

# The Elderly-oriented Measures and Suggestions of Smartphone in China's Post-epidemic Era

Shuchen Liu\*, Hongtao Wang, Yuxin Yang, Yuanzhi Jin, Binbin He

Beijing University of Chemical and Technology Beijing 100029, China  
2235262072@qq.com

\*Corresponding author

**Abstract:** In 2020, the outbreak of the epidemic accelerated the development of the digital economy. With the arrival of the post-epidemic era, the aging of China's population will step into the superposition period of rich while old and the accelerated development of the digital economy. How to use digital technology to prepare for the severe aging period has become a concern of the whole society. By studying the current situation of smart phone use and digital divide among the elderly population, this paper explores appropriate measures for smart phone aging in the post-epidemic era and helps to improve the construction of China's elderly service system.

**Keywords:** The Elderly; Smart Phone; Optimal Aging; Digital Economy; Post-Epidemic Era

## 1. Introduction

At the 2021 Government Work Report, Premier Keqiang Li pointed out that promoting intelligent services should meet the needs of the elderly, and intelligent tools should not be allowed to pose obstacles in their daily lives. The continuous optimization and upgrading of smart phones and the increasingly refined and intelligent Internet services provide practical services for the daily life of the elderly in China, making it possible for China to realize active aging as soon as possible. But at the same time, problems such as inconvenient life of the elderly, digital divide and increased loneliness have also emerged.

As COVID-19 swept the world at the end of 2019, home quarantine forced industries to transfer from brick-and-mortar stores to online shops in order to control the pandemic effectively, which triggered a transformation in social life and work patterns. In this era, the phenomenon of "digital divide" among the elderly is particularly prominent. At present, the pandemic has been effectively controlled in China. In the post-epidemic era, it has become a social concern to better integrate smart phones into the daily life of the elderly and to reduce or eliminate the "digital divide" among the elderly, which is also of importance for the development of the smart phone industry in the future.

By analyzing and studying the use of smart phones of the elderly during the outbreak of the pandemic and the impact of smart phones on the daily life of the elderly, explores the countermeasures of "aging adaptation" of smart phones in the post pandemic era, and consequently, puts forward feasible suggestions and countermeasures for the elderly to use smart phones in their future life, hoping to make contribution for the perfection of China's elderly care service system.

## 2. Current Situation of Smart Phone Usage of the Gray Group

In 2020, the outbreak of the epidemic accelerated the development of the digital economy. In 2021, China's aging population will enter the overlapping period of rich while old and the accelerated development of the digital economy. How to use digital technology to prepare for the arrival of the severe aging period has become a concern of the whole society. The proportion of people aged 60 and over was 17.4% in China in 2020, which is estimated to increase to 34.6% in 2050[1].

According to the 48th Statistical Report on China's Internet Development, the number of Internet users in China reached 1.011 billion. Among it, users aged 60 and above accounted for 12.2 percent, an increase of about 26 million from last year, with middle-aged and elderly users seeing the fastest growth.

It can be seen that the elderly in China are accelerating the popularization of the use of smart phones and stepping into the Internet era. There are not only many business opportunities behind this wave, but also many hidden dangers and problems.

### **3. The "Digital Divide" of the Silver-Haired Group**

#### ***3.1 Some Epidemic Prevention and Control Measures do not Fully Consider the Use of Smart Phones by the Elderly***

During the epidemic, big data was used to accurately capture the journey to achieve the prevention and control effect. Many places also applied this measure. For example, they could not take buses or enter shopping malls without using or showing the health code, which undoubtedly increased the travel difficulties for the elderly who could not or could not skillfully use smart phones.

#### ***3.2 The Personalized Needs of the Elderly in the Design of Smart Phones Need to be Optimized***

More than half of the older smartphone users interviewed were using their children's obsolete devices. These mobile phones are specially designed for young people. For the elderly, the interface is complex, the font display is small, and the light on the screen hurts the eyes. These youthful functions affect the experience of the elderly and make it difficult for them to use smart phones.

#### ***3.3 The Negative Impact of the Use of Smart Phones on the Daily Life of the Elderly***

The use of smart phones occupies more and more time in the lives of the elderly [2]. In the questionnaire and interview survey, it is found that many elderly people are prone to addiction after starting to use smart phones. The time for daily outdoor activities is gradually occupied by mobile phones, reducing the frequency of exercise. At the same time, in the Internet age, the information on the Network is uneven, and the elderly lack some network discrimination ability. So the personal information is easy to leak.

#### ***3.4 Different Elderly Groups Have Otherness in Using Smart Phones***

The majority of the elderly are not proficient in using smart phones. In addition to the gradual decline of their memory and learning ability, many elderly people do not understand the operation logic principle of smart phones. In addition, age is negatively correlated with smartphone use. And the higher the education, the higher the use of smart phones, and the stronger the ability to accept and learn smart products in the new era.

### **4. The Optimal Aging Measures and Suggestions for Smart Phone**

#### ***4.1 Policy Guidance: Let the Senior Citizens Better Integrate into the Intelligent Age***

In the post-epidemic era, when epidemic prevention and control is becoming normal. The government should take more scientific and precise measures, make traditional services and intelligent service innovation parallel.

