Going Cashless: Who's Left Behind?

—— Solving Mobile Payment for Mainland China Elderly People

TABLE OF CONTENTS

1. BACKGROUND

Mobile payment is now reaching astonishing penetration in mainland China, and the society is going cashless. According to the report of Internet Development in 2020 from CNNIC[1], there are 1.319 Billion Internet users in Mainland China and 86% of them use mobile payment as their prior choice[2]. However, penetration of mobile payment in the elderly is not sufficient to catch up with the technical trend. Over 60% of the elderly have troubles with buying necessities, registering in hospitals or booking train tickets in daily life because of the inability to use mobile payment[3]. It has been such an imminent problem for the elderly to freely use the function. With the concern about the complexity and security of mobile payment, as well as the lack learning environment, how to solve the mobile payment issue for the elderly in Mainland China becomes a defined challenge.

The report is explaining the 3-stage approach designed for the elderly to solve mobile payment issues. It will further analyze the mechanism and innovativeness about the solution.

CHINA INTERNET PENETRATION RATE

Year	2011	2012	2013	2014	2015	2016	2017
Internet penetration rate	38%	42%	46%	48%	50%	53%	56%
Penetration rate of people over 50 years old	7%	10%	12%	13%	16%	16%	19%

Legend: Penetration rate of people over 50 years old — Internet penetration rate
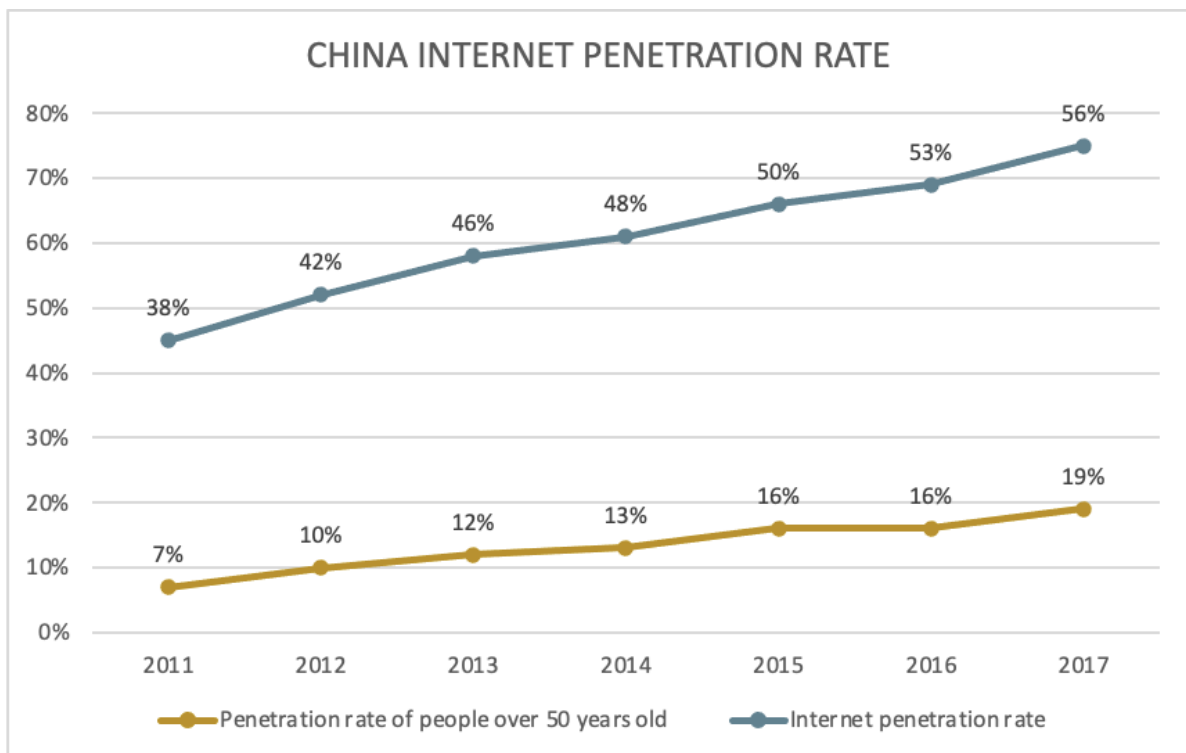
[1] CNNIC: China Internet Network Information Center
[2]《第46次中国互联网络发展状况统计报告》 https://finance.sina.com.cn/tech/2020-09-29/doc-iivhvpwy9334481.shtml
[3]《有钱不会付，有号挂不上:1.9亿中国老人被二维码"忽视"》
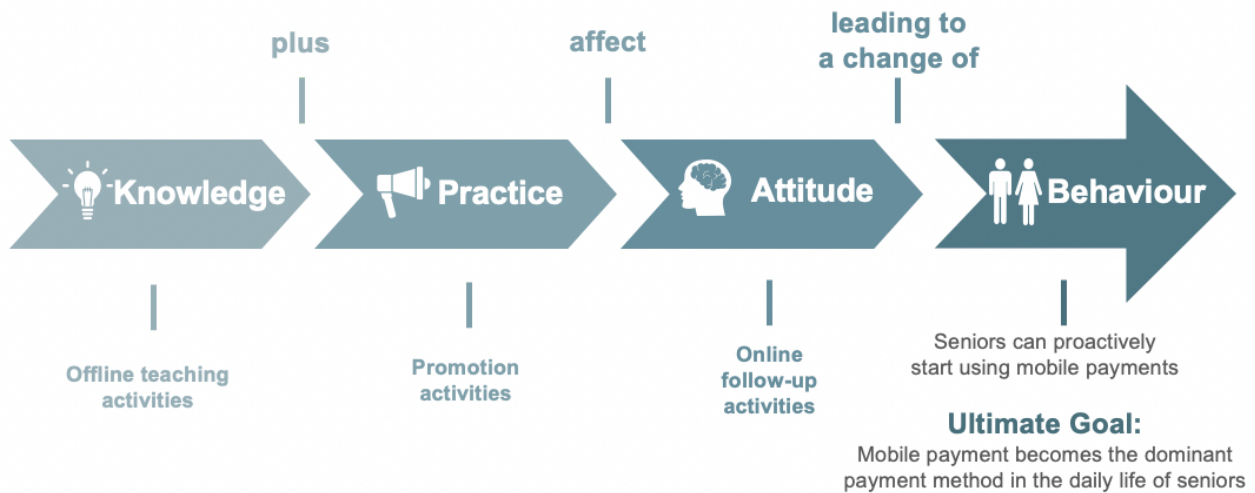https://www.thepaper.cn/newsDetail_forward_9027695

