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**OVERCOMING THE OBSTACLES PREVENTING USE OF DIGITAL BANKING  
SERVICES WITHIN THE OLDER GENERATIONS**

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Abstract  <p>The purpose of this study was to find out what obstacles the older generation is having when adapting to digital banking services. Secondary objective was to find ways to overcome these obstacles, in a manner that companies, especially within the banking industry can make their digital services more accessible for the elderly. Based on studying existing literature, IT service management was chosen to take a practical look at this problem alongside the trust theory, which had more theoretical implications at this point. A survey was conducted among OP's elderly customers to gain empirical information regarding the problem. Based on this we then compared our findings with previously studied literature and begin to interpret the findings. As we had hypothesized with trust theory, the trust towards digital services and trust towards one's own skills within the digital environment, causes many of the elderly to keep away from digital banking services. Media often brings up how there are security breaches, and different scams going within the digital environment. This combined with the elderly often lacking in the skills and not knowing what benefits the digital services actually give them, cause many to prefer to not use the digital banking services. A solution for this problem for OP was to firstly make sure to give out information about the benefits of the digital banking services, in a manner that the elderly customer understands. Secondly there would be study sessions where the bank's customers could join and learn the skills necessary to use the services. Lastly all this and more should be done by following the Information Technology Infrastructure Library, ITIL, principles in order to create the most efficient digital services. In the end we go through theoretical implications and future research ideas that could enhance our solutions to wider use.</p>			
Keywords			
Additional information			

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## 1 INTRODUCTION

This chapter focuses on explaining the overall view of the subject of the study, also providing the basic idea behind the study and why it is currently relevant. Secondly it explains the problem this research is going to look at and the idea how this research is going to look at this problem with the research questions. Thirdly It explains briefly all the important terms used during this paper. Finally, this chapter introduces the structure of this paper where, the general progress of this research is talked about.

### 1.1 Background

Nowadays digitalization is highly researched subject in terms of why digitalization has become so popular, what uses it has for the company and how it works in the business world. For example Poh, O. (2019) talks about how with MasterCard and digitalization can connect consumers to worldwide services and how new companies can use this to their advantage or how Lim, Raphael Explains during the pandemic companies focus more and more to adoption of technology and digitalization and how it has increased the e-commerce. So even though digitization has been popular topic last few years there still has only been a few articles like Siren & Knudsen (2017) and Meristö & Laitinen (2020) that focus what kind of problems this kind of shifting does to older generations who are not that used to smartphones or doing their financial business on the internet. This will lead to problems when companies start to reduce their physical business spaces or bank branches to save money and start offering more and more digital services and deliveries. Therefore, we will be conducting our own research survey targeted at the older generations, to find out how this digitalization has affected them, how they feel about it and do they have any suggestions for the banks on how to correctly implement the digitalization within the industry.

Due to the recent Covid-19, people are expected to use fewer physical services, as to avoid human contact. Therefore, it is now especially important to be able to offer digital services in a way that even the older generations will be able to use them fluently. Considering the digital services, the problem has been around to some extent as long as those have been around. Older generations have had a harder time adapting to new digital technology, and are more likely to use physical services, such

as going to the actual bank building to use the banking services, rather than using them online. Therefore, the relevance of this topic presents itself right now because most companies are trying to lessen their physical services and replace them with digital services, due to the Covid situation. So, it is important to manage these digital services so that they are easy for elders to use while still giving them the feeling that they are safe enough to use.

The problem will be examined from the perspective of Finnish finance sector and how they could get the older generations to use the digital services they provide. Goal of the study lies within the incentives that would make digital services more desirable to be used, rather than the physical ones. Research's idea is not to end physical services completely, but rather to find a way which would lead people from the older generation to be more comfortable with using digital devices which then would lead most likely to them using more digital services and payment methods.

The study focuses on finding what problems the older generation is having with adapting to digital services, and how could those be overcome. To reveal this, this study will be examining the problems older generations are facing related to using digital payment methods and other digital services. Another goal this study has, is to find solutions to make it easier for the older generations to also adapt to using digital services without them having that much trouble with the current technology. So, one clear target is to find out solutions for the older generation to feel comfortable using the digital services. Therefore, the solutions should be on the lines that it would be easy to use and safe enough that older generations could trust these methods.

This would help both companies and older generations because it would make transactions easier to the older generations and it would also be cheaper for the company because then they would not need to keep workers in physical premises. It could also increase the efficiency of the financial management from the business side at least according to Monika Dimitrova (2019). Also, the monetary value can be justified to the older generation or customers in general by them not needing to spend time traveling to the bank, i.e., gasoline costs.

## 1.2 Goals and research problem

This topic is important especially now that covid-19 makes it harder to serve customers physically which leads to problems with some of the older generation because they do not have other ways to pay for the services and they are having hard time to adapt to the new digital services. By finding a way to replace these services with methods that would be easy to the older generation and would not need physical services, this research could make sure that older generations could do their necessary payments without risking their health by doing them physically. Even if we ignore the problems that the covid-19 might cause because of physical visits to the organization, elders still will face the problem that most of the organizations are trying to change their services to digital form. According to Kwiatkowska & Skórzewska-Amberg (2019) Poland is trying to digitize their health care system which would cover e-prescriptions, e-referrals and electronic medical records. According to article this is planned to be fully completed and implemented from January 2021 which would mean that after new year there would be risk of senior citizens do not get access to the services they need if they are not familiar with the digital services, which then could cause many serious problems to the senior citizens health and to medical companies' profits and imago.

This study's idea is not to find ways to replace all of the physical services with digital services but with this research we might find some ways make it easier for the older people to change to digital services from physical services which would reduce amount of physical services elderly people needs which then would lower their risk to be exposed to covid-19 and make their life easier. The banking industry should not follow the aforementioned Poland's health care approach, but step by step implement the digitalization in order to let the older customers get used to it and not to feel forced to the change. Therefore, it is important to be able to offer digital services in a way that older generations will be able to use without problems and making sure they are able to learn.

This Research could help all companies that offers physical services right now and are trying to move to their focus more to the digital services because need for the

physical services have been reduced with covid-19 and with the current technological advances, which has made it easier to the business to offer digital services and for customers to access to these services. This has led to some problems in companies because they have to keep at least somebody at their facilities because some of the people prefer physical services and this is costly to the company. This will also help people from older generations that are not familiar with current digitalization payment methods because the idea of this research is to find ways to get older generations also into digital payment methods, which make the paying process faster and safer for them during this epidemic.

### 1.3 Research gap

We already know that the issue is that some of the older generation have problems with the bank changing more and more of their services to digital services. There are many reasons why older generations have problems with the digital system. One of the biggest ones is trust issues like Vines et al., (2011), which say that the older generation usually is more skeptical about online financial transactions. Reason for this is that they do not see themselves where the money goes, and they cannot be sure if it is going where it is supposed to go. Also, the news about people getting robbed or hacked via the internet does not help with this issue. According to Kajjanen (2018) this is one of three common reasons the elderly does not use digital identification. Other reasons were lack of skill, experience, and knowledge and last one simply lacked the device to do so. Also, according Meristö et al., (2020) the reason for why elderly people uses less digital services is their lack of experiences with smart devices like tablets and smartphones. Our place within the theoretical field lies in expanding the trust theory to our niche of digital banking for the elderly. This mostly is about creating trust for those who lack the understanding on the subject they have to trust in order to justify using it, in this case the digital banking service. We will be combining previous research of trust theory, elderly attitudes towards digitalization and the changes that come along with it, i.e., lack of privacy and new kinds of frauds.

One reason that is also possible for the older generation not adapting to current changes is that some of them are a bit conservative with their mind set and prefer to do things with the old fashion ways. Another interesting point that Knowles & Hanson (2018) found out in their research, was that most of the older adult's normal



lives function just fine without using the new digital technologies. Therefore, it can be reasoned that if their lives are fine without the digital services, why would they use them. This then again comes to the object of this study, to find out incentives for using them, and at this point we believe that even a small clear incentive that the customer can themselves use to justify the switch to digital services may be sufficient.

The previous literature mentioned above have mainly focused on why the older generations do not use new payment methods generally, and what problems they have with them, while this study also focuses on finding out what kind of problems older generations have had adapting to the new payment methods. This is especially important and interesting now with the current situation with the covid-19, as there should be more interest from both sides to do business remotely.

This research idea is to first gather the information already existing about these problems and then try to find some sort of solution that has been missed previously to help the older generation to adapt digital services better and make services better for them. Because right now as studies show some of the older generations cannot use these services just because it is too hard for them. Therefore, we believe that by first studying the previous data and then conducting our own survey in order to fill the gaps in the data in relation to our own research questions, is the right approach to this problem, as after studying the issue more in depth, we will be able to form hypothesis based on this said data and test it with the results from our own surveys. Alongside the quantitative data we look to get from our surveys, we feel that also approaching the elders with the possibility to speak their minds on the issue could help us see the problem from a wider point of view, and thus gain more practical ground level information, that we believe is critical in order to make any conclusions.

All in all, there has been studies on this subject that provide us with frameworks of conducting hypothesis for our study, Knowles & Hanson (2018), Vines et al., (2011), Kajjanen (2018), and Meristö et al., (2020), We still argue that there is new information to be found by conducting a survey to OP's customer base, and the target group within, and letting them to explain about their issues and problems with digital banking services. Although previous studies can be used to give out solutions to the

problems that many digital service providers are often having with the lack of interest and usage from the older generations, there will still be differences between different digital services, and thus more precise data for OP's digital banking service is going to be needed for this study. Therefore, we should indeed conduct the abovementioned survey for this study.

#### 1.4 Research questions

As our goal is to find what problems the older generations are facing that prevent them from using digital services, and how to solve those problems so that these people could become users for digital services. Based on this our research question is, how to overcome the obstacles the elderly people are facing with digital financial services. Basically, this question is looked at by researching what kind of obstacles the people not able or willing to use digital services are facing, and then using our findings combined with previous literature to conduct answers, so they could start using these said services. As we are set to use IT service management perspective in this study, the assisting questions are built around this theory. First assisting questions is how to present the digital services as a viable option to the older generation with conservative mindsets, and how can the companies within the banking industry make the digital services more accessible to the older generation by using ITIL. The second assisting question is how to gain the trust of these older users, so that they would feel comfortable in using them, and they would not have to feel confused and overwhelmed by the digital services. This second question then utilizes the trust theory, which we found to be very relevant to the subject of getting people to adapt to new technologies and services.

To answer these questions, we first need to know what kind of problems the elderly people face when they try to transfer from physical services to digital ones and also what kind of fears, they have towards the digital service usage. It is also vital to examine how they are facing these problems and how these said problems could be avoided in the future. The what and the how then works as the foundations for our solutions, on which we start building them. Secondly, we also feel that it is highly beneficial to learn how the older generation typically reacts or has reacted when facing these problems and how keen they are on receiving assistance from either their relatives or from the organizations offering the digital services. This should give

us clear information on building the solution as in if whether i.e., teaching sessions of sorts about using digital services are something that the elders would like to participate in. Therefore our solutions work not only on theory, but in practice too. Lastly, we are looking to generally focus on one particular theory about the problems here and use that as a basis. This is to make sure the research is coherent and does not get too extensive, and thus the solutions will be more clear and less confusing. The same goes to the theory of which we will be conducting our solutions based on. At this point we are set on IT service management, and we believe this is the best theory to base solutions on.

### 1.5 Used research methods

It is necessary in our opinion to use both qualitative and quantitative data gathering methods during this research. Qualitative data gives us accurate information about the issues and problems elderly are having while they are trying to use digital services. This is to clearly see the nature of the problems and not just testing what previous literature suggests that the problems are. On the other hand, quantitative data lets us see how many are already using the digital services and how common the problems gathered from previous literature are, as well as how the solutions from similar research fit our study. In the end the main idea is to find what ways digital service providers could offer their services to elderly people without them having many issues in using them, as well as understand the benefits of using them instead of their previously used methods. We will be using OP's position not only to create concrete practical solutions, but also to broaden the theoretical perspective. We feel this is justified as our theoretical contributions will be based on our study conducted with OP and thus theory will reflect OP's brand in a sense that it may not be similar with other digital service provider's customers. More studies conducted with more digital service providers in the future will create more consistency to the theory.

### 1.6 Terms

Here some of the key terms and abbreviations will be briefly explained, so that the reader will be able to understand this study better.

### 1.6.1 Digitization, digitalization and digitize

In the last decade digitization and digitalization has gotten a lot of notice from scientific research. Reason why people are so interested to research this topic is the currently rapidly growing technological development and it is very beneficial to find out what uses these developments might have in the business world. According to Jason Bloomberg (2018) digitization is when companies change from analogical form to digital form for example when they changed typewriters to computers which meant that written text went from paper form to digital form.

Digitalization According to J. Scott Brennen and Daniel Kreiss (2016) does not have that simple definition. They explained that digitalization is more than just business changing their business model to a digital version of itself. They believed that it was people changing their way of interacting to social life. They mentioned in the article how people have changed from physical mails to e-mail and how nowadays phone calls are not from a stable landline but rather from smartphones and can include video calls or social media posts. This definition would give one reason why elderly might have problems with digital services because even though most people have changed the way they handle their interactions, people that have used to send mail and call from landline for the last forty years are probably a bit hesitant to change their way especially because their old way of doing these said interactions that they are so used to is still working fine, and they may not be aware of the benefits of switching to more modern methods.

### 1.6.2 ITSM

ITMS means IT-Service Management which means many different processes, which help companies to organize their IT-services and deliver them to the end-users.

According to Sarah K. White (2019) Unlike other IT management practices that focus on hardware, network, or systems ITSM aims to consistently improve IT customer service in alignment with company goals. ITMS core idea is that IT services are part of the core operations rather than just a separate department (Jacob Gillingham 2020)

### 1.6.3 ITIL

ITIL means IT Infrastructure Library. According to Sarah K. White and Lynn Greiner (2019) ITIL is a library of volumes that describes a framework of the best practices to deliver IT services. According to Mathias Salle (2004) IT service management started to grow interest in people during early 1980 when disciplines like network management and applications management became the center of the IT management community. By the end of it had become evident to the companies that management of the IT function was very much needed because it was so expensive to upkeep IT functions without any management tools or principles. Therefore in 1989 The information technology infrastructure library (ITIL) was established by the United Kingdom's former central computer and telecommunication agency. Which is the most used framework for ITSM to this day according to Barreto et al., (2019). Nowadays there are already three updates to the original ITIL. Latest one ITIL 4 was released in 2019 which updated the framework to accommodate and answer to modern technology, tools and software Sarah K white and Lynn Greiner (2019)

### 1.7 Structure of research

First the research is to focus on the overall problem and explain why it is important to study this right now as well as why this is a problem for companies and for the customers in the current situation which helps readers to understand the importance of this issue. There the article would look at the problem from OP point of view and hypothesize how they could reduce this problem.

The second chapter would be analyzing already existing data from previous research and surveys found from this topic. The third chapter explains how the study is going to be conducted, as in explaining how the data was gathered and how it is relevant for the research, as well as what kind of methods we used with the survey. The fourth chapter focuses on looking at new data provided by surveys conducted by us based on the information we feel is needed to conduct our study to a completion this chapter also combines the old data from previous literature with the new data, that we have gathered from our survey, together and then analyzing it to find the answer for the research questions and finally the last chapter is a chapter for conclusions

which shows what kind of answers this study has found out and explain why and how these answers would make a difference.

The issues as mentioned earlier are how to make the digital services easier to use and access without losing any trustworthiness along the way and how to make it so that the elders with conservative mindsets could get into the idea of digital services. Also, because this research focuses on these problems during 2020 and 2021 when covid-19 is still around we have to also think if these solutions found during research works after the epidemic is over or are these solutions only there to patch things up until the epidemic is over. If solutions found during the research works only during the epidemic it does affect dramatically the conclusion that can be made with this research, although if another similar epidemic arrives, then the research would have a lot of practical usage in the future. Nevertheless, this should not really be the case, as this study is not done because of the Covid-19, but the pandemic works as a reminder why digital services are optimal solutions in certain cases.