To specific measures, such as the management in "health code", the information about epidemic prevention and control can be integrated into "health code" through technical means to realize only use one yard. In terms of registration and consultation in hospital, medical institutions should reserve a certain proportion of manual service windows for registration, payment and printing of inspection reports, and reserve part quota of offline registration. In the field of payment, any unit or individual shouldn't refuse paying on cash. Enterprises that make outstanding contributions to the construction about information barrier-free should also be given preferential policy in the selection standard toward excellent employee, credit management, social responsibility assessment and other work.

#### ***4.2 Social Assistance: Build an Atmosphere of "Helping the Elderly"***

Social public welfare organizations should actively promote the wave of making the smart phone optimal aging, establish a favorable social weather vane, and encourage enterprises to invest in smart

phone aging and other related business actively. Practically help them to integrate into intelligent life as soon as possible.

Enterprises and communities should provide convenience for the elderly to learn online technology. Residential communities should organize various forms of training lectures, online and offline classroom meetings to provide convenience for the elderly to learn new technologies and new knowledge. We should not only strengthen the training of intelligent technology for the elderly, but also carry out more psychological counseling and ideological construction for the elderly to help them change their ideas, eliminate the fear of using smart phone, dare to accept new things and cultivate the consciousness of learning.

#### ***4.3 Telecommunication Enterprises: Assume Social Responsibilities***

Telecommunication enterprises should retain a certain proportion of business halls and "face to face" service modes, retain manual customer service and consultation platforms. Online, one-button manual consultation service better be designed to simplify operation links such as voice prompt and digital selection, so that the elderly can solve their own problems in the first time.

Cellphone data charges should more transparent, and subsidies should be provided to elderly users. One of the significant reasons why many elderly people are afraid to use smart phones is that the cellphone traffic charges are too expensive, or the usage of the cellphone traffic charges isn't transparent enough to be queried in time, and mobile phones are sometimes reminded that they are in arrears. In this regard, the network operation enterprises should open a more convenient window in inquiring the network data charges, in order to eliminate the elderly people's fear of the charges when surfing the Internet.

#### ***4.4 Mobile Phone Manufacturers: Attach Importance to the Elderly Group and Design Targeted Smart Phone Products***

Mobile phone manufacturers should give full consideration to the scenario of the elderly using smart phones and their real requirements, so that smart phones can meet the needs of the elderly with large screen, loud voice, large font, long battery life and other features. In addition, the operation of smart phones need to more simple and direct.

Mobile phone manufacturers should provide detailed and feasible solutions to the difficulties commonly encountered by the elderly when using mobile phones. For example, Huawei, a well-known domestic and foreign smart terminal brand, has added the functions of "Chang Unicom Talk" and "Remote assistance" to their smart phones on the basis of calling [3]. This function enables the two smart phones to share the screen with one click when making voice or video calls. Through this function, parents can help solve problems when using mobile phones by remotely guiding their children regardless of whether they are with them or not.

#### ***4.5 Software Developers: Fully Consider the Needs of the Elderly and Develop Digital Products Related to the Elderly***

When developing or upgrading products, software developers should carry out investigation and analysis of the elderly people's demand for digital software and services, and in-depth study of the physical and psychological characteristics of the elderly, so as to take a series of measures for aging. For example, simplifying software functions, increasing software fonts, effective selection of advertising and so on. In view of the impact of the complicated online taxi-hailing process on the elderly, taxi-hailing software represented by "Didi Taxi" has launched taxi-hailing services suitable for the elderly, such as taxi-hailing service hotline, one-click taxi-hailing, cash payment and other functions, to improve the travel experience of the elderly [4].

In order to attract the elderly to widely accept smart phones, major software companies should also develop software that is popular with the elderly and close to their lives, so as to increase their interest in smart phones.

#### ***4.6 Elderly User: Actively Participate to Improve Confidence and Patience***

With the gradual promotion of smart phones for aging, the elderly are supposed to put aside the mentality that it is difficult to use smart phones and actively learn to use smart phones in order to

facilitate life and follow the trend of The Times [5].

To help the elderly quickly integrate into the digital society, efforts of the family are also essential. On the one hand, young people should use "technology" to feed back the elderly, so that they can master the digital skills necessary for life. On the other hand, we should encourage the elderly to use smart phones more patiently, improve their confidence in using smart phones, and promote them to actively integrate into the digital society.

## References

- [1] World Health Organization. Ageing—Demographics: Percentage of Total Population Aged 60 Years or Over. Available online <https://www.who.int/data/maternal-newborn-child-adolescent-ageing/indicator-explorer-new/mca/percentage-of-total-population-aged-60-years-or-over> (accessed on 10 April 2021).
- [2] Jeong YW, Oh J. Pattern of Smartphone Usage and Psychosocial Factors Affecting Smartphone Over dependence in Middle-Aged Women. [J] *Addict Nurs.* 2020 Jan/Mar; 31(1):39-46.
- [3] CHARNESS N, Holley P. The New Media and Older Adults: Usable and Useful [J]. *American Behavioral Scientist*, 2004(48):416-433.
- [4] NIEHAVES B, PLATTFAUT R. What Is the Issue with Internet Acceptance among Elderly Citizens [J]. *Lecture Notes in Computer Science*, 2010:275-288.
- [5] Zhang-Shen. Mobile phone function design of the elderly in the smartphone era [J]. *Computer Knowledge and Technology*, 2013 (12X): 2.