99.7%

MOBILE INTERNET USERS PENETRATION

1.319 Billion Internet Users in Mainland China according to report of 2020.

86%

MOBILE PAYMENT PENETRATION

Among the Internet Users, 86% of them take mobile payment as their prior choice.

2.1 SOLUTION OVERVIEW

The diagram above illustrates the general logic design of our solution, consisting of three steps. The first step is to impart the knowledge by organizing offline teaching activities. The second step focuses on actual practice by using mobile payment platforms through our promotion activities. The third step is about attitude conversion. We provide online follow-up to further helping them familiarize with mobile payment and extra use. Combining knowledge and practice could affect seniors' attitude towards mobile payment, and then lead to a change of their behaviour —— proactively start using mobile payments. These steps could achieve our ultimate goal: mobile payment becomes the dominant payment method in the daily lives of seniors.

2.2 PART I: OFFLINE TEACHING ACTIVITIES

Since elderly are highly ignored as a potential group of mobile payment, there are few talks and lectures designed specifically for this group to popularize these information and familiarise with the function. Hence, our activity is to provide them with an opportunity to start from the very beginning. We will organize the offline teaching activities in public areas like parks, residential areas and senior universities, where they visit frequently.

Teaching the mobile payment usage

First, we design the leaflet and banner stand like the picture (Appendix 1) to introduce some basic information about mobile payment usage. Second, we arrange student volunteers to have hands-on teaching, including downloading the applications, opening accounts and using the scanning QR code function. If seniors have questions after reading the brochure, they can ask volunteers for individual teaching.

Eliminating the misconceptions

The topics we will cover include the security and convenience of mobile payments and how seniors could prevent and respond to possible risks. Taking convenience as an example, many seniors do not really know mobile payment can be applied in many extra scenarios in daily life, such as taking the subway, taking the bus, paying for the utility bills, etc.

