



USER RESEARCH AND ANALYSIS

Prepared for Interaction Design course lab 1-3
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Table of contents

Topic	Page
Introduction	2
Background	2
Research scope	2
Research goal	2
Internal discovery	3
Research	4
Research method	4
Survey report	5
Interview report	6
Analysis	8
Persona 1 Nattawut Manothai	9
Scenario 1 Nattawut Manothai	10
Persona 2 Rungnapa Udomrak	11
Scenario 2 Rungnapa Udomrak	12
User Journey	13
Conclusion	14

Introduction

Background

First and foremost, the research topic for this lab is “How do people discover what document or information they need to prepare before going to report a particular case at the police station” Since the COVID-19 pandemic is still going on, we do not want to be in a crowded place for too long. Therefore, I am working on an application that aims to help people discover what documents they need to prepare. So, they can finish their business as fast as possible. This research finding will help guide an application design.

Research Scope

For this lab, we’re looking for an interviewee who has the following characteristics.

- Interviewees must have experience in case reporting at the police station.
- Interviewees must be older than 18 years old or live independently.
- Interviewees must not be police officers or lawyers.
- Interviewees must have at least one electronic device which can connect to the internet and be able to enter web applications or mobile applications.
- Interviewees must live in Thailand.

Users who do not have those properties may not be able to provide us with the required information.

Research Goals

We’re going to apply multiple research methods to find out more about the case reporting experience of each interviewee. We aim to acquire some information such as, What kind of the case that interviewee have reported? How do they usually discover what document they should prepare? Are there any problems with that method? If the application is available to you right now, would you use it? Why?

Internal Discovery

At the early involvement stage, I decided to do internal discovery by interviewing police officers at the local police station to gather some requirements. My goal is to collect issues that are related to my research case from different stakeholders as much as possible. So, I know the goal of each stakeholder and be able to prioritize it. The goal that could benefit end-users the most will be the first priority.



After I have interviewed the police officers. I realized that there are 2 stakeholders. Here is the summarized information that I have received from the internal discovery above.

stakeholder	Goals	Importance	Severity	Priority
inspector	To help people prepare correct documents for reporting a particular case	4	5	20
inquiry officer	To organize a better and faster case reporting process	3	3	9

Rewrite goal as research questions

- How do people usually discover what document they should prepare?
- Is there any inconvenience when people come to report a case at the station?
What are they? Why did it happen?

Research

Research Methods

For this lab, I made the decision that I am going to use 2 research methods. Which are

- Survey with Google Form
- Online interview with Discord

First of all, I am going to start with a survey. I will let my interviewee answer my survey questions before starting the interview. The reason why I have chosen this path is because I want to make sure that interviewees have all the required properties so I can analyze user profiles from this information. Here are the questions from my survey.

Number	Survey Question	Format
1	Nickname	Short answer
2	Age	Short answer
3	Occupation	Short answer
4	Do you have any experience in case reporting at the station	yes/no
5	Do you have any electronic device which can connect to the internet	yes/no
6	How often do you use the internet in one week	Multiple choice
7	How often do you use the internet in one day	Multiple choice
8	How many holidays do you have in one week	Short answer
9	How did you travel	Multiple choice
10	Which city are you currently living in	Short answer

See also: <https://forms.gle/wsrLDwmwemNX9R6q7>

After the interviewee has already answered survey questions. We're going to start interviewing. The technique that I am going to use for interviews is a semi-structured interview. Here are some possible questions that I may ask the interviewee during the interview.

Number	Interview Question
1	Do you have any experience in case reporting? What is that case about?
2	Does the case require any documentation or information? If yes, what are they?
3	How did you know what document that you need to prepare? If your case does not require any document how did you know it doesn't
4	Is there any inconvenience with your current finding method?
5	If the recommendation application is available to you right now, would you use it? Why?

Since this interview is a semi-structured interview. I will allow the conversation to be a little bit flexible. There may be some extra questions that weren't mentioned in the table above. You can see it in the next session.