## 2 LITERATURE REVIEW

This chapter will focus on the findings from already existing research and articles identifying what kind of problems older generations are having generally with the digital services and with the digitalization in general. This chapter also explains why these problems occur and why it is so important to solve them. Secondly it will explain why it is such a big problem for both customers and for the companies too. Firstly, we will briefly talk about Osuuspankki, as we are conducting this study for them, and then dig into the existing literature.

### 2.1 Osuuspankki's position

The OP, which operates in Finland, doesn't need to worry as much about most of the customers not getting access to the internet and with that to their digital system like some other countries would need to worry about. According to the Bank of Finland Bulletin (2018) over 85% of all the population use the internet daily which means that only below 15% of the population might not be able to get access to digital services they provide. It is also worth noticing that from that 15 % there is a high chance that not everybody from those is from the older generation and even if that 15 % of population would include all of the older generation it does not mean that they would not have access to the internet if they don't use it daily. So, the reason for OP having only few of their older customers are using their digital service has to be somewhere else, rather than solely not having access to the internet. Also, security issues with OP should not concern older generations that much because OP has been trustworthy during their long history. OP before they changed their name 1970, they were called Osuuskassa and first Osuuskassa was in early 1900, and thus is highly recognized and familiar to Finnish people. So, people should know that OP is trustworthy, but this of course does not mean that their servers could not be hacked because there are always people that can find new flaws in any system and use that flaw to his own benefit. Also, it should be noted that the trust placed towards OP is different from the trust placed towards their digital banking services. This is especially relevant to those customers who have little to no understanding of digital services or the digital environment in general. This leads to the conclusion that from the big problems that Siren & Knudsen (2017) and Meristö & Laitinen (2020) found

during their research and interviews only the difficulty of using the digital devices and internet and losing the physical contact and service are the problems that OP is facing, alongside the lack of trust towards digital services. Because it is a fact that older generations have problems learning to use digital devices especially if they retired before digital devices became more common in workplaces.

Although the OP group already has their services transformed into digital form, we still believe that digital service management and the digital service transformation theory will be the most efficient way of looking into this problem. This is due to the fact that even though one might have said services set up, they still need constant management and getting the customers to use them with the help of the digital service management system.

## 2.2 Literature review on the current situation

Current elderly people are a large group of citizens, especially in Western societies. With the increased number of elderly people and with the current situation with covid-19 companies need new ways to stay touch with their elderly customers, which is harder now because the government recommends over 70 years old to stay inside to avoid risk of getting infection because it is life threatening to them Yle (2020). According to Markku Huusko (2020), this means that companies need new ways to reach these customers. This is important to the companies because the older generation is one of the biggest customer groups in certain fields like medicine and the banking industry. Without them as customers companies that focus on these fields would make huge losses if they cannot reach their customers. According to statistics given to us by OP 25,72 percent of their customers are more than sixty years old, which means that over a quarter of their customers are from the older generation. Another good example of how important older generations are as a target group, is found from Finnish pharmacist union website, where they say that most of their customer base is of the older generation Suomen Apteekkariliitto (2007). These companies would face the same problem that companies in tourist cities have faced. For example, in Rovaniemi according to a survey done by Lapin yrittäjät Ry they expect about 600 corporations to go bankrupt because the current covid-19 is preventing foreign customers from accessing their services. Even though the problem for medicine business or bank business is not as dependent on elderly people as these



companies from Rovaniemi are with their tourists it would raise their profits considerably and make their business smoother if they could get the remaining older generation into their digital services.

It is also important to the older generation that companies do get in touch with them somehow as currently older people are relying on their relatives to get their product. Problems with relying on relatives will show when relatives are busy or if elderly people do not have any relatives living close by and even if they have relatives by getting remaining older generation customers into digital services it would also help their relatives because they would not need to take time from their own daily life as often as they have to do now. To solve this kind of problem elderly people, need to use digital services and ask for home delivery or domiciliary care but not everybody has funds to order domiciliary care especially if they don't have any relatives that could help them to fund it. Easiest and most cost-effective solution would be for the elderly people to use digital services and home deliveries that companies often offer, but the problem with this solution right now is that elderly people are often experiencing problems with new technology which prevents them from using these digital services. This aforementioned problem is exactly related to our research problem and thus we feel that conducting this study will have practical implications outside the banking industry as well.

According to Meristö & Laitinen (2020) there are two main problems that make it hard for elders to get into digital markets. According to their research one of these problems is privacy. In most of the companies, the digital services customers have to give sensitive information about themselves when doing their business, such as addresses, phone numbers, e-mail addresses and bank account numbers. Which is understandable from a company's point of view because they want to be sure that they can contact the customer if something goes wrong with the delivery from their part or if the customer has some problem with the payment especially if it is a part-time payment. This protects the company from losing money when the customer decides to not pay the rest of the payments. There is quite often news about some companies getting hacked, and thus leaking all the customers data that company is in possession of, it will make not just the older generation but anyone more reluctant to give out their personal information online. This is what happened to Sony in 2014. It

is one of the most famous data breaches that happened to this day. Sony got hacked in 2014 by the hacking group called guardians of peace which according to BBC news (2015) got thousands of social numbers and other sensitive information from their servers. According to Steven Musil (2014) the amount of security numbers was more than 47000 which included celebrities, current and former Sony employees and some of the customers who had bought games from their digital services. This just shows that if as big of a company as Sony can't make their servers hundred percent safe, how could any other company guarantee that the data they have won't be leaked. These kinds of events can make elders, or anyone else, skeptical about how many can see their information from these apps and services when they require your bank account number, password or even your home address. Which might mean that someone with dishonest intentions could take advantage of them

Second problem Meristö & Laitinen (2018, 2020) mentioned was about security according to their survey from 2018 and study from 2020 if elderly people are not skilled enough with the digital devices, they can cause the safety and security problems themselves, i.e., logging into a fake bank site. This is related to the last problem for example they could type their security number or password in the wrong place which would then allow anyone to see them which then would end up allowing dishonest people to take advantage of this situation and steal their assets. For example, one of the interviewed elders from Siren & Knudsen (2017) research said that if there is anything that needs to be taken care of on the internet I will go to my daughter or son because I am afraid that I will do something wrong. This kind of problem can be avoided by getting proper help when the elderly are practicing to use this digital service. This kind of help can be obtained from relatives if there is one or usually a company that provides digital services that has some people that can be contacted for assistance. But according to Meristö & Laitinen (2018, 2020), continuously relaying for help from other people will reduce their autonomy and it is commonly known that Finns really don't like to ask help, especially people that possess a more conservative mindset. Siren & Knudsen (2017) also mentioned how the older generation does not trust the internet. According to her article some of the elders that were part of the research felt insecure about making money transfers over the internet. These elders probably do not trust the internet because they cannot be

sure where their money goes, because there is no physical contact so they can not physically see that the money goes to the people it is meant to go to.

This goes along with the third problem which Siren & Knudsen (2017) found while doing their research. According to them, the most often agreed disadvantage of e-services or digital services was that the older generation loses personal contact. According to the survey that Siren & Knudsen did, most of the elderly, the over 65-year-olds, did value personal contact highly and losing it would make transactions harder to do. According to the article, the older the customer was, the more they disliked the idea of losing personal contact. This is probably due to elders' lack of confidence in using the internet or the digital services. According to Siren & Knudsen (2017) just like the dislike of losing the personal contact increased with the age of the customer, also the lack of confidence in using the internet also increased with the age which is understandable because those who had lived their working age without internet and computer might have problems to learn them just because suddenly, they have to do so to be able to live normally.

According to study by Mbama (2018) it is very important to understand that certain people see digital banking as a supplement, not a replacement to normal banks. Mbama (2018) also came to the same conclusion that it is the problem for banks to get these people to use the digital services. Mbama (2018) also highlighted that it is especially these customers that value security and service personalization very highly. Therefore, in order to get these customers into digital services, these customers must be informed about the benefits of using the digital services, and it is the banks' role to get them informed.

A recent study by Leichsenring (2020) found out that the use of digital services in Germany within the age group of over 65 years old increased by 107%, and especially digital banking had increased significantly, due to the Covid-19. This study, among the rest of the previous knowledge, we would like to argue that the most efficient way to get the older generation to use digital services, is by actually leaving no other options. Because of Covid-19, the German people had to start using digital services, because it was basically the only option for the risk groups, and thus it shows within this study. If there is no need to use the digital services then the older generation would not be interested in trying to use new methods in banking, if the

old method works fine. Like Knowles & Hanson (2018) argued, why would people need digital services if there are no problems that they acknowledge with the previously used physical ones.

It is also possible to find good enough incentives to get the older generation to willingly switch to digital services. Nevertheless, Incentives work differently for different people. Some people may be interested in trying free samples, whereas others cannot be bothered with those. Therefore, like Pirhonen et al., (2020) explain, it is important to make sure that the customers understand the advantages digitalization can bring to their lives, and thus they could justify the switch to digital services. Pikkarainen et al., (2004) describe how marketing efforts towards digital banking services should focus on explaining what the adaptation to digitalization provides, rather than brand building with less information about the advantages. The advantages such as cost savings and the ability to use these services where and when ever, should be clearly informed to the customer. A customer already possessing a mindset of digitalization does not need this information and the bank is better served with the branding type of marketing, but for those who do not possess it, are better targeted with informative marketing, in this case the older generation. So based on this there needs to be clear separation about the marketing targeted to the ones that are accustomed to the digital environment and the target group that is not digitally advanced.

So now that we have clearly identified issues regarding the reasons why people do not use digital services based on the previous literature, we should be examining how to face them. In order to do this, we will firstly be looking into previous literature to find what conclusions have previously been made, after that we will be doing our own empirical research on the issue.

### 2.3 IT-Service management

This chapter discusses the idea behind the IT-service management, ITSM and information technology infrastructure library, ITIL. We focus on how the need for ITSM started to rise in the 90's and how it has evolved since then. We look at ITSM analysis with ITIL, which is one of the most used frameworks for ITSM. We will be

also discussing ITIL's potential usage for OP's digital services, which also should be applied to the banking industry in general.

The role of digital services in business has been really important for the last decade, many different companies have either moved their whole business idea to a completely digital format like some of the mobile game companies while other companies have some digital services to support their businesses like many players in the banking industry. There are very few companies currently which do not utilize any kind of digital service in their business model. ITSM as a term is a relatively new term which is understandable because there was no need for it before companies started to digitize their services for their customers. According to Mathias Salle (2004) IT service management started to grow interest in people during early 1980 when disciplines like network management and applications management became the center of the IT management community. By the end of it had become evident to the companies that management of the IT function was very much needed because it was so expensive to upkeep IT functions without any management tools or principles. In 1989 The information technology infrastructure library (ITIL) was established by the United Kingdom's former central computer and telecommunication agency. Which is the most used framework for ITSM to this day according to Barreto et al., (2019). IT was established because this was the foundation to our currently existing IT service management and most updated ITIL version which is currently ITIL version 4 is still seen as one of the best tools for IT service management even though company cannot manage all of their IT Processes via ITIL it does cover the most important parts for the service point of view.

According to Marquis (2006) ITIL describes the most accepted guidance for enterprise IT operations and it does provide a roadmap that offers the opportunity to improve IT service quality, Efficiency, cost, and it helps to achieve business alignments. So, it is not a necessary requirement for ITSM, but it is the most used tool for it and even though it is really helpful for the company it does not mean that implementing it to the company is always correct. As the UK's office of government commerce which publishes the ITIL back in the days announced "there is no universal configuration to suit all" which means that it is impossible to make a framework that works in every single situation in every single company.

The popularity of ITIL has recently been growing rapidly according to these articles by Mathias Sallé (2004) and Sukmana, Husni et al., (2019) in 2003 1800 IT managers responded to survey where around 41% of responded were familiar with ITIL and 44% of those under uses ITIL standards in during their work at the companies. This shows that managers have started to see how important ITSM is and appreciate ITIL as a ITSM framework. According to different studies implementing ITIL can improve service quality by reducing the server's downtime and improves response and resolution time to incidents and customers incalls (Jon Iden et al., (2013), Carter-steel, A. (2009), Marrone, M., & L Kolbe (2010) & (2011) and Wan S.H.C., & Chan Y. H. (2008)). With these kinds of improvements banks could offer better support for elderly people for the digital services which then would encourage them more to test these services. These improvements were mentioned frequently in the articles. Of course, there are other outcomes and improvements in implementing ITIL but because different studies use different methods and sources while looking for the conclusions there is no easy way to compare those findings with each other or state that in all situations ITIL would improve this or that. We pointed out just the most often mentioned improvements that many different cases found that ITIL improved. At this time ITIL is often recognized as the best practise for IT management, (Cronholm & Persson 2016).

There are many benefits to implementing ITIL in the company. According to Marquis (2006) ITIL's main point is about reorganizing the work so that it is easier and more efficient to do, and this way provides the company an advantage in the markets. According to a survey by marrone et al., (2011) they found out that IT executives think that ITIL helps them with service quality, customer satisfaction, server downtimes, return on IT spending and overall morale of the IT staff. Cronholm & Persson (2016) on the other hand identified the main strengths and weaknesses of using ITIL as an ITSM management tool, by sending questionnaires to IT managers of certain companies. They concluded that the main strengths lay within its reliability, cost efficiency, easiness to communicate and its ability to support structured work well. The weaknesses on the other hand lay within ITIL being too abstract and not being as concrete to a certain task, but they also explain

that this would make ITIL less adaptive to a variety of tasks. Another problem that Marquis (2006) brings up is that implementing ITIL to the company business model is not always easy and if it is done wrong, it usually fails completely which then causes the company unnecessary losses. Cronholm & Persson (2016) also explain that some also experience adaptation difficulties with the ITIL, and some experience that it is too heavy to comprehend, as the ITIL material concretely consists of nearly 2000 pages of information, required to be understood.

To get more practical with ITIL, it is basically a set of guidelines that helps an IT practitioner to deliver the best possible services. It consists of seven guiding principles that are to guide an organization to keep on focusing on their chosen path. First principle is to make sure that every task is to focus on creating value for stakeholders and to focus on creating the best possible experience for users. Second principle is to start where the company is at the current moment and analyze the current situation and improve from that current situation accordingly. Third principle is to progress iteratively, in a sense that collecting feedback and adapting the new information to the operation and doing this repetitively, after each modification, will create a loop that keeps on improving the operation and processes of the organization. Fourth principle suggests collaborating and promote visibility for the organization, this is in order to create the maximal value for the company. Fifth principle recommends for the organization to think and work in a holistic manner. This is to unify organizational processes so that the different parts of the organization create value across their solitary parts and connect with each other. The sixth principle is to keep the operation simple and practical. This is to cut down unnecessary work and not to waste time and resources. Simplicity comes when just keeping the wanted outcome in mind and not making the process too fancy. Last, seventh principle is to optimize and automate. This means that the most flexible yet limited resource, which is people, should be put to work on tasks that cannot be automated. This to make sure that people are utilized in the best possible manner and automation is used in tasks where it is possible and thus save resources and money.

Next, we will be discussing ITIL's potential usage for OP's digital services, which also should be applied to the banking industry in general. We will go a bit more in depth on this topic, based on the ITIL 4 guide by Markos Symeonides (2020). Later

on, we will compare our results to these utilization suggestions and try to find how it can concretely be put into action to combat the problems and obstacles we are to find within the digital services. This will also help us with the one problem that ITIL often has, that it is a bit abstract, and it may be hard to see practical usages to certain tasks.