Propagandizing the following activities

In addition to conveying information, a more important purpose is to have a long lasting promotional effect. We will inform the seniors about our next campaign: they can get discounts if they can join the promotion activity in the supermarket. We will also invite them to follow us on social media and tell them we will distribute coupons on online platforms.

The first approach serves as a foundation for our whole project, including teaching and promotion. It allows the elderly to understand mobile payment in detail first so that we could carry out the second activity smoothly, since they will not have the patience and time to stop and listen to us teaching them as the second activity is held in the supermarket.

2.3 PART II: PROMOTION ACTIVITIES

After the offline teaching part, the elderly will go into the practical attempt step by attending the promotion activities. Our main purpose is to use bargains to give elderly people an opportunity to experience the benefits and conveniences of mobile payment, which will give them a clearer understanding towards mobile payment.

The concrete plan

The concrete plan for the practical attempt step is holding promotion activities in supermarkets and offering high quality fresh foods at very low price with 60% to 70% discount. Elderly people are required to use mobile payment to get the bargains. Meanwhile, well-trained volunteers from charity organizations will be arranged to assist the seniors. Each activity will last for 2 to 3 hours and the expected quantity is about 200 customers. This activity will be held regularly and could spread to different cities.

The reason why it works

As elderly people are frugal and sensitive to prices, they like promotion activities. Meanwhile, as daily supplies are needed everyday, they need to go to supermarkets frequently. Therefore, the scale of the activity can be ensured. Besides, according to our calculation(Appendix2), the loss of a promotion activity is just about one-month salary of a cashier, but the new elderly customers will continuously produce profits as long as they shop in the supermarket, hence the loss is of short term, but the profits are of long term. Therefore, supermarkets are glad to cooperate with us. Moreover, we could also invite mobile payment developers, such as Tencent or Alipay, to cooperate with us. They could offer funds and technical support. As these organizations are interested in social influences and potential new users, it is possible for us to attract them to help us. With their assistance, holding and spreading our activities will be much easier.

After the trial, we will encourage the elderly people to follow our online account to join further activities and learn some advanced skills in mobile payment to extend the influences.

2.4 PART III: FOLLOW-UP ACTIVITIES

The seminar and promotion above are a good start. But we are not just doing a one-time event, our goal is to help as many seniors as possible to use mobile payment, and to keep the positive impact going.

The third solution, follow-up activities, includes three key tasks: consolidation exercises, in-depth learning, and new user attraction. We hope that the elderly will spread e-payment to those around them and expand the impact of our campaign.

Consolidation exercises

Consolidation exercises encourage seniors to use e-payment repeatedly, in order to let them get familiar with mobile phones. At the end of the offline seminars, we will invite seniors to scan a QR code and subscribe to our WeChat account. Then, we will cooperate with local supermarkets and groceries to negotiate some special offers, distributing some coupons for e-payment on WeChat. With these coupons, the elderly will have an incentive to use mobile payment when shopping, and hence get used to e-payment in their daily life. To ensure the comfort of using mobile payment, we will place e-payment tutorial posts at the counters. And stores will conduct staff training to guarantee that seniors have assistance when they have problems with mobile payments.

In-depth learning

The next important task is in-depth learning. WeChat is the most popular app in mainland China, and seniors use it very frequently. It's convenient for them to read articles and watch short videos on WeChat, as well as share them with their friends. By keeping updated science articles and videos on our WeChat official account, we can help the elderly to learn about different kinds of cell phone functions with an easy-understand format. Several popular subjects we plan to make include purchasing railway tickets, showing health code, car-hailing reservation on app, and online shopping. The step-by-step tutorials will be a straightforward and comprehensive way for seniors to do in-depth learning.

New user attraction

Furthermore, the online platform has served as a tool to attract new users. To achieve this goal, two incentives are developed. First, the capability of managing mobile payment will be described as a useful and advanced ability, which gives elderly people a sense of fulfillment and impels them to show it to other elderly people. Second, the cash coupons are prepared for both our followers and new users, which increases the attraction of mobile payment. As a result, elderly people are willing to share it among others and we can advertise our activity at a low cost.

