantitative study, we hope this will allow relevant government institutions to use this data for future policy planning as well as provide future studies a reference point.

7.Literature review

To study the issue of information inequality, we first must understand the history of the term and the various conceptual definitions surrounding it. Yu (2006) provides an overview of studies related to information inequality from 1990 and allows our research to understand the different theoretical perspectives involved. Critically, it links the idea of information inequality with information poverty, suggesting that groups faced with difficulties obtaining information are continuously obstructed in the long run (Yu, 2006). The factors involved in causing information poverty is compiled in an ‘Information poverty and related theoretical perspectives’ framework which our study will be referencing (Yu, 2006). Additionally, Yu (2006) also highlighted the digital divide as a main issue arising from information inequality. It provides different categories of studies on the nature of the divide as well as its definition and this allows our study to form a general understanding of the issue.

Studies by both Lim and Tan (2003) and Mok and Luk (2022) touched on the issue of digital divide in Singapore. This provides our study with a local perspective to contextualise our study. Both studies highlighted the elderly as a common group that remains vulnerable to the advancement of technologies due to their inability to keep up. Lim and Tan (2003) reveal how the elderly can be negatively affected by the digital divide and analyses the effects on the elderly. Their study is a qualitative one involving interviews with the elderly in a one-to-one setting, and this provides us with an understanding of how a qualitative study can be carried out. More importantly, it acknowledges the limited reach of a qualitative study and suggests that similar studies can be carried out in a quantitative manner for a wider reach. Mok and Luk (2022) provides such a quantitative study, using surveys as a form of data collection method. This study focuses not only on the effects of the digital divide on the elderly but also government initiatives involved in this divide (Mok & Luk, 2022). These ranges from government policies causing the divide like Smart Cities and Smart Nation while also having policies like the Silver Infocomm Initiative (SII) that aims to address the divide (Mok & Luk, 2022). Mok and Luk’s study is thus an important paper for this study to reference regarding the Singapore’s government policies.

8. Gant chart



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