First principle, to focus on the value, can be easily described that the bank should keep the main value of the service in mind at all times. So, for OP, they should keep in mind what it is that they fundamentally bring to their customers. In regard to their digital services, it should be as simple as giving the customers a platform to handle their banking in the online environment, rather than going to a physical bank. Here it then should be broadened to match what people do in the bank, which basically is to pay the bills, transfer money and maybe check your payroll etc. Basically, the focus on the value means that OP should focus on what the customers want from their digital service, and not trying to make it too fancy. It may not be too simple a task to find out the actual value of what the service brings to the customer and thus focusing on this may help OP to find solutions for this whole problem we are studying.

The second principle, to start where you currently are, should suit OP very well as they are already a big business and already have assets to utilize in bettering their digital services. To be more practical, conducting this research we are doing right now started with OP starting where they are and trying to conduct measurements with the help of this study for example, and making adjustments from there. This is similar to the third principle which was to work and think iteratively, as in by what we are starting to do by conducting our survey and thus gaining feedback on the problems people are having with the digital services. Based on this iterative principle, OP should continue to gather customer feedback after utilizing results from this study and putting them into action, and then using that feedback to improve their digital services constantly. The adjustments made to the services should not be too major, and feedback should be gathered fairly often on the new adjustments. This should be done in this manner because if a new adjustment is made and not gained feedback on, then the future adjustments made to the first one is harder to measure due to the fact that the first adjustment was not measured and thus it will be harder to compare these two.



The fourth principle focuses on collaborations and promoting visibility. This collaboration, especially amongst users of the digital services will help OP to co-create services with their customers so that both parties can benefit from the activity, as the company finds out what the customers value and want with the service and customers get what they require. According to Markos Symeonides (2020) The collaboration should also occur between different teams and parts of the organization in order to find optimal solutions for different problems with many perspectives for the matter. Symeonides (2020) also explains that visibility factor comes into play when different teams do not know what other teams are doing and this halts the problem solution. So, when OP is to conduct solutions they should have clear visibility and collaboration between different teams in order to get many perspectives to choose from for the issue and this will also cut down any duplications, due to different teams working on the very same thing at the same time and coming up with the same conclusion. The fifth principle to think and to work holistically is quite similar in a sense that it emphasizes that the processes within the organization should be well coordinated and every part of the organization, at least those who are working to any extent on the problem, should be kept on track all the time. So, for OP when conducting solutions every part of the organization working on the solution should also know what the other parts are doing too. Symeonides (2020) describes a problem that may occur if different departments are not up to track with each other. He explains that i.e., an IT department may be sure that a change they are deploying will be surely beneficial for the company, but there is a business initiative made by different departments set to happen when the change is to happen and they would overlap in a poor manner with each other. Thus, the need for holistic working manners and visibility is clear.

The sixth principle was to keep things simple and practical. There is a clear need for this principle within our study, as we have hypothesized that the digital services may be too hard for elders to use and thus, simplicity could be key here. Symeonides (2020) explains that the focus of the service should lay on the mainstream demand and not to make it too fancy only because a small number of people would utilize the special parts of the service. On the other hand, these special cases that are not required by the vast majority should be handled case by case. For OP this means that a very unique and special request considering the services should not be

implemented for every user, but when requested those should be handled uniquely. This saves effort when making and maintaining the digital services, but it also makes it less confusing for those who would never touch these said special parts of the digital service. All in all, the digital service should thus be as clear and easy to use as possible, especially for the elders that may find these confusing already.

Last step is to optimize and automate the parts of the digital services that do not require human labor. This part would be the hardest one for the OP or any other bank because people want to have some sort of human contact while doing their business in the bank to feel more secure to do the transaction via digital services. Even if it is just that they can ask questions in live chat if they have a problem. This step is important one because it can save lots of resources if done correctly but also lose extra resources and imago if done wrong OP should think carefully what part of the digital services, they can automate without making services more difficult or annoying to use for the customers. Automating the wrong part of the business can only make errors in the program causing malfunctions to the services which then again make customers trust the services less.

#### 2.4 Trust theory

Trust has always been at the center of the financial industry. Even when using cash, the note itself has no value, but trusting that it holds the value it promises creates the value for the note. With paper money though, one can concretely see the wealth, whereas money being in electronic format, just numbers in your banking application, it is not as easy to trust it as having the value it is supposed to have. Therefore, even more trust is required in order for electronic money formats to function. As we have so far concluded, trust is a clear issue with the older generation adapting to use digital banking services. Like Vines et al., (2011) explained that it is especially the older generations that possess the lack of trust towards digital banking services. Therefore, it is important to find out how trust has been considered within the previous literature.

According to Grabner-Kräuter et al., (2008) analyzing the trust within internet banking should not focus solely on interpersonal relationships but should also regard

impersonal ones as well. Therefore, the trust is divided into trusting the banks and people working in or managing the bank, and also trusting the machine, or the online environment, that is not a person. At the moment we argue that most of the lack of trust towards the digital services is caused by the impersonal issues related to the actual digital environment and not the trust towards the banks in general. To go more in depth in this issue, we also argue that the lack of trust is mostly related to not understanding the digital environment and mistrusting one's own skills within this digital environment. Like we previously mentioned, it is hard to trust something that one does not understand, and therefore again it is important for the customer to understand the digital services and the environment in general, and it is the services providers or the banks task to teach their customers about their services to reduce this problem.

Yu et al., (2015) Identify trust as an important challenge for digital banking. They explain that the lack of trust is clearly a major obstacle for people to use the digital services a bank has to offer. Grabner-Kräuter et al., (2008) also explain that in previous literature, the lack of trust has often been considered the main reason why people did not tend to use digital banking services. Therefore, we believe that finding out how to get people to trust digital services is at the center of this problem. The fact is that if one's skills in the digital environment are not very great, then it is harder to trust something that you do not quite understand.

Grabner-Kräuter et al., (2008) argue that trust in an online environment is harder to achieve than in face-to-face situations. Reasons for this is the need to also trust the digital service, but also the trust that one needs in a normal, non-digital situation is there. It could also be argued that it is easier to trust a bank official in a face-to-face situation, rather than in an online environment where the human is not actually concretely present, and even if they are, they would still be faceless towards the customer. So, there is more uncertainty in the digital environment and when this uncertainty reaches too high of a level, people will not trust the digital services. Therefore, reducing the uncertainty in order to gain trust is important in order to even get the customers to really consider the digital services.

Munoz-Leiva et al., (2010) studied how trust is gained for an electronic banking website and how different factors influenced this. They identified that all the

problems that are preventing the adaptation of digital banking services are linked to the processing of sensitive, or personal information within the transactions happening in the digital environment. The trust factors Munoz-Leiva et al., (2010) used in their study were, customer comments, guarantees of money refunds in cases where a fraud has happened, applying rules that the public has recognized and security arrangements. Their study concluded that the use of customer testimonials, money back guarantees were especially helpful in order to gain the trust of customers. Also, the security arrangements such as security seals and them being acknowledged by the public and third parties were increasing the trustworthiness of the webpage. Pashkov & Pelykh (2020) also explain that the aspects of trust, such as authenticity, personal information and confidentiality are often not given enough attention in the financial industry's digital services, whereas cyber security is often the biggest thing that these trust issues mainly focus on.

Pashkov & Pelykh (2020) argue that the lack of development methods that are designed to digitally transform financial services, based on trust, is slowing down the whole process of digital transformation in the financial industry. Therefore, in order to develop better digital banking services, the trust of customers must be gained for it to reach the full potential. All in all, it is essential to keep trust as the biggest obstacle to overcome in this study, as it is preventing the development as well as being the biggest cause for people to not use these digital services.

Munoz-Leiva et al., (2010) also explain that the functionality of the webpage is very important in order for the customer to feel safe. If the webpage is slow and crashes often, then the customer may not feel very comfortable using it. Badly working webpages and applications may often feel shady to a customer, and they might even think that the webpages are slow because they have been hacked. A problem with this is the fact that it may not be the bank's application or webpage that is slow, but the customer's smartphone or computer. Therefore, even if the fault is not with the bank's side, a customer may still feel uncomfortable with the digital services. The bank and other digital service providers should also bring this to customers attention, even if it could be argued that it's not too hard to understand whether the problem is with one's device being slow or the webpage being slow, but for the people lacking

the skill with this kind of technology, they should be informed about the reason for the problem still, rather than being uninformed about it, or even blamed for it.

Ho & Oh (2009) studied the effects of electronic security seals within e-commerce websites. They explained that it is important for these websites to show the seals very clearly to the customers to gain their trust. It is highly important for customers to notice these security seals within the webpage in order to gain their trust, even if it happens unconsciously by just seeing the seals on the webpage. A generalization of these seals amongst many webpages will create a network effect that when a customer sees the seal, they understand that it is the same security seal that they have seen on other webpages, i.e., online shopping pages, that they have previously used and had no security problems with.

As discussed earlier, many recent studies have now started to form a trust-based approach to development of digital financial services i.e., Pashkov & Pelykh (2020) and Munoz-Leiva et al., (2010). Therefore, trust has clearly been revealed as the issue behind the negative attitudes towards digital banking services. All in all considering the aspect of trust with the digital services, we base our hypothesis from this aspect to argue that rising the trustworthiness of the digital services will increase the usage of them amongst the older generations. Therefore, we are to examine in addition to the previous theory, how could the older generation trust these digital services more. This will be done by conducting qualitative survey questions to the target group.

## 2.5 Reflecting on ITIL with previous research

The reason why we strongly believe that the efforts put into IT service management are necessary lies within the fact that these IT services are very complex in nature. Gil-Gomez et al., (2014) explain that there are many factors affecting whether the IT services are efficient enough at the given time, such as technological development and regulations, therefore managing these is highly relevant in order to optimize their usage. Also based on our theoretical research on the subject, we have so far concluded that the use of ITIL is the best practices at the time, and thus our hypothesis focuses on it being the answer for how management can enhance their actions towards efficient digital service management.

Gil-Gomez et al., (2014) explain that the ITIL framework ensures the IT services of the organization align with the objectives and the business processes of the organization. Therefore, the service management and the organizational strategy as a whole is on the same page, and it is important that people within the organization know the overall strategy of the organization and act according to it. ITIL is therefore able to help to unify the IT services to the organization's strategy.

One of the strengths of ITIL that Cronholm & Persson (2016) defined was ease of communication. Related to our work, we have defined that communication with the customers and bank, in relation to for example, informing customers about the benefits of using online banking and assisting them in case of any problems occurring, in a way that there is a common understanding about the problem. As we have pointed out, trust comes from understanding the services and the platform, thus being able to communicate in the best possible manner, will bring the best possible results and thus enhance the customer satisfaction.

## 2.6 Concluding the theoretical part

At this point our hypothesis on this issue lies within the biggest obstacle being the lack of trust towards digital services, based on not understanding them and thus making them distant for older generations not used to them. To face this issue, we argue that the idea of ITSM and using ITIL would lessen this problem by making the digital services more clear and easier to access and understand for the older generations. Considering the way to implement the digitalization, our hypothesis is that the best way of doing it is via compulsory methods, but there must be good enough guidance to it and also good enough explanations why to use it.

To sum up our hypothesis, for the obstacles part, based on the theoretical research we argue that the major obstacles are the lack of trust towards digital services, caused by mainly not understanding them. Another obstacle we argue is preventing the utilization of digital services is lack of skills and the unwillingness to learn those. Lastly one major obstacle, which is also the easiest to solve, is the lack of knowledge on the benefits that using digital banking services would bring to one's life.

For the solutions part we argue that bringing out the information why to use the digital services is the key. Another one would be implementing and following IT service management protocol, and thus enhancing the system, i.e., by following the ITIL 4 guidelines.

### 3 CONDUCTING THE STUDY

This chapter focuses on the methods of the empirical part of this research paper. The purpose of this chapter is to make the reader understand how the data has been collected and analyzed as well as explain why this kind of method has been chosen to be used during this study. This chapter will also describe the validity and reliability of the study

#### 3.1 Mix of qualitative and quantitative

The survey for the data gathering in this research was a mix of qualitative and quantitative. The idea was to get qualitative data by interviewing people in the OP's office area to get answers to why people are not using digital service and what is the problem according to customers while gathering other quantitative data with surveys to get statistics about peoples how much people use digital services and what services they use. But because covid-19 and new regulations we were not able to go gather the data face-to-face, so we decided to do a survey via mail. In the survey, questions 1-9 and 11-14 were multiple choice questions that we used to gather quantitative data. For the research these questions' purpose was to find overall opinion of how easy it is to use OP's digital services and how many of their customers has a trust issue or problems to use their systems. While questions 10 and 15- 18 were an open question section for gathering qualitative data. Such as what kind of problems customers have while using digital services and why. We wanted to also know the reason behind the trust issues that articles like Yu et al., (2015) and Grabner-Kräuter et al., (2008) explain. By having customers explain the issues they are having with open sheet form make our result also more reliable because this way we got honest answer from the customer own opinion rather than having him forced to choose one of the few answers that we thought that might be the problem

#### 3.2 Methods in theoretical part

The purpose of the theoretical part is to find the reason why elderly people have issues using digital services in the banking industry from already existing literature and trying to find answers to how to find a solution to these issues. In the theoretical part we are looking into ITSM and the main tool of ITSM which is ITIL. We decided



to choose this as our main topic in the theoretical part because with proper ITSM companies IT-services should be easier to use which we thought would help our target group to have less issues with bank services. Research used scholarly databases, web databases and some news sites to gather the data for the theoretical part of the thesis which tries to find solutions to research problems from already existing literature. Databases that were used included Proquest, EBSCO and Google Scholar and Researchgate. All of the articles used in the theoretical part resonated somehow with our research questions to ensure as good validity as possible. During the theoretical part sources were double checked from another article to see that the information is reliable.

### 3.3 Methods of empirical part

To get customers point of view seen during our research the initial plan was to do our personal interviews by going outside of OP's business premises and interview their customers there and get more data about their opinion that way because we needed their opinion about digital services and the reason why they are using them or are not using them. Semi structured interview would have been optimal for our research because with this method interview could lead responders to our topic and still hear their opinion about the digital services more freely than with structured interview or survey with answer options. According to Koskinen et al., (2015, p.104-105) semi-structured interview most used way to gather qualitative data because it can be really effective for the researcher and effortless to responders compared to other qualitative data gathering methods.

Unfortunately, because of covid-19 and OP's new policy, which was implemented one week before our scheduled interviews, research could not be done this way which made us change our plan. In the end research was done by doing a survey form with OP staff, which then was sent via mail to three hundred elderly OP customers inside the Oulu area that were chosen with a random sampling method. The empirical data of the study was gathered from surveys done via mail that were sent to 300 people. The data we got back from the survey consisted of 45 answers from OP's customers where they gave their opinions about OP's digital services by answering our 19 questions survey frame about how easy they are and how trustworthy they think OP's digital services are. These questions were made so that

they could not lead people to answer certain questions in a prescriptive manner, because we wanted to get as honest answers from people as possible and questions that lead to people answering certain ways would make the data not reliable. Then customers then send the answers back to OP where then the OP employee brought them to us to analyze. These answers then were changed to digital form where it was easier to see correlations between answers and do different kinds of analyzes via computer software's. The research survey frame (appendix 1) was 15 to 19 questions long depending on, depending on if the interviewee had used any digital bank services before or not. Out of 300 surveys sent we got 45 answers. From the 45 people that answered our survey 10 people were below 65, 5 people did not want to give their age and 30 were 65 or older.

### 3.4 Building the questionnaire

Considering our question, we first asked whether the respondent has used any digital banking services before. If they had used any, they would then answer questions two to five, and if they had not, they would go straight to question six. Questions two to five were answered from a scale of one to five rating, and questions six to nine were in a yes or no format. Questions ten fifteen and sixteen were open format questions where the respondent could give us more precise feedback regarding the issues and digital services. Questions eleven and twelve were about preferences of using banks. Questions thirteen and fourteen were about skills in the digital environment and question seventeen was about asking how trust affects these problems they have faced and question eighteen then gave an open space to commend what kind of factors affect the said trust placed on the digital services.