By finishing the 3-stage solution, the elderly could have a basic knowledge of mobile payment, an understanding of how to use it, and several chances to practice. In conclusion, the activities are conforming the learning model, which provides elderly people an in-depth learning opportunity, instead of a basic introduction or one-time usage. In addition, by encouraging elderly people to share and forwarding our activities, our project aims to help them form a learning atmosphere and environment.

Besides, from the perspective of the designer, efficiency and effectiveness are considered. The corporation with supermarkets minimizes the budget of the activities and making good use of online platforms enlarges the coverage of influence.

3. INNOVATIVENESS

In this part, we will illustrate the innovativeness of our solution. In particular: why and how is our solution better than others?

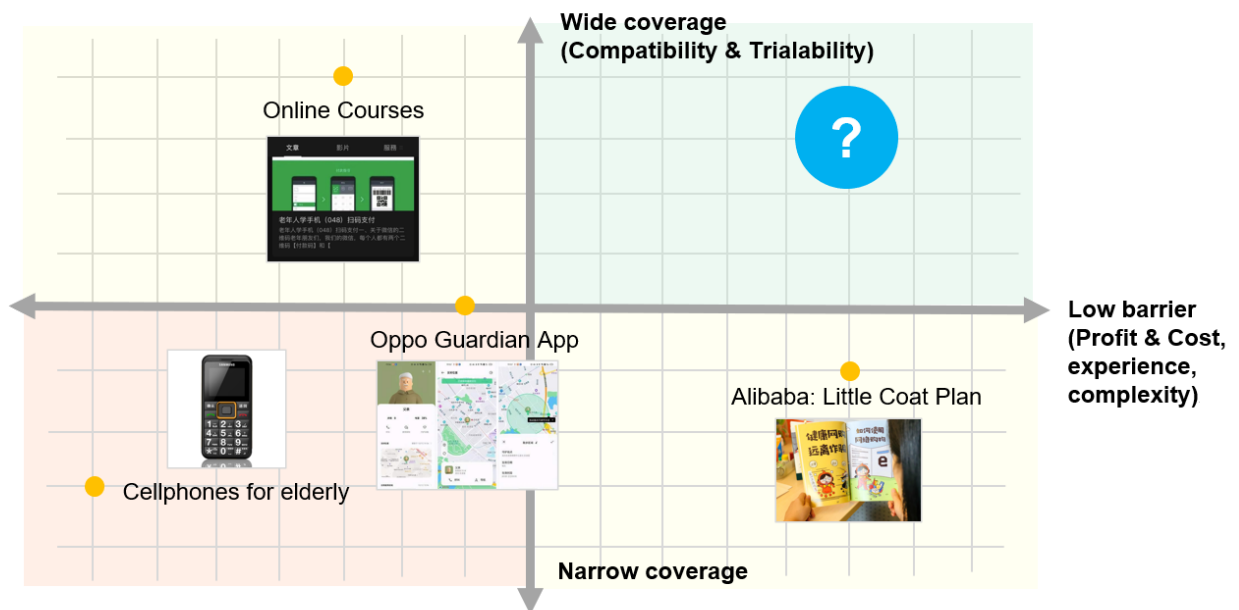| Name	Description	Positive(+)	Negative(-)
Cellphones for elderly	• Design a new smartphone specifically for elderly	• **Simplify** the complicated process for elderly	• Expensive, only a very small proportion of elderly use it (**Low coverage and high barrier**)
Oppo Guardian App	• An application installed in both elderly's and children's smartphone • children can give assistance at any time	• Elderly people's children can **help** them to fix the problem	• Required extensive help from elderly's children (**high barrier** especially for elderly who live alone)
Alibaba Little Coat Plan	• Booklet form • Teaches elderly people in elderly university	• **Traditional form of teaching** (Books) is familiar to elderly	• Only available in elderly university (**low coverage**)
Online Courses	• Online lectures and articles available in WeChat, tiktok and other social media platforms	• Well-made **visualized video** is very intuitionistic and useful	• Elderly cannot find the video by themselves (**high barrier** in using social media)

Comparison

The above figure shows four mainstream available solutions. From designing a new cellphone that is particularly targeted at elderly people, to an application that is installed in both elderly people's and their children's phone [4], to the "Little Coat Plan" that teaches lessons in the elderly university [5], to the online lectures available on social media platforms. If we draw these solutions on a competitive map, in which the X-axis is the barrier (Profit + Cost, Experience, and Complexity) and the Y-axis is the coverage (Compatibility and Trialability), we will see the following diagram:

———————————————

[4] ColorOS 6 的温情一面，OPPO Reno用远程守护让你随时安心, Retrieved 25 July 2019, from https://zhuanlan.zhihu.com/p/75219873

[5] 阿里柔军推出"小棉袄计划"：助攻老年人跨越"数字鸿沟", Retrieved 26 October 2020, from http://zjnews.china.com.cn/yuanchuan/2020-10-26/254882.html

Competitive map diagram

**Wide coverage
(Compatibility & Trialability)**

Online Courses

?