More in depth about the questions, two to five, we believed that those elders who are not accustomed to digital services would rate them very low, but when they gain somewhat of an understanding of these digital services, and the digital environment in general, their ratings on the services would grow significantly. As we have discussed, understanding is a basis for forming trust towards the services and this grants the user confidence in using them. We are to measure this in our research by asking the levels of satisfaction towards the services and also by asking the levels of trust the respondent has towards these services. Lastly, we are to use a common question of to what extent would the respondent recommend these digital banking

services to others. This way we can gain support for our hypothesis that understanding digital services is the key.

The purpose of our questions from six to nine is to find out whether the respondents had had any help with using the digital banking services, and whether they would be interested in gaining assistance with those. We are also going to ask whether they had received information about the benefits of digital banking services from the banks side, which based on our theoretical findings was found highly important, based on studies by Pirhonen et al., (2020) and Pikkarainen et al., (2004). Asking about this matter is also highly relevant when conducting solutions, as it gives us clear information whether OP has done their marketing efforts correctly towards digitalization. It is not enough that they just tell people about the benefits, but they will have to make sure that the elders understand these benefits and can see practical use in relation to their own life.

In the next part we are to ask what kinds of problems the respondents have had with digital banking services, and how they react when facing these problems. These questions may give us new information about problems that the elders might be facing, and they have not been discussed in previous literature. We also believe that finding out how they are trying to overcome these problems is relevant information when conducting the answers to our research questions.

In the next part we are asking some basic information on how the respondents rate the importance of bank facilities in their local area and how they like to pay their bills in general. This is to find out how much the bank facilities mean to the older generation, and how cutting down their numbers would affect their lives. We are also asking about the security risks and how the respondents see them affecting their will of using digital services. Lastly in this part we are asking the respondent to rate their own abilities within the IT field.

In the last part of our survey, we are asking what kind of problems the respondent sees with the digital banking services, so we could find new problems we have not really considered about, based on previous research and also to complement the previous research by finding out that the problems mentioned are indeed very common. Lastly, as we chose the trust theory as our basis about why these problems

exist, we are to ask whether the respondent feels they lack trust towards the digital services, and if they want to comment on the issue.

This method, of sending out surveys, was not as optimal for our research as face 2 face interviewing would have been because people usually don't like to write as long explanations about their reasons to do something than they would with face two face and quantitative surveys like surveys via mail are not the best way to obtain answers to questions like why or what, because usually to get answer to questions like why or what, researchers use qualitative data gathering method like in-depth interview or half structured interviews. Also, there is some problem with the reliability in surveys done via mail because they are not as trustworthy as doing the interview face 2 face. One reason is that people might want to look better to the outside than they are and lying to the paper is much easier than lying to people. Others can be that people are just answering randomly and sending our survey back hoping to get the reward of 50 euro which OP agreed to draw between all who answered our questions. But because covid-19 did limit our ways to get answers from OP's customers. It was the only way to get answers from them legally without risking their health during the process.

### 3.5 Validity and reliability

According to (Koskinen et al., 2005, p.252-254) very rarely findings in scientific literature are absolutely correct or completely wrong which is why according to Koskinen, it is important to make sure that the scientific literature results can be trusted. Best way to make sure that the results are trustworthy is through reliability and validity.

Koskinen et al., (2005, p. 254) explains in his book how validity is a measurement of how much of the data gathered represent the chosen subject. In this paper it would mean how well the survey questions are made to get validity data out from the interviewees and then how useful this data is to the research. Koskinen also explains how validity can be divided to many types of validity like internal and external.

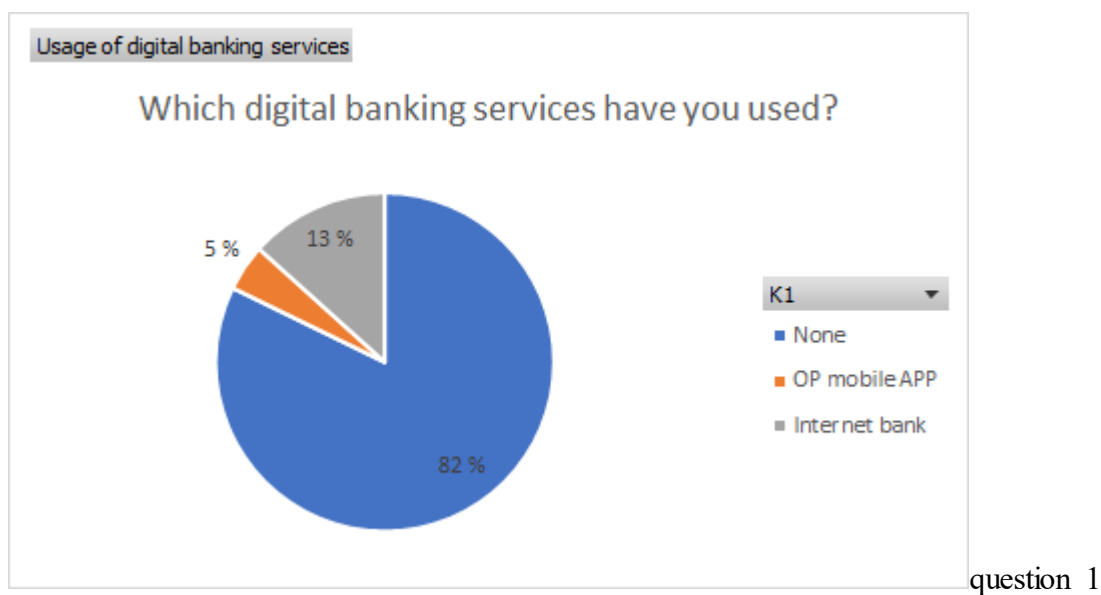
Internal validity means that the research is logical and does not have internal inconsistency or conflicts inside the research. External validity means that the study can be generalized in other cases than the current research (Koskinen et al., 2005 p. 254-267). In this case it would mean for example that this study could be done in different cities or to different banking companies.

Reliability measures how reproducible and trustworthy the data in the research is. According to Koskinen et al., (2005) one way to make sure that the data is reliable is to ask many questions that answer the same question or ask the same question in different formats. This way researchers can see if the responders are just answering in the questions randomly or putting false answers. In this survey we did use this method to find what problems the older generation had and to understand how familiar they were with digital devices. Of course, this method can't alone make sure that the data is 100% reliable but, as said earlier there are very few cases where scientific literature can prove something to be absolute truth.

To make this research reliable and valid the research is structured logically so that it can be seen what methods were used while gathering the data, then presenting the findings. Furthermore, during the data gathering sending 300 randomly selected elderly OP customers to get big enough sample size so that the data would be more valid.

## 4 FINDINGS

First part of the questionnaire focused on finding out how many in our target group were using digital banking services in general, and how those who have used them felt about them. The results showed that 82 percent of respondents had not used any kind of digital banking services. This tells us that although digital banking services are very commonly used in general, the older generation tends to avoid them. Only about 5 percent of the respondents had used OP's mobile banking application and 13 percent had used internet banking on their computer. Although we expected that older generations would use fewer digital services, we did not believe that the usage would be at this low level.



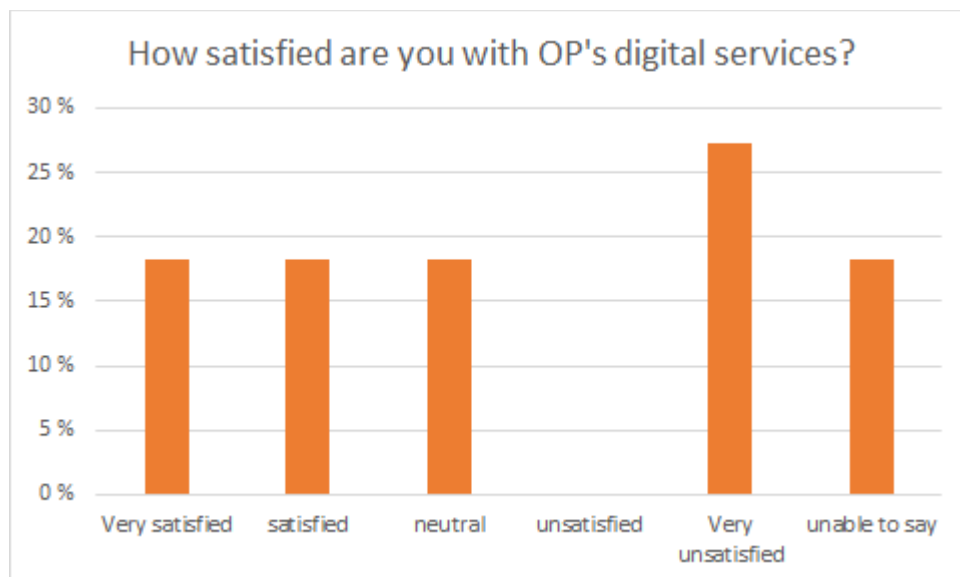
Based on this information we can clearly confirm that there is a need to find solutions on how to move this older generation towards digitalization, as we can clearly conclude that the digital banking services are not very popular amongst the elders.

The next questions regarding how those who have used digital banking services felt about them, were answered from the views of those 18 percent of the respondents who had used digital banking services. One thing to note is that in most of these questions the respondents left some blank answers, and we took those into account

by making them represent inability to say or rate their opinion in the diagrams. Although there is not much to conclude about these answers, we still feel that those need to be represented in order for this research to be coherent. As mentioned above in the research methods chapter, we had to send out these surveys, rather than doing face to face interviews like we had planned, and thus some questions may have not been answered to the extent we wanted. This is especially a thing within our target group as the older generation may not understand the questions fluently due to their age and doing the interviews face to face would have allowed us to open up the questions more to combat this problem. This explains the reason why some blank answers were given in certain questions. Another problem with these questions now was the low number of answers for these upcoming four questions, as only 11 of the total number of 45 respondents answered these questions, due to these ones needing to have experience with digital banking services in order to give out answers. Also, to note, a couple of respondents who previously mentioned that they have not used digital banking services answered some of these questions based on their understanding of these services. Here we can assume that they still had some experience with these but did not find it sufficient to say that they had actually used them, and thus we decided to take into an account these couple of answers too. Here again had we been able to conduct these interviews face to face, we could have had more information about this reasoning, and we could have explained the questions more clearly.

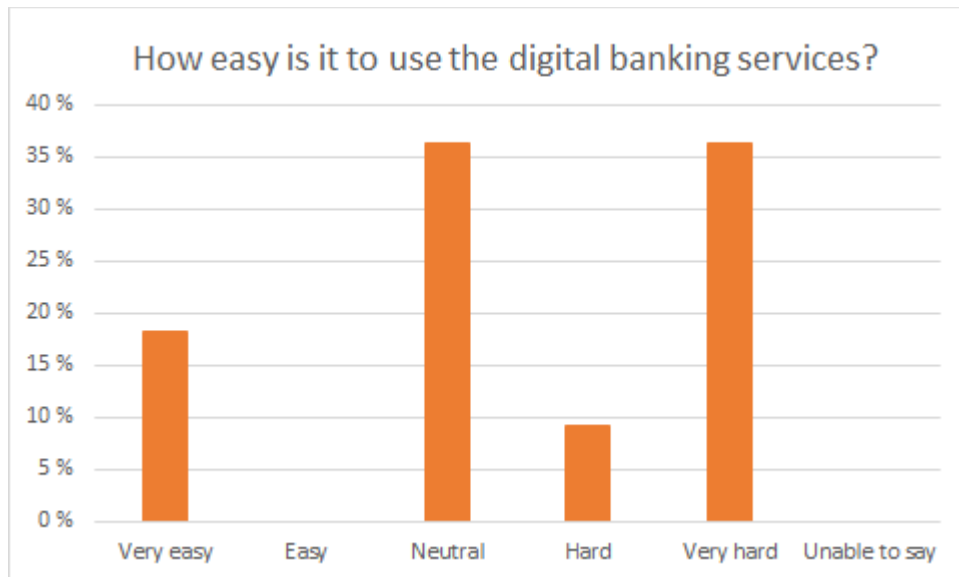
First, we asked how satisfied people were with OP's digital services. Although the mode of the answers was very unsatisfied, most of the answers were still placed within the neutral to very satisfied area. Therefore, we can conclude to some extent that those who understand the services are often satisfied with them and those who cannot understand are very unsatisfied as they cannot even use them at all. This can also be somewhat identified by the fact that no one regarded their satisfaction level as unsatisfied which also follows the conclusion mentioned above, that after getting the hang of things, or understanding the digital service, people's attitudes towards them grow significantly, and thus they go straight, from being very unsatisfied to neutral or satisfied with the service. Therefore, when forming our definite conclusion on the question of how to overcome the obstacles preventing the older generation

from adapting to the usage of digital services, we need to keep this in mind, as the first step seems to be the hardest one to climb.



In the next question we asked the respondents to rate the ease of usage of the digital banking services in their opinion. Here we can see that like in the previous question, very hard has had many votes, but hard relatively few and then the neutral option has received more again. This somewhat follows the previous question's line, where the step from very hard to neutral kind of skips the hard placement. So here we again suggest that the first step is the hardest. The difference here lies within the fact that the growth of the easiness somewhat stops after neutral level, and thus we feel that the banking services should be made easier to use, as the majority here feel that it is either very hard or neutral. Although it is the majority, the fact that 18 percent feel that it is very easy to use again suggests that after learning how to use it people feel very confident with it.



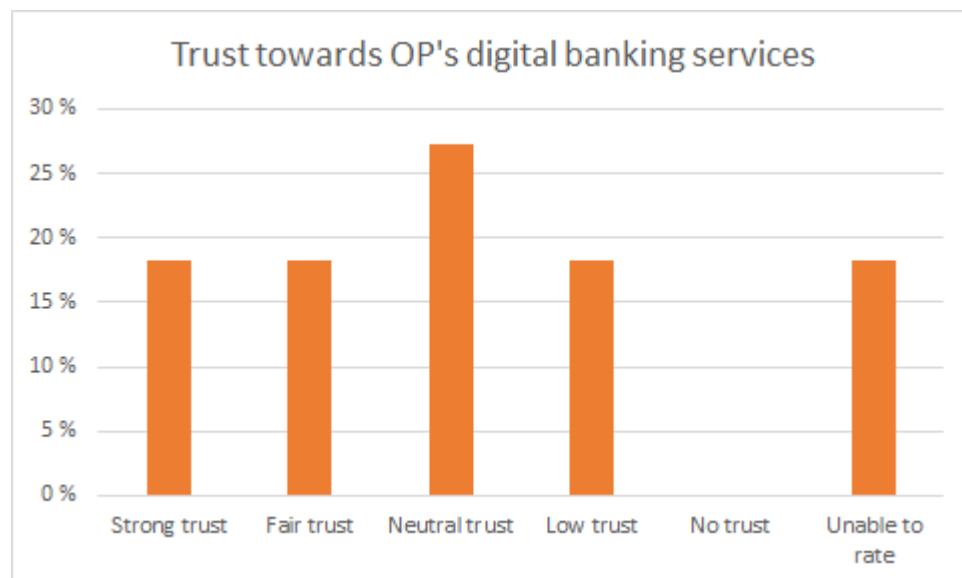


Next, we can identify the steps here skipping the levels of easy and hard, and therefore we can see that people have either strong, weak, or neutral levels of confidence in their abilities. This could suggest that when people learn to use the services, they either learn them very well or only moderately. Moderate level of learning and being able to use the digital service could be sufficient to some extent, but we feel that raising the level of understanding here will increase the confidence and this will then increase the motivation to use the digital services rather than going to the bank. As our problem in this research was to find how we can get the older generation to use digital services, we can argue that those who only rate their level of confidence in using the digital banking services neutral would still rather use the old-fashioned methods.