Oppo Guardian App

**Low barrier
(Profit & Cost,
experience,
complexity)**

Alibaba: Little Coat Plan

Cellphones for elderly

Narrow coverage

Based on the diagram, each current solution has attractive merits, but none of them is perfect. Online courses could cover many seniors (potentially high coverage), but it requires a high barrier of searching skills. "Little coat plan" can provide a good learning experience, but it only covers seniors in elderly universities.

We studied these solutions deeply and tried to combine their advantages. Finally, we form a complete solution process in the sweet spot that provides both a good learning experience and covers a large population. We will explain it in detail from both the barrier and coverage side.

Low barrier

From the barrier side, our solution has acceptable cost & profit, a good learning experience, and simplified complexity. For elderly people, they do not need to pay extra money such as buying a new phone. For our partners, they only need to bear a little cost at first and then earn profits, new customers, and a good social image as return.

The elderly people could also get a good learning experience thanks to the logical learning curve from initial teaching to the actual trial, to continuous practice, to advanced self-learning. In addition, the complexity is simplified since we provide sufficient assistance in both hands-on teaching form and online form at every stage.

Low cost and some profits	Good learning experience	Simplify the complexity

- **Low cost for elderly people**: no need to pay extra money (e.g: buying new phones)
- **Low cost and some profits to our partners**: small discount and future customers, and good social image

- **Logical learning curve**:
- from the initial teaching, to actual trial, to continuous practice, to advanced self-learning
- "True" learning

- **Assistance** is provided at each stage: hands-on teaching at stage 1 & 2, online assistance at stage 3
- Includes **both traditional help** (booklet and lecture) **and visualize help** (online videos and articles)

Wide coverage

From the coverage side, our solution covers a large population through having wide compatibility, strong incentives for trialability, and obvious observability.

The solution is compatible with elderly people's lifestyles since shopping at supermarkets is most elderly people's frequent daily routine. We created a strong incentive for them to take a trial since they are very price sensitive. In addition, once some of them have mastered mobile payment, they can continuously radiate their surrounding people and create positive responses in the whole community.

Compatible with elderly's lifestyle	Strong incentive for trialability	Obvious observability for widespread adoption

- **Compatible with elderly's lifestyle**, shopping at supermarket is most elderly's frequent daily routine
- We **fit the teaching into** elderly's daily life, which makes mobile payment becomes part of their comfort zone

- **Elderly are price-sensitive**, so they can be attracted to our solution at the first place
- **Continuous attraction** like coupons and discounts to let them practice and eventually used to mobile payment

- Once one elderly learnt to use mobile payment, he or she will **radiate to the whole community**, it becomes more and more widespread (exponential growth)
- Truly benefit elderly's life!