We also asked in our questionnaire the preferable method of paying bills, of which we will be going more into later. This question was targeted at every respondent rather than the ones who had used digital banking services, like in this question. When comparing these answers, we found out that everyone who rated digital banking as being very easy to use, said that their preferable payment method is through online banking or the mobile application. Only 25 percent of those who rated digital banking services being on a neutral level of ease of use said that they prefer paying their bills with online banking. As for the rest who rated this hard or very

hard, none preferred to use digital banking methods. Therefore, although people feel neutral in their abilities to use the digital banking services, they still do not prefer using those. Therefore, it is not enough for people to have neutral levels of confidence here, in order to get the older generation to use digital banking services. So, with the help of using ITSM, there must be a focus on giving out enough help and information to reach the higher levels of confidence on using the digital services, in order to get the older generation into using them.

In the next question we asked the respondents to rate their levels of trust towards OP's digital banking services. Here we wanted to find out how people trust these digital banking services in general and if it has an effect on whether they choose to use them.



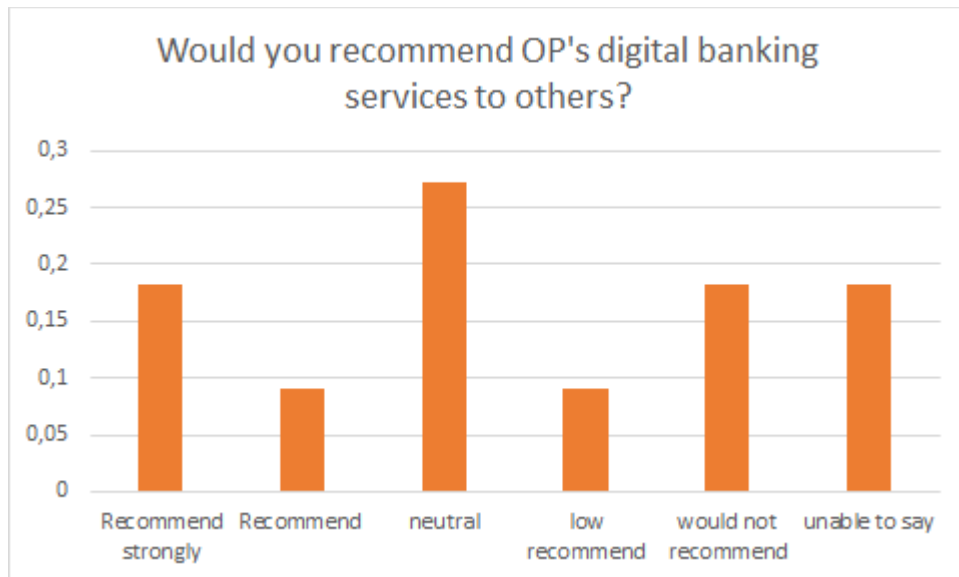
question 4

Here we can see that in general people trust these digital banking services that OP provides quite well. As we have hypothesized, trust should correlate with the understanding of digital services. When comparing the answers in this question with the earlier one we can conclude that those who rated their ability to use the digital banking services highly also had strong or fair trust towards these services. Similarly, those who rated the easiness on a neutral level had mostly neutral levels of trust too. Interestingly those who previously had rated the easiness level being very hard here rated the trust a bit higher in relation, either with neutral or low trust, but not with no trust. This most likely means that people still have some trust towards their bank, although they do not understand the digital services, but it is not enough that they

feel confident about using those. So, thus we can argue that the issue of trust is not addressed towards the bank, but rather towards their own skills of using digital banking services. This also came up within the open format questions later on, where we asked factors affecting trust towards digital services. There the respondents explained that the lack of trust in their own skills in the digital environment causes them to stray away from these digital services. So, to conclude there is some trust towards the digital banking services, but for those who do not understand them, the trust is formed from the trust towards their bank. This is what we also argued before based on Grabner-Kräuter et al., (2008) theory on trust being divided into interpersonal and impersonal trust, as in trust in banks and trust in the programming or the machine. This is also supported in open ended questions of the survey where people explained that their trust issue is indeed faced towards the digital environment.

In the last part of these questions pointed towards only those having used digital banking services, we asked if the respondent would recommend OP's digital banking services to others. We did this again from a scale of one to five, to keep it constant rather than making this a yes or no question.

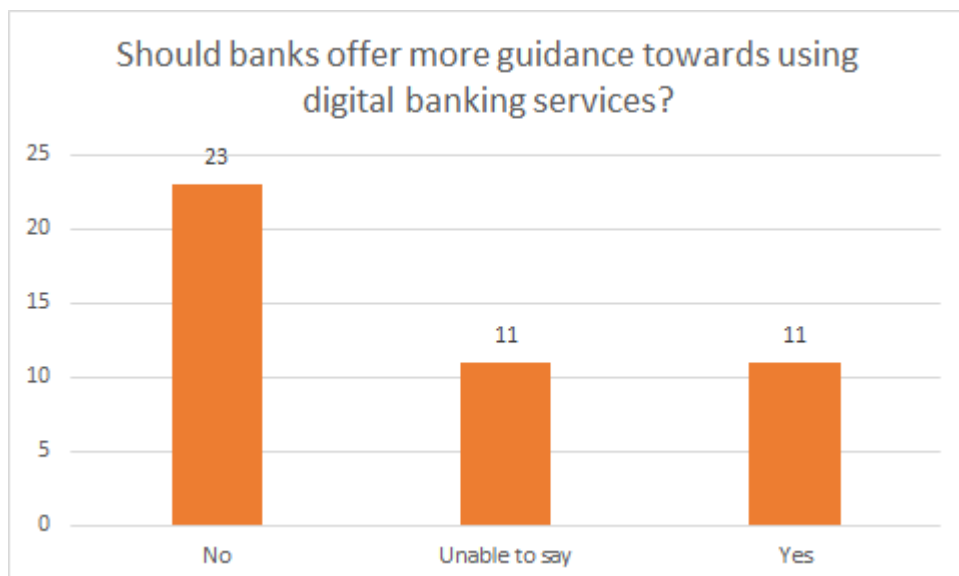
The results were quite similar to question two about the respondent's satisfaction levels on OP's digital banking services. Both had the average of three, neutral and this is expected, as the questions were quite similar, as in if you are satisfied with the service, you should recommend it at the same level. Similarly, those who were satisfied, i.e., said that they are very satisfied in question two, answered that they would strongly recommend the services in this question five. There were no big differences for any respondent between these answers, and those who answered differently had gone i.e., from neutral level to satisfied or recommended level, but no respondent changed their answers here drastically. Thus, we can conclude here that the answers about customer satisfaction levels are correct with a neutral average.



question 5

In the next part of the questionnaire, we took answers from all the respondents, rather than only those who had used digital banking services, like in the previous ones. This is because in these questions, experience about the digital services is not needed and people with no experience can give us information to gain a solution to the problem.

In question six we asked if the respondent felt that banks should offer more of a guidance towards using digital banking services.

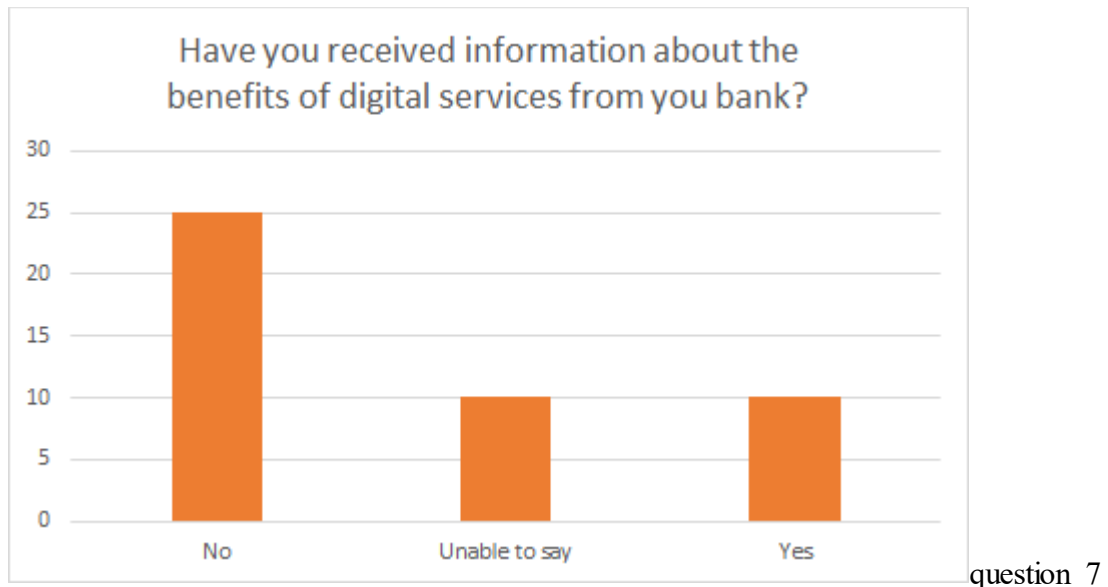


question 6

Over 50 percent of the respondents felt that more guidance offered from the service provider would not be helpful for them, and roughly one fourth of them felt that it would be helpful. This tells us that the older generation feels very distant from the digital services, so that they do not even think that guidance would help them to use those. Although the one fourth who felt that more guidance would be beneficial often answered in upcoming question ten, about problems they have had with digital banking services, that they do not possess enough skills to use those. Therefore, we can argue that those people who mentioned having lacking skills as a problem feel that their skills could be enhanced from more of a guidance from the service provider's side. Thus, we feel that providing more information would be beneficial, although not everyone, like the 50 percent here feel so.

We feel that in order to guide the older generation about using digital banking services, the guidance should come from those who have learned to use them. We are not saying that the people with the most skills should not be teachers here, but those who understand the problems the elders are having, as they have faced them themselves, could be in a better position to explain how to use the services in a more understandable way to the elders. Many respondents rated their IT skills very low and explained that they have very little experience with computers in general. Therefore, the problems they are facing may be from such a basic level, that an IT expert or even someone who is accustomed to working in the digital environment could not understand the basis of the problem. On the other hand, someone who has been in a similar position as the digitally estranged elders, may be able to help them learn to use the digital banking services to a satisfactory level more easily. This method of teaching of the services also could make it less stressful for the elders, as they can see the teacher as somewhat of a peer to them and understand that he or she has also struggled with the problem. Also, the elders may also feel more relaxed and not as pressured in such an environment where they see the teacher as a peer. To conclude this, the one who teaches elders to use digital services, should not necessarily be the best at using those, but someone who is capable of understanding an elder's problems related to the subject, and we feel that experience of previously having worked through these problems could be very helpful here.

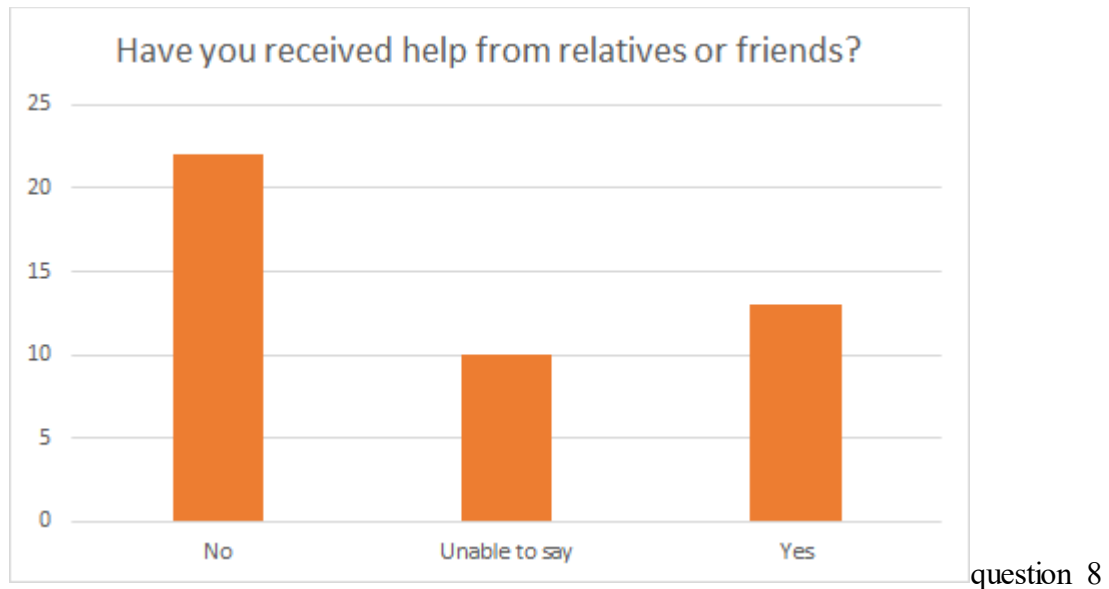
In question seven we asked whether the respondent had received information about the benefits of digital services from their bank. Like we concluded in the theoretical part of this study based on Pikkarainen et al., (2004) the marketing efforts towards digital banking services needed to focus on explaining the benefits of adapting to digitalization. Also, the importance of the customers understanding the benefits is regarded as a key issue. Therefore, this question gives us concrete answers on how successful the efforts of OP has been in this matter.



These answers give us clear evidence that most of the respondents have not received information about the benefits that digital banking services offer them. It is not to say that OP may or may not have given the information to the respondents, but it at least confirms that most of them have not understood the information, thus it has not been given out in sufficient manner. This is clearly something that requires proper actions taken, as the importance of understanding the benefits is one of the most important steps in order to even think about switching to digital banking services. As we argued that it is hard to justify the switch to digital banking services if one does not understand the reasons behind it. Also understanding this gives more of an understanding of the digital services in general and, thus we argue this will have a positive influence in the trust aspect.

In the next question we asked whether the respondent had received assistance on using digital banking services from their relatives or friends. This question was based on previous literature where it was regarded that often the elders have someone to do

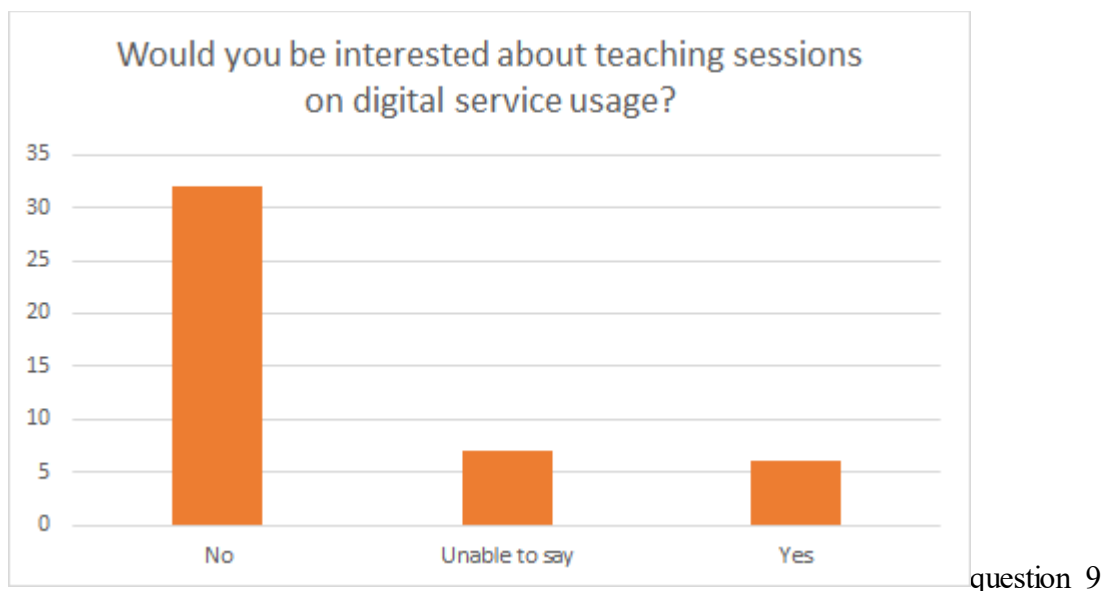
this digital banking processes for them, and we wanted to find out whether there are those who actually use them themselves with some assistance, rather than fully giving it for someone else to handle. This gives us somewhat of an idea on to what extent elders still want to use them by themselves with assistance or do they just give up and let someone else use them for them.



This diagram's answers are quite similar to the one of question 6, where we asked about whether it would be useful to get more guidance from the bank. Around 73 percent of those who said yes to question 6 had said yes to this question similarly. On the other hand, around 82 percent of those who had voted no in question 6 voted the option no again here in this question 8. This can be interpreted so that those who think that it would be beneficial to learn, seek to learn. So, these answers also suggest that it is very important to show the older generation why it would be beneficial to learn these things, so they could again justify why to learn, and following this relationship between these answers to question six and eight, they would then be more willing to seek to learn.

This can also be interpreted in a way that those who had received some assistance from their relatives or friends, may have learned something about using the digital banking services, and thus can see the value of guidance being helpful. So, to develop this even further, it can be seen that taking the first step of the learning process is the hardest, but after that the user wants to learn more. This is something that needs to be kept in mind when conducting the solutions.

In the next question we asked whether the respondent would be interested in joining a teaching session about using the digital services. OP has informed us that they offer these kinds of services already, so this as a solution would not require extra effort from OP's side.



Everyone who answered yes here also answered yes to question six about the necessity of banks offering guidance on using the digital services. This was expected as those who would like to join these teaching sessions should also find them useful, in order to justify participating in them. This does not correlate as well vice versa as 36 percent of those who said yes in question six, said no here in question nine. This is somewhat expected because although you might find something useful, the effort of joining a teaching session may be a bit too much and harder to justify than efforts with less commitment. Also, some people may not like participating in these kinds of activities in general, and this could also explain the difference here. Nevertheless, the 74 percent who voted yes to question six and also voted yes to this question nine, and this tells us that there is clearly an interest shown for these teaching events by those who see the value in them.

Also, something to note that follows our results from previous measurements is that only one out of the six people who answered yes here answered no in the question eight, and thus it furthermore shows us that those who had had some guidance before are more likely to seek more guidance rather than those who had had no guidance.



In our next question, question ten, we asked our respondents to describe problems they have had with digital banking services. The main problem clearly seems to focus around not having experience with digital devices, by either never having really used one or having used one and finding them too difficult. Many also explained that the reason they are not using digital services is simply due to not owning a digital device, and feel that even if they owned one, they would not be able to use any digital services with it. Many people seem to feel that if they can do their monetary businesses the old-fashioned way, why would they change their ways. This follows the results of Knowles & Hanson (2018), who explained that if there is no clear reason to change the method, why would some do so. This is also reflected in question number nine where we asked whether the respondent would find the teaching sessions interesting, and there was little interest towards it.

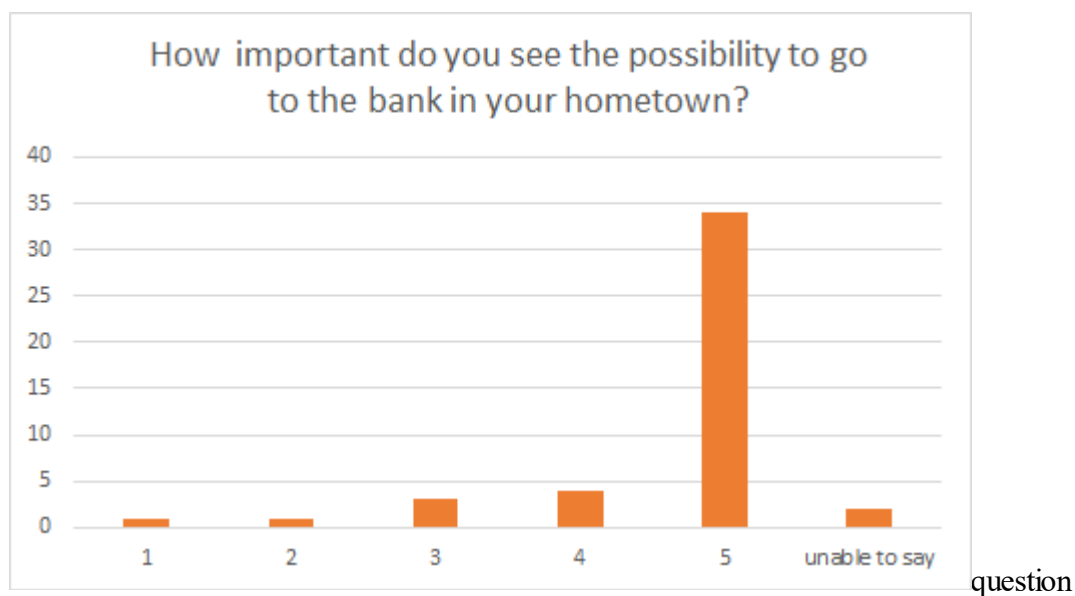
Some people feel that they are already being pressured into using digital banking services and frown upon this. Although we concluded earlier based on previous literature that compulsory methods may be the most efficient way into a solution here, there seems to be clear resistance towards this, and thus banks may lose customers. This being said, OP still has clearly the most bank facilities in Finland, so going to alternative banks for non-digital banking services may not be possible for those wanting to switch due to forced digitalization.

Another thing the respondents mentioned was the aspiration for services being handled with personal contact. As discussed earlier based on Siren & Knudsen (2017), it is especially the older generation who values personal contact within services highly. Some respondents also explained that using digital services is time consuming. This may be the case to some extent, as those who are unfamiliar with this digital technology may have to take things slowly, to avoid mistakes and to understand what they are doing. Lastly many respondents had the fear of being hacked or making mistakes. Basically, all these problems originate from the lack of skills within the digital environment, and we believe that discourages the elders from using digital services.

Therefore, we can argue that the banks should give guidance to the elders to the extent that they understand something about these digital banking services and following this trend we discovered here based on these two questions, they would

then seek information on their own whether it is asking for assistance from relatives or looking to join a course about using the digital services.

In the 11th question we asked respondents thoughts about how important it is to have the possibility of going to the bank in their hometown and as seen in the diagram of the question eleven, most of the responders thought that it is really important to have a bank office in their hometown.

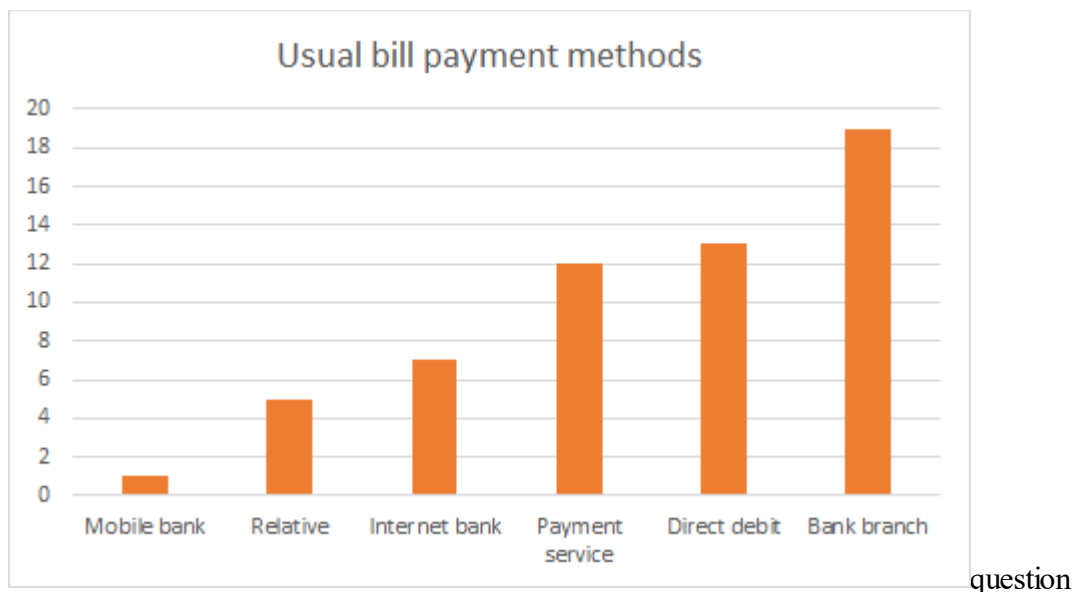


11

This was shown also later on in the survey when people were given the choice to write their opinion about the problems in the bank service. Many people complained about the removal of the bank office from Kiiiminki because it made going to the office impossible for some of the customers because the closest office for them is now over 20km away. This kind of distance can be hard to travel for elderly people and without digital devices it might be impossible for some of the elders to make their necessary payments without help. That is why just like the survey showed us, it is important to have offices close by even though digital services are rising in popularity.

The 12th question was about responders' ways to pay their bills. These answers give us clear evidence that elderly people still even during the covid-19 prefer going to bank offices to handle their payments, rather than handling them from distance via

digital services which is safer because it reduces the amount of human contact during the transaction.

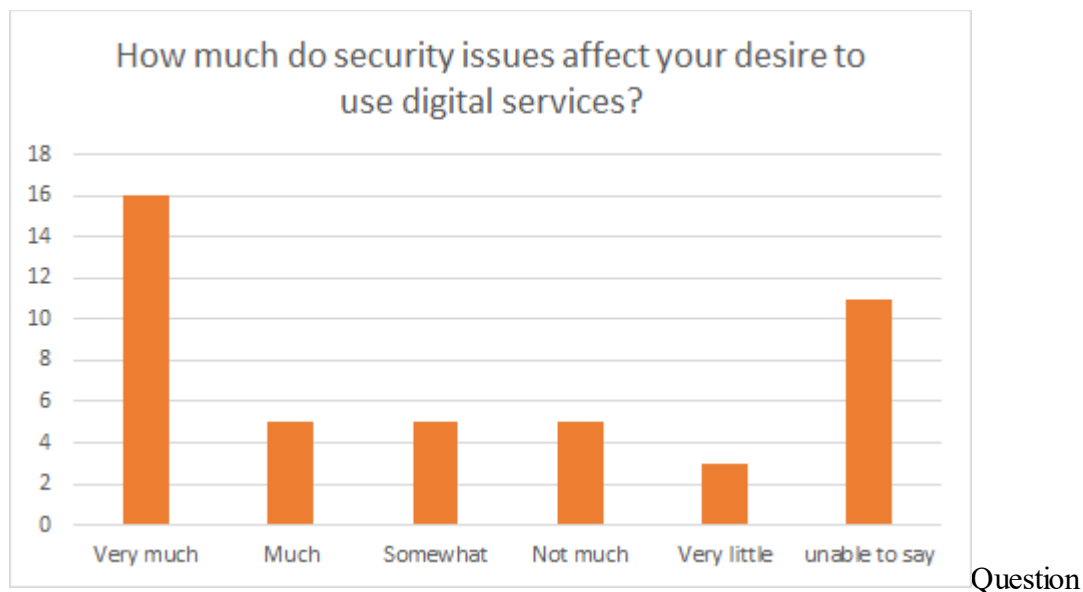


12

This can be explained by looking at the diagram in question 3 where responders made it clear that they don't know how to use digital services, but it does not explain why they would not use more other non-digital methods that can be done from distance, like envelope rather than risking their lives with covid-19. One reason we came up with is shown in Siren & Knudsen (2017) study is that the older generation fears to lose personal contact so we think that people prefer going to bank offices because that way they can have personal contact during the transaction. Some of our responders also expressed her need for personal contact and her disapproval of the digital services which, according to her, are trying to take away the personal contact she needs. One thing to note in this question is that the options were, using internet banking services, using mobile, bank office or other. So, the rest of the options were given under other and then written how i.e., the direct debit. Also, some respondents named multiple methods they often use, which was also the point, as this question wanted to see how often different methods are used and it did not really matter if one person uses many.

In question thirteen we asked the respondents to what extent do security issues within the digital environment affect their decision to use digital services. This question

should tell us about a concrete problem, the security issues, and how big of an effect it has on the elder's will of using these digital services.



13

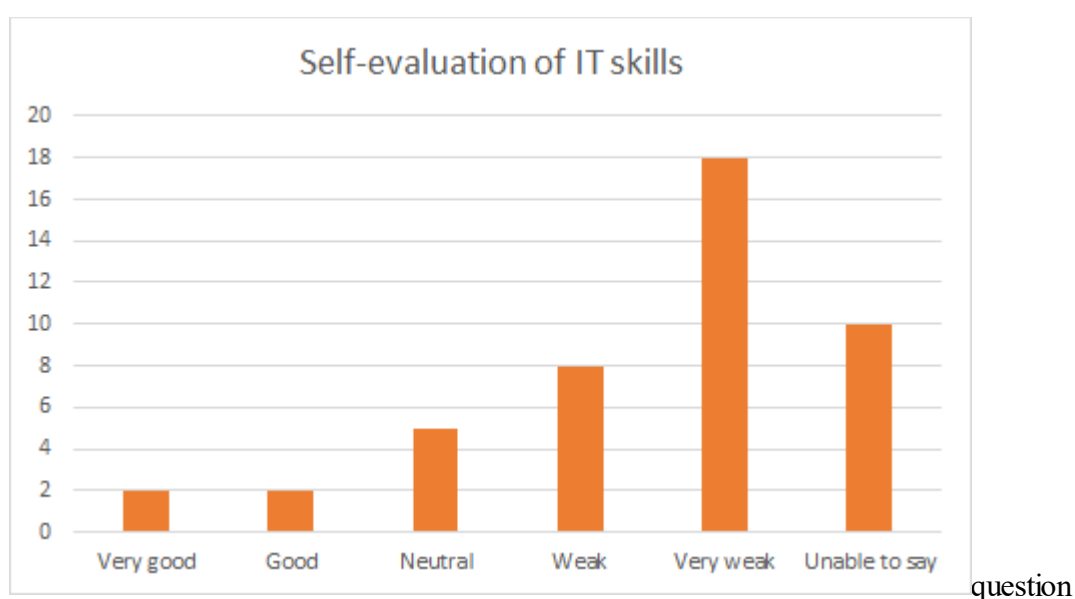
Based on these answers the older generation rates these security issues highly.

As we discussed in this study earlier, based on Meristö & Laitinen (2018, 2020) study and survey the fact that elders are lacking skills in the digital environment cause them to suffer from the security issues more easily, i.e., falling for scams on fake sites and such. The security issues are also much discussed in the media, as very often a new form of scam has been discovered and reported on the media, and this makes the elders even more suspicious of the digital banking services, and any digital services in general, where they need to give out sensitive personal information. Also, due to having low trust in their skills in the digital environment may cause them not to want to take the risk of using them just in case they would be a victim of these said scams or any other security related problems.

Based on the fact that the elders rated security issues as quite big of an obstacle, we suggest that teaching about the digital service usage should take this into account. As we have discussed before, understanding things, in this case the security issues and how to safely use these services, will make the elders more comfortable in using them. We also suggest that not knowing how to use something keeps the elders from

using these things, especially when there is the possibility of mistakes leading to a financial loss, i.e., due to falling for a fake bank site scam etc.

In question number fourteen we asked elders to evaluate their IT skills in general. This gives us some information on what kind of starting point would the elders have when they begin to use the digital banking services. This is very important in order to know at what level should the information or the teaching given to these elders start from. If one is unable to navigate at all with their digital devices, then teaching how to use an application within the device would not be very fruitful. Thus, starting from the very basic level might be correct.