In a nutshell, what we are doing is actually combining the advantages of current solutions, not in the form of simply putting them together, but through a logical 3-stages mechanism that involves a complete and comprehensive learning curve. Eventually our solution reaches both wide coverage and low barriers compare to any other available solutions.
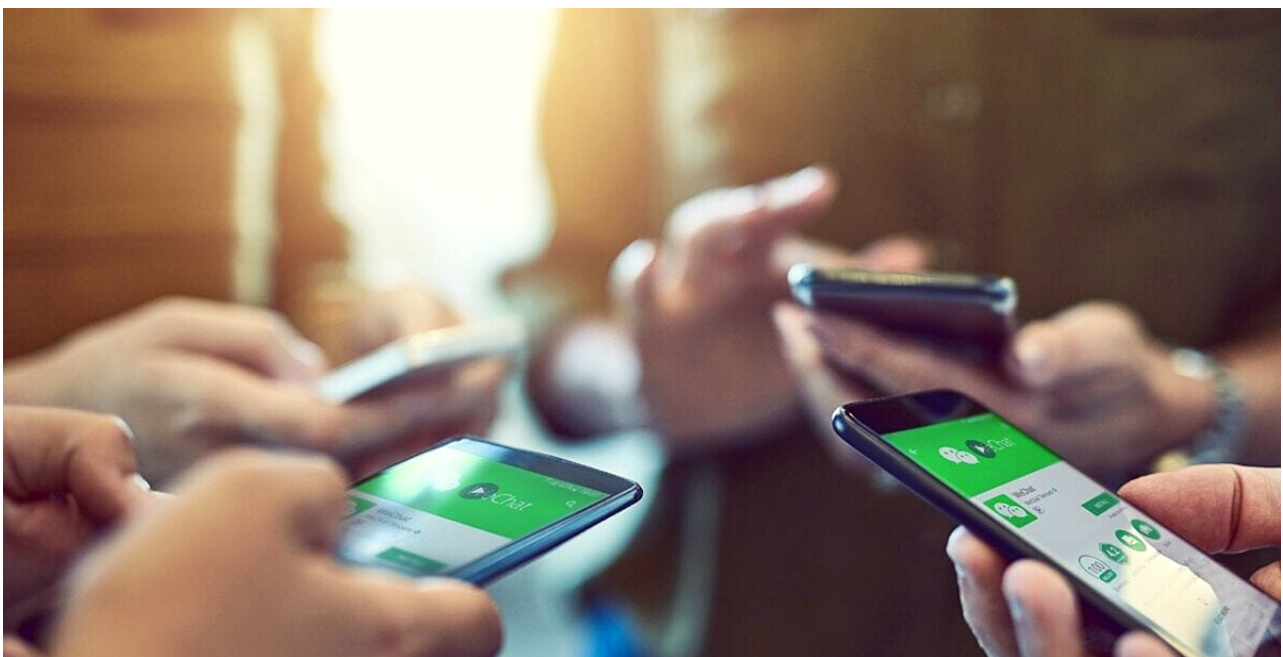
4.CONCLUSION

Reviewing the project, it puts forward an effective and innovative 3-stages solution for the elderly in Mainland China to solve the mobile payment issue. Complex operations and applications are making them dazzled by the new world. What we expect is to help the elderly keep in step with the trend of mobile payment by combining the advantages of existing methods and creating an effective mechanism for the solutions. Leading the elderly from having incentives, to actual trial, continuous practice and finally reaching advanced self-learning, hopefully the continuous project can make a brighter outlook for the elderly who are left behind.

5.CONTRIBUTION

███████████████████████████ ███████████
████████
███████████████████████████████████ ███████
███████████████ ███████████
███████████████████████████ ████████████████████
███████████ ███████████
███████████ ███████████

We are basically making different parts as above, but in the whole project, our team cooperate closely with each other.

6.APPENDIX

Appendix 1: the leaflet we designed for the solution part I

Calculation of the Profits

4200RMB
This is the loss of our activity in a 2nd-tier city in mainland China

3200RMB
This is the monthly salary of a cashier in a supermarket of a 2nd-tier city in mainland China.

24days
This is the approximate time for the new elderly customers covering the loss of a promotion activity.

As the discount is of the form of percentage => we may calculate for a certain city(take the tier-2 city Shenyang as example) as different cities just vary for a ratio.

Assume the sum of original sale price for 1 kg fruits and 1 kg vegetables is 60RMB, and we are offering 70% off for 0.5kg bargains each, and the total population of an activity is 200 => the total lost is 60*0.5*0.7*200=4200RMB. The salary of a cashier in Shenyang is about 3200RMB/month.

Assume 40% of the elderly are attracted by this supermarket and we are offering coupons like 100-10, further assume the total price of a weekly shopping is 150RMB, the gross profit rate is about 20%=> in order to recover the lost, these new elderly need to shopping for 4200/((150*(0.2/(1+0.2))-10)*(200*0.4))=3.5 times, that's about 7*3.5=24.5 days.

If we consider the rate of pin (5-25% of the product are overstock), the loss will be even less.

Conclusion: The loss is of short-term but profits are of long-term

GEYS4010 Final Report

Group1