14

Based on the answers the elders rate their IT skills quite weak, as about 74 percent of those who answered this question rated them either weak or very weak, and over 50 percent rated their skill very weak. Based on these we can clearly see that the basic IT skills are at a low level, and this gives bad premises to begin to use digital banking services. Therefore, when conducting the solutions, it must be noted that the teaching or information of using these digital banking services should start from the very basics.

As seen in the results of question fourteen, the basic IT skills are at quite low level for the elders. As a result, the teaching of digital banking services should begin from making sure the elderly students understand their digital devices to an extent so that

they can take the next step of using the applications within their devices. We believe that a basic understanding is enough and even learning how to open the right application i.e., the OP mobile and being able to navigate around it, would make the elders comfortable enough to use it. So, OP should focus on teaching the very basics to the elders as the results in question fourteen showed that 74 percent rated their IT skills either weak or very weak, and thus the majority would benefit from the basic level of teaching.

In question fifteen we asked the respondents to explain how they react in situations where they have problems with digital services or any digital programs in general. This is to tell us whether the elders are looking for the answers on their own, or with the help of relatives or whether they do not even wish to try to solve the problems. This was an open-ended question and we asked them to personally describe their actions. Similarly in question sixteen we asked the respondents to describe what kinds of problems they see with using digital banking services.

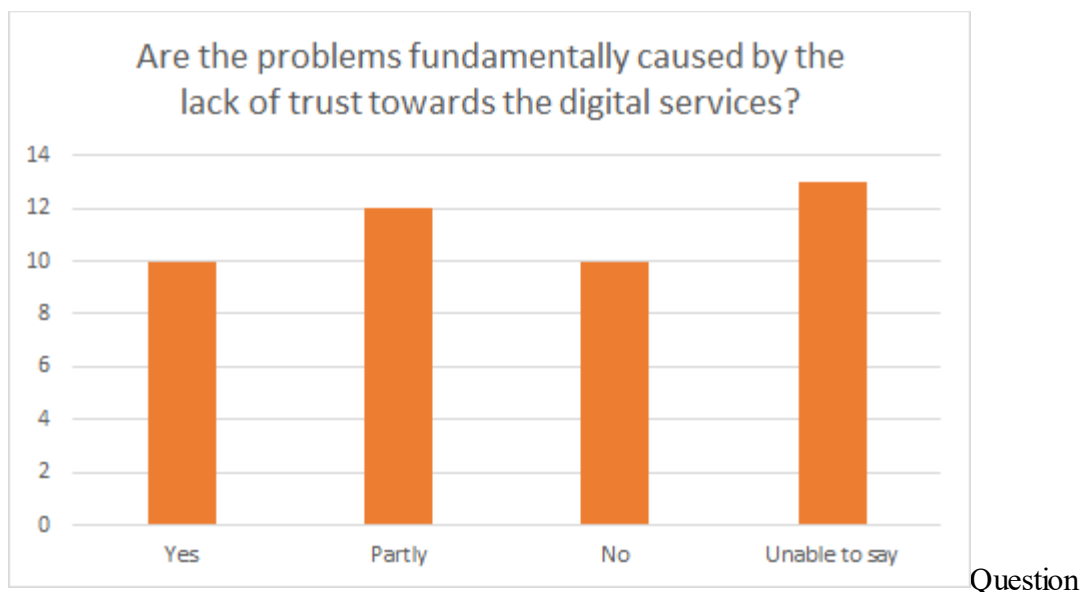
Most of the answers for question fifteen were about asking for help from either relatives or customer services. Some respondents answered that they get frustrated and rather give up on digital services. For the question sixteen most answers stated that they lack the skills to use them and have issues with trusting the security of the digital services. Many people were also afraid of making mistakes themselves, and thus not trusting their own skills either. Some answers stated that the digital services are too complicated, and they do not have interest in learning them.

Based on this and other of our questions the elders do not really trust digital services and that they fear that they either press something wrongly which would mean they pay someone else the money and can't cancel the transaction later or that people take advantage of them by hacking or pretending to help them and then robbing them. This is similar to what Meristö & Laitinen (2018, 2020) found out during their interviews in 2018 where they found that elderly people are not skilled enough with the digital devices which cause elders to feel safety and security issues in digital services. Similarly, Siren & Knudsen (2017) found out from one of her respondents, "If there is anything that needs to be taken care of on the internet I go to my daughter or son because I am afraid that I will do something wrong". Therefore, the literature follows a similar path to our results, where elders are afraid of using digital services

due to the fact that they lack skills and feel that they could be easy victims for scams and such. Just like in Siren & Knudsen (2017) study, our findings also shows that elders usually ask help from their relatives when they face troubles or delegate all of their digital work to them if they don't want to use them because of the risk they bring within. Even though during the 8th question most of the people said that they have not received help from relatives they still explained during the 15th question that they usually ask for the help from relatives if they have problems, they cannot solve themselves.

All in all, the lack of skills and thus inability to trust the digital environment seem to be very clear issues that the respondents have identified themselves as the main problems they see with the digital environment. This supports our finding from other survey questions as well, and also supports our hypothesis that lack of trust is one of the biggest problems here. In the next questions we will be looking at the trust theory more deeply.

As we discussed earlier based on Yu et al., (2015) and Grabner-Kräuter et al., (2008) the lack of trust has been one of the biggest reasons why people did not tend to use digital banking services, we asked in question seventeen whether the respondents identify trust as a root cause for problems they have with digital services. Based on this we hypothesized that trust is indeed the key issue within this problem and thus this question was set to find out proof on this matter. Something we thought when conducting this question for the survey was that it is a bit harder to answer in a sense that identifying the correct sources for problems is not always an easy task, especially when it has to do with oneself. Therefore, this question may not be as simple as the others in this survey are, but we still believe that it has its merits, especially when we have placed a vast part of our hypothesis on the trust theory. Also, regarding this question, we originally meant this question to be solely yes or no, following the consistency of questions six to nine, but we decided to include the middle ground here, as this question is not as black and white. When we have received the answers, we should regard the partly ones as ones following our hypothesis.



17

At first glance on the diagramme we can identify that many left this question unanswered. This somewhat shows that although trust may be an issue, the respondent had not identified it as one or thought about it very much, due to not having skills within the digital environment and thus they would not ponder about these deeper issues. Nevertheless, we can also note that 22 out of the 32 who answered something regarded trust as the fundamental cause to some extent for the problems they are facing with digital service usage. The results somewhat follow our hypothesis, but as discussed earlier, identifying the root cause of problems may not be an easy task as one may not always be able to see where the problem originates from.

As we have identified based on Grabner-Kräuter et al., (2008) the analysis of trust is divided into interpersonal and impersonal trust, as in trusting people and trusting the machine or the digital environment. Therefore, this question seventeen only measured the effect of trust in general, not to what it is placed at. In the last question, eighteen, we asked the respondents to comment on factors affecting their trust towards digital services. This gave the respondent more open space to tell us what causes their potential lack of trust towards the digital services. We believe that these open-ended questions here can give us more clarity on the reasons and thus be of great help when conducting the solutions or steps to take in order to get the older generation into using the digital services.



Thus, in this question eighteen we asked what affects the respondents' trust towards the digital services. One most common answer was about different scams going on and how they are warned about these fake bank sites etc. in the media constantly. Another thing that popped out was that an inexperienced user cannot trust themselves within the digital environment and thus it is impossible to trust the digital services in general, due to not understanding them fluently. So, the fear of making mistakes is there along with the fear of being hacked and losing money, seems to be quite common for these elders. Others again thought that all of the digital services are not trustworthy because they lack in the security department. Some of the responders thought that these digital services are too easy to hack, and if they get hacked people using them would lose money. Some then mentioned that OP only has a few security steps during the authentication, which then make them not trustworthy and explained that some other banks have done it better, which has made them change banks from OP to another bank. All in all, the lack of trust here was mostly placed at the customer themselves or the digital environment, rather than the bank, although OP's services got their share of lack of trust placed at them to some extent, but it was far less common than the impersonal trust or the trust in the user's own skills.

Based on these answers some solutions were straight suggested to us. One was implementing more multi-level authentication for logging in to the digital banking services. Another solution given to us by the respondents was to focus on making the digital services clear and easy to use and making sure they work fast enough. One respondent also discussed the fact that constant changes make it hard to use and the changes made to the digital services should not be about changing the interface or the usage for the customer. Lastly the clarity was also recommended by another in a sense that there should not be any non-native words and no weird characters within these digital services.

## 5 CONCLUSIONS

In this chapter we will be comparing our findings with the previous literature in order to get the actual solutions for our research problem whilst conducting a clear practical solution for OP. After that we will look at the theoretical implications of our research. After this we go through the limitations and discuss opportunities for further research

### 5.1 Practical implications

As it was our task to first determine the extent of the problem, as in how vast the negative attitude towards digital services within the older generation is. We easily found out that there was a clear lack of interest towards digital banking services within the older generation, as 82 percent of participants did not use either OP's mobile banking application or internet banking at all. Thus, there is a clear need to find solutions for this problem.

Now that we have indeed determined that there is a problem regarding the usage of digital services, we can justify coming up with answers for the problem, and here our survey and the previous literature will help.

People were not too satisfied with OP's digital services, as there were many who answered that they are very unsatisfied. To raise the satisfaction levels OP should follow ITIL guidelines and gather feedback from customers and step by step implementing often sought-after changes to the platform. Then again as we discussed in the findings part of this study, that those who do not understand the platform at all cannot really be satisfied with it, and thus the answer should be formed from teaching the elders the basis of using digital services or even platforms in general. Also, the ease of using the digital services was rated poor, thus using the same method of gathering feedback and implementing this into the services should be considered. Another aspect of ITIL, keeping things simple, should be utilized a lot here, as some respondents regarded the digital services as being too confusing and also some even said that they would like more simplicity as in no non-native words and such, and this should eliminate this aspect of the problem a bit.

Now based on our findings we are to examine the ways of how to get the older generation to be able to use digital devices and the digital environment. As we have earlier discussed, the main obstacle seems to be that the older generation does not find learning this skill worth their while or they do not believe they can learn how to use these skills at all. To tackle this problem, we suggest that first of all it should be explained that it is not impossible to learn these things and even it is quite simple. The way to do this could be done by having another old person, who have before tackled this problem and overcome it rather easily explain, i.e., via marketing strategy, their story. Older people, as people in general often tend to relate the easiest to their peers, and thus this would give them the assurance that they can indeed learn these things too. Our respondents also described that they are too afraid to try the digital banking services as they do not trust their own skills. By implementing the said marketing strategy, where their peers would describe how they overcame their similar problems should also encourage people with these problems. As Pikkarainen et al., (2004) explained about that the marketing strategy should not focus on brand building in these kinds of cases, we also argue here that brand building has little effect in this problem either, but to get the elders to try the digital services, the marketing here should be focused on encouraging these elderly customers.

Based on the results of the study we argue that after the elder takes the first steps into using digital services, they are clearly more likely to look to gain more of an ability to use those themselves. Therefore, we argue that the bank or service provider in general should focus on the very first step of using the digital services and very clearly teach the elders about that. This could be done i.e., when the elder comes to the bank, the clerk or should first clearly explain what the benefits of using the digital services are, this must be done very clearly so that the elder can justify the switch to some extent based on this new information. If the elder has a smart phone with them, the next step would be installing the app for him or her by clearly showing the customer what is going on all of the time and taking the process very slowly. Next, due to the trust the elders commonly have towards the bank, we believe that the bank clerk could show them through using the mobile application hand in hand and guiding them along very slowly and clearly. Last part of this would be

making sure the elder is able to do basic bill payment for example with the app and assisting them in order to succeed in this. By carefully teaching the basics to the elderly customer, the first and the hardest step can be overcome quite fluently. Following the results of this study, the elder would now be more comfortable in seeking help with any problems they may have while going further, as the very basic understanding is now at hand.

In order to succeed in this said suggestion, the elder must be comfortable in the situation and feel that they are in charge of what is happening and not feel that the digitalization is forced on them. As this study revealed, the elders are not very comfortable with forced change, so they should be made to understand that it is not something they must do, but rather something they should try out. Therefore, it should be explained that if they do not like this digital banking service, they can still come to the bank like they previously have done. This should take a lot of pressure off them, and they should feel more comfortable in their attempt to learn this new thing. To increase the comfortability and feeling of being in control to some extent, the teaching should be done by taking the first learning process very slow and asking the elderly customer whether they have any questions along the basic teaching process constantly.

Another highly important thing is to show and explain the benefits of using digital banking to the customers. To our surprise the results of our survey showed that most participants had not received information about the benefits of using digital banking services from OP. As we found out based on Pirhonen et al., (2020), the importance of understanding the benefits which digitalization brings to people's lives is highly important. It seems very troublesome that there have not been enough efforts from OP's side in this matter. Why would anyone want to buy anything if they do not see any value in it? Thus, as ITIL guidelines explain, focusing on the value is key and making sure that the customers understand the value is one of the most relevant things. Also based on question five where we asked whether one would recommend OP's digital banking services to others, the neutral recommendation level reflects that the value OP's digital services provide is not seen by all their customers and thus they cannot recommend using these digital services. Again, it is not to say that OP has not informed customers about the benefits, but if the target customers do not

understand the information, then the marketing has clearly failed. Therefore, OP should here focus on making sure that the marketing efforts are done correctly and should first test these things with their target audience to see whether they understand the marketing or not. As it was with the encouragement to trust one's skills the study of Pikkarainen et al., (2004) also has clear merits here, as the marketing efforts should indeed focus on explaining the value that switching to digital services provides to the customer, and not on the bank's brand.

Another aspect about how information or the lack of it affects the willingness to use digital services is that rather than knowing about the benefits of the digital services, they have only read about the negative parts of them, like how some sites have been hacked and people have been robbed from all of their possessions. When you add this kind of fear and lack of information about the benefits and the actual security it can make anyone fear digital services. According to our survey, security issues and distrust are causing at least 58 percent of our respondents to not be using digital services. This is partly new news because theories about these problems have usually just focused on the fear of hacking and never talked about how much the clients know about the service. While we talked to the OP representatives they explained to us, how they have informed how well their services work and what kind of benefits those give to the user but because users have not understood this information, they are still not trusting the system. So concretely explaining the benefits and giving correct information about the negative side of digital service usage, should greatly enhance the willingness to use the digital banking services.

After getting people to understand the benefits and the value that the digital banking services provide, the next step into using those is to teach the customers how to operate them. As discussed earlier this should start from the very basis, at least for some people, as 74 percent of our respondents rated their skills within the digital environment either weak or very weak. It would not make sense trying to sell scuba diving equipment to a person that cannot swim, and thus people should be taught how to use the digital environment and even computers in general before trying to get them to use a particular service within the digital environment. There was not very much interest towards the teaching sessions within our respondents, but we must keep in mind that these same respondents were not informed about the benefits

of the digital banking services, and thus there were no incentives about learning to use those. We would argue that understanding the benefits will raise the eagerness to learn to use those, thus the next step, after successfully marketing the value of the digital services to the customers, would be getting them to join the teaching sessions, as they are now motivated to do so. Of course, the teaching sessions would not be for everyone, as it can be seen as a bit too much of an effort just in order to use a banking service, but for those people, the willingness to seek help from i.e., relatives should raise similarly when understanding the value, the digital services bring to one's life.

Trust placed towards OP's digital services was rated neutral. Here an action should also be taken in order to raise this rating. As we chose trust theory as the main theoretical perspective in this study, we feel that this is the biggest step OP should take, not just by making their image more trustworthy but the whole digital environment. Once again, the main goal is to raise the skill level of the customers to the extent that they understand and are able to use the digital services, without this any action taken seems pointless, as you cannot teach a baby to run, if they cannot even stand up on their own.

As our results about the trust issues pointed out, the fear of getting hacked and thus losing money was quite a common reason to stray away from using digital services. Based on what Munoz-Leiva et al., (2010) found out in their study, customer testimonials and money back guarantees are very helpful in order to gain the trust of customers. Therefore, in order to reduce the problem of fear of being hacked, the money back guarantees should be made known for the customers in these situations. Nowadays many of these scammers send very realistic looking links to fake bank sites where the victim is to type their credentials and pass the authentication steps very similarly to real bank sites. Therefore, if the scams are so good, it should be expected that an inexperienced user may fall for them. This combined with the user recognizing their inabilities within the digital environment, makes it very difficult for them to justify using digital banking services. Therefore, it is the service providers job to not only explain how these scams work to the customers, so that they could be aware of those, but also to include these money back guarantees and take it to

themselves to solve these scam related incidents, in order for the elderly customer to feel safe to use the digital services.

The fear of making mistakes, which was often pointed out by our respondents as an obstacle for them to start using digital services, is quite similar to the fear of getting hacked in a sense that the customer here feels that they are pretty much on their own when these things happen. Many of the respondents explained that as they have little to no experience with digital devices combined with problems with vision and shakiness or clumsiness of their hands, they can foresee problems arising very clearly. Therefore, in order to get these elders for whom the biggest obstacle is the lack of trust towards their own skills, the teaching sessions should be valid to some extent. This is to say that some of these may benefit from it, but if the elder is unwilling to take the first steps or has zero interest towards the issue like some of the respondents we interviewed, then the teaching would have no effect. Also, if the problems that come with age, i.e., the vision related problems, are too great then there would not be easy solutions, except possibly trying a tablet type of device, which has a far greater screen than a smartphone and also can be somewhat clearer than a computer screen. This could be offered as a solution for those who feel that using smartphones and personal computers may be too difficult. On the other hand, suggesting buying a new device and having to learn how to use it, may be too much to ask for some people, but here again explaining the benefits of this adaptation in sufficient manner is something that will help.

About the security issues some of the respondents pointed out, more of a multi-level authentication could bring more feeling of safety for the customers, but it can also make the application that much more confusing. Also those fake bank sites do not really care about the levels of authentication, as the victim is voluntarily placing their information on the fake site, where the hacker uses them in real time, and thus it may not make any difference whether the hacker has to type more information which he or she is receiving in real time, but on the other hand the victim may notice that something is wrong if the process takes longer. To conclude this, more levels of authentication are good for security, but they may cause more confusion for those that find it hard to use these digital services in the first place. This problem can be

combated by making these additional authentication steps optional, as an extra layer of protection.

The functionality, clarity, and ease of use of the webpage, were discussed as things that the respondents found important in open ended questions regarding problems and trust associated with digital services. As mentioned earlier Munoz-Leiva et al., (2010) explain that the functionality of the webpage is a key issue in order for the customers to feel safe within the webpage. Based on ITIL, OP should focus on creating the product in a manner that it brings the value people want in a most simple possible way, rather than making it very fancy and elegant. Simplicity often enhances functionality, in a sense that there are not too many options to choose the part of service from, and the elders are less likely to be overwhelmed by the number of different menus to choose from. In more practical terms the menu interface should be presented so the most commonly used options, i.e., bill payments should be easily spotted on the main menu, and the other services that are targeted towards more advanced users, that the elders are most likely not to use, would be behind submenus so that there would not be too much stuff on the main menu of the digital service.

To find out what services within the digital services the elders often use and what they do not, following the principalities of ITIL, one should conduct surveys regarding the usage of what service within the target group, and utilize that information to enhance the interface to be simple and clear. Cutting down the problem of the digital services being too confusing should increase the likeliness of elders trying them out.

As we talked about in the second chapter there were 3 main problems that we found from already existing literature. They were about requirements of personal information, security issues and isolation. During our own survey we noticed that security issues are still a major problem, and the elderly people do fear that with digital services becoming more popular every day they would eventually lose the human contact while they are using bank services. According to responders, fear of digital services being hacked is one of the biggest reasons they don't want to use digital services even if they have the skill sets to use it. They fear that they could lose their money and give their personal information to the hackers which could lead to other scams. Another thing that came up was about how safe the application's



security is, if the devices that have the app are stolen. people were scared that if the device was stolen the thieves could empty the bank account without any problems. One of the responders explained how she did not see the OP's digital services safe enough which had led to her to change her bank to another bank.

To avoid these kinds of problems banks should earn customers' trust so that customers believe that their information would not leak to outsiders even if they use the digital services. One of the strengths of ITIL that Cronholm & Persson (2016) defined was ease of communication. So, by following ITIL OP should be able to communicate with the customers easier and show to the customers that OP is making sure that their transactions are as safe to do via digital service as it is from the bank office. Best way to do this as we pointed out earlier, would be to make customers understand the service better because most of the problems that elders are having are from not knowing the risk and benefits coming with the digital services which then make it so that they make their own conclusions about the safety issues that are based on the problems other companies are having.

As our results showed the older generation rates the necessity of having bank branches close by very high. Thus, we would suggest not closing down too many branches at this point, but first focusing on getting the elders accustomed to the digital services, and only after that starting to close the locations. On the other hand, as OP holds clearly the most amount of bank branch locations within Finland, closing them should not make their customers change banks, as the rest of them do not have many locations either.

So, we would suggest examining whether the damage to the customer satisfaction levels is too much compared to the savings when cutting down the number of bank branch locations. Based on this, OP should either choose to first make sure the digital service usage within the older generation reaches higher levels, so that a high number of bank branches becomes irrelevant, or to first close the branches and thus force the customers to try digital services.

Based on the results from question 12, we can identify that even though many of our respondents prefer going to the bank branch to handle their bills, direct payment and payment services were also widely used methods. Direct payment means that

whenever a person receives a bill, i.e., electricity bill or similar, it automatically is paid on the due date. The payment service on the other hand means that a customer sends their bills to the bank office where someone pays them for them, and thus it cuts the need to visit the bank and saves time from both the bank clerk and the customer. Although these two methods do not count as using digital services, they still help cut the amount of bank branches needed.

As we have seen a lot of negativity towards the digital banking services within our respondents, and we cannot expect that even though OP was to implement all of our suggestions based on this study into action, there would not be anyone that still shuns away from digital services. Thus, for these people these two methods would be the middle ground solution, which essentially tackles our problem of OP having too many bank branches across the country.

## 5.2 Theoretical implications

As the previous literature revealed i.e., Vines et al., (2011), the elderly lack trust towards digital banking services. Other previous literature such as Pashkov & Pelykh (2020) and Munoz-Leiva et al., (2010) regarded trust as a very important aspect of getting people to use online banking and therefore we argue that our theoretical contributions should start with examining that. This is further supported by the fact that our survey revealed that many people also identify trust as a fundamental cause of problems they have towards digital services.

Grabner-Kräuter et al., (2008) explained that there is interpersonal trust and impersonal trust. Our study revealed that the trust towards people of the bank is far less of an issue here compared to trusting the system. This may be caused due to the fact that the elderly are used to having banks but not electronic banks, and thus new things take time to earn trust. This is indeed what our results showed as in open ended questions our respondents kept mentioning that digital banking services are something that they are unwilling to use due not having used digital devices that much. Therefore, the lack of trust is indeed placed on the unknown, which is the digital environment. Similarly, Grabner-Kräuter et al., (2008) argued that trust in an online environment is harder to achieve than in general. Based on our research we feel that there is a problem

with being able to communicate about different problems that the elderly are having within the digital platform, as our study showed that the services were confusing and had words in foreign languages and similar additional difficulties that make the big picture even more confusing. Siren & Knudsen (2017) also mentioned how the older generation does not trust the internet. We argue that this is also caused by not understanding the internet, and again we concluded that it's hard to trust something you do not understand, i.e., as fear of making mistakes is regarded as an obstacle in our survey.

One of the interviewed elders from Siren & Knudsen (2017) research said that if there is anything that needs to be taken care of on the internet I will go to my daughter or son because I am afraid that I will do something wrong. This is similar to what we found, where elders often had their relatives handling their business in the digital environment for them, as they were not keen on trying and learning to use that themselves. We talked about the advantages of peer learning in this study, but considering the help of relatives, it could be a subject of a future study to see if the help could be rather of teaching nature instead of just doing things for them.

Siren & Knudsen (2017) found while doing their research. According to them, the most often agreed disadvantage of e-services or digital services was that the older generation loses personal contact. This was also seen during our interview when people explained how they don't use banking services because they want to have personal contact when they are using banking services. Personal contact also creates more trust, as there is a person present. Based on our study we argue that creating a more personal feeling within the digital environment, as i.e., with the help of video calls from real people rather than a robot answering questions, to determine the nature of the problem.

Munoz-Leiva et al., (2010) combined trust factors that help combat these trust related problems, one of being money back guarantees in situations where a scam or thievery has occurred. This will make sure that elders get the confidence from the feeling of safety that not everything will be lost in case they make a mistake. We did not measure their effectiveness per se but found that these problems were something that were indeed an obstacle for our respondents.

Question 3 revealed that the elders rate their skills as very easy, neutral, or hard, but not easy or hard. This suggests that this problem should be looked at by encouraging to take the first step. Therefore, the problems regarding the elderly and digital services should focus on how to get elders to become interested to try these, rather than how to get them to learn them. Therefore, the most important part, as Pirhonen et al., (2020) explained is to make sure the advantages of the said services are understood by the customers. Our study follows this, as we found that many of our respondents were unfamiliar with the advantages, and thus they did not care about the digital service.

In our study the customers did not find they needed the product. This is either due to the product not being useful, or as we argue in this case, the usefulness is not marketed correctly. Pikkarainen et al., (2004) then explained that marketing efforts of digital services should be focused on marketing the service and its benefits rather than brand building. Our results also noticed that OP's brand reputation was on good levels, but the actual product's reputation was not. Therefore, from a marketing standpoint our results are similar, the theoretical discussion in marketing digital services should focus on the product, especially when marketing to already existing customers. It is not enough that the product is useful if there is no need for it, and thus it is the marketers' job to create or show that it indeed is a useful product and therefore customers may see the need for it.

### 5.3 Research limitations

As mentioned in earlier, one of the biggest limitations we had during this research was the ongoing pandemic, and the new regulations that came with it. These regulations made it so that it was almost impossible to have face to face interviews with the customers and doing in-depth interviews impossible. This leads to us using mail surveys that do not give us as much information as in-depth interviews would have.

Where we come to our second limitation which was the way we did our interview. By doing the interview via mail we can't be sure how many people answered the survey or how seriously they answered the survey. This can be seen also by looking at the number of answers we got during our data gathering. As explained earlier, OP sent a survey form to 300 of their customers and only 45 answered. Also, we should take notice that there was 50€ draw between responders so people might have answered without thinking about their answers just so that they can have a chance to win that 50€. Which then might cause misleading information. While mail interviews are easier and less time consuming than in-depth interviews with in-depth interviews researchers can more easily control the amount of the answers they get and quality of the answers.

#### 5.4 Ideas for future research

Because of the limitations of this study caused by covid-19 there are probably still problems that older generations have that we did not catch on during this research so future research can find more of these problems after the coronavirus epidemic has ended. On the other hand, similar studies have been made in other countries like in China and Denmark by Meristö, T., & Laitinen, J. (2020) and Siren & Knudsen (2017) and even before covid-19 they found similar main problems as mentioned during this research so it could be possible that the biggest problems did come out during this research even with this kind of interview model. Another aspect to look at in the future would be interviewing and studying those elders who have previously had not been using any digital services, and at some point, realized their potential and learned to use those. These people would tell their experience of on how they managed to learn to utilize the services, and what was the cause of the change in mind. This then can be utilized when developing the guidance for the digital services, and also soften the way of introducing the digital services in general.

According to study by Mbama (2018) it is very important to understand that certain people see digital banking as a supplement, not a replacement to normal banks. Our study revealed that elders felt that digital banking is something forced at them so

they would stop using bank branches. Therefore, when explaining the benefits of the digital services, it should be emphasized that they should try, and they are not forced to use them. A future study should be conducted on how effective it would be to get the elders to try out these with no strings attached so they may not feel as negative towards the digital services if they did not feel compelled to use them.

The trust factors that Munoz-Leiva et al., (2010) combined, i.e., the money back guarantees and security arrangements, could be put to test within the elderly age group and first see how they would feel about these, and measure whether it would encourage the elderly to try digital banking services. A problem identified i.e., fear of losing money would be combated by telling, there are money back guarantees. All in all our study can be used as framework for future more in depth studies into niche areas that examine one specific problem and measure how suggested solutions would work.

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## 7 APPENDICES

### 7.1 Appendix 1



#### Asiakaskysely OP:n digitaalisista pankkipalveluista 19.-26.3.2021

Kyselytutkimus liittyy Oulun yliopiston kauppakorkeakoulun opiskelijoiden Mika Rautavuoren ja Jarek Paajan tekemään maisterin työhön, jonka he tekevät OP Ryhmälle. Tämän kyselyn tarkoituksena on kartoittaa digitaalisiin pankkipalveluihin liittyviä ongelmia ja esteitä digitaalisten pankkipalveluiden käyttöönottoon, eritoten vanhemman väestön keskuudessa. Kysely toteutetaan anonymisti.

Haastateltavan ikä

26-35  36-50  51-65  +65

1. Mitä digitaalisia pankkipalveluita olet käyttänyt?

Verkkopankki  OP-mobiili  En mitään  
(Jos vastasit En mitään siirry kysymykseen 6.)

2. Kuinka tyytyväinen olet OP:n digitaalisiin palveluihin?

En ollenkaan tyytyväinen ○○○○○○ Erittäin tyytyväinen

3. Kuinka helppoa digitaalisten pankkipalveluiden käyttö mielestäsi on?

Erittäin vaikeaa ○○○○○○ Erittäin helppoa

4. Arvioi luottamustasi OP:n digitaalisiin pankkipalveluihin.

En luota ollenkaan ○○○○○○ Luotan vahvasti

5. Suositteletko OP:n digitaalisia pankkipalveluita muille?

En suosittele ○○○○○○ Suosittelen vahvasti

6. Olisiko mielestäsi tarpeellista saada lisäopastusta digitaalisten pankkipalveluiden käyttöön pankin puolelta?

Kyllä  Ei

7. Oletko saanut tietoa digitaalisten palveluiden hyödyistä pankiltasi?

Kyllä  Ei

8. Oletko saanut apua digitaalisten pankkipalveluiden käytöstä, esimerkiksi sukulaisilta tai ystäviltsäsi?

Kyllä  Ei

9. Kiinnostaisiko sinua osallistua opetukseen digitaalisten palveluiden käytöstä?

Kyllä  Ei

10. Millaisia ongelmia olet kohdannut digitaalisten pankkipalveluiden kanssa?

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11. Kuinka tärkeänä pidät pankissa käymisen mahdollisuutta kotipaikkakunnallasi?

En tärkeänä ○○○○○○ Erittäin tärkeänä

12. Miten maksat laskusi mieluiten?

Verkkopankissa  Pankissa  Mobiililla  
 Muulla tavalla, miten? \_\_\_\_\_

13. Missä määrin turvallisuusriskit vaikuttavat haluusi käyttää digipalveluita?

Erittäin vähän ○○○○○○ Erittäin paljon

14. Miten arvioisit taitojasi tietoteknisissä asioissa?

Erittäin heikot ○○○○○○ Erittäin hyvät

15. Miten reagoit, jos kohtaat ongelmia digitaalisten palveluiden kanssa tai ylipäätään digitaalisten ohjelmien kanssa?

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16. Millaisia ongelmia näet digitaalisten pankkipalveluiden käytössä?

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17. Liittyvätkö mahdolliset ongelmat pohjimmiltaan luottamuksen puutteeseen digitaalisia palveluita kohtaan?

Kyllä  Osittain  Ei

18. Haluatko kommentoida tekijöitä, jotka vaikuttavat luottamukseesi digitaalisia palveluita kohtaan?

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