Survey Report

Interviewee	Age	Occupation	experience	Electronic device	Internet /week	Internet /day	Holiday	Travel	City
1	20	Student	yes	yes	everyday	>12	2	Private vehicle	Nonthaburi
2	47	Business	yes	yes	everyday	6-9	2	Private vehicle	Rayong
3	38	Business	yes	yes	everyday	1-5	1	Private vehicle	Rayong
4	19	Student	yes	yes	everyday	10-12	2	Private vehicle	Pathum thani
5	21	Student	yes	yes	everyday	>12	1	Private vehicle	Nonthaburi
6	51	Business	yes	yes	everyday	10-12	unstable	Private vehicle	Bangkok
7	21	Student	yes	yes	everyday	6-9	2	Private	Rayong

								vehicle	
8	21	Student	yes	yes	everyday	10-12	2	Private vehicle	Rayong
9	21	Student	yes	yes	everyday	6-9	3	Private vehicle	Chonburi
10	31	Company employee	yes	yes	everyday	6-9	2	Private vehicle	Chonburi

Interview Report

Interviewee	Interview summarize
1	<u>He has experience in case reporting when he got house burglarized</u> a long time ago. He calls 191 to report the case directly to the police officer. <u>In his case, he does not have to prepare any document to report the case.</u> In that situation, he doesn't think about documentation at all. The police officer gives him all the important information, so he does not need to prepare anything. <u>After the first case reporting is done, he still needs to go to the station to make a proper case report.</u> But, since he already got a police officer's private phone number <u>he discovered what document or information he needed to prepare directly from the officer.</u> <u>He does not think this is a problem</u> because he prefers to gather information directly from the officer. <u>He does not want to look for information on the internet or application because he is not sure whether or not it is up to date.</u>
2	<u>She has experience in case reporting when she went to bail her son</u> (her son is committed to harming others). For her case, <u>she has to prepare some documents and money</u> before being able to bail her son. On that day, <u>she went to the police station to find out what document she needed to prepare</u> and made an appointment with the police officer. <u>After that, she went home to prepare those documents and went back to report the case at the station.</u> <u>She thinks that method is very inconvenient to go to the station and find out what is the required document then go back home to prepare it.</u> <u>She said she thinks a police station is a bad place. She never wants to be there.</u> Therefore, she wants to <u>decrease the necessity of going to the station.</u> However, she still prefers to <u>talk to a police officer who responded to each particular case anyway.</u> If there are recommendation applications available to her, she will use them. So she can gather some information and go to the station less often.
3	<u>He has experience in case reporting when someone defames his barbershop on Facebook.</u> In this case, <u>he has to prepare some evidence such as defaming messages that are posted on Facebook.</u> He <u>discovers what document he should prepare by searching on the internet and also ask from his friends.</u> Since he had done very good research, all of his documents and information are correct and acceptable. Therefore, he is able to proceed with the case reporting process. <u>He said self-researching is not too difficult for him and his case is quite common</u> so he can find a lot of useful information on the internet. However, <u>it may be good for him if he can just do self-research within only 1 website or 1 application.</u>
4	<u>He has experience in case reporting one time but he does not want to share what it is about.</u> He never does any research about documentation at all. Luckily, <u>his case does not require anything more than a citizen id card.</u> Basically, <u>he just wants to walk into the station.</u> If the police officer requires anything more, he is willing to go back and get it. For now, he doesn't think this method is a problem for him. <u>If there are recommendation applications available for him, he would prefer the old method because he does not want to download any application to his device.</u>
5	<u>He has experience in case reporting when his mom got into a car accident.</u> In this case, <u>he has to prepare some evidence such as an accident photo.</u> Luckily, one of his dad's friends is a police officer. <u>He can discover what document he should prepare by asking his dad's friend.</u> <u>He is very happy with this method and never thinks of the other method.</u> Even if there is an application that will be able to tell him what document he should prepare, <u>He still does not want to use it because his current method makes him feel superior.</u>

6	<u>She has experience in case reporting when she has been framed on selling infringement products.</u> In this case, she has to prepare some documents and evidence to report the case. <u>One of her friends is a lawyer, so she can discover what document she should prepare by asking her friend.</u> Asking from a friend is not the only method she has done. She also searches and gathers some information from the internet as well. <u>The problem with this method is that she does not want to bother her friend too much.</u> Therefore, she wants to gather some information by herself somehow. This leads to another problem, she has to look for information from many different sources to ensure that she has prepared a correct document. <u>If there are recommendation applications available for her, she would love to have them. But she does not want to download it because she does not want to waste her device storage. She thinks case reporting is not something that she has to do very often.</u>
7	<u>He has experience in case reporting when he is ordering something from an online shop and doesn't get the product.</u> In this case, <u>he has to prepare some payment evidence.</u> He discovers what he should prepare by searching on the internet. <u>The very big problem with this method is that he doesn't prepare the correct document.</u> He knows that he should prepare payment evidence but he doesn't know that he should print it out. <u>Therefore, his case report has been postponed.</u> He has to find someplace to print it out and come back to the station again. <u>He said it would be nice if our recommendation application is available so he can get every detail about the document he should prepare from some official source. He also wants to know the estimated time and all of the reporting process so he can plan his schedule.</u> Note that, his father is a mayor but he prefers to proceed with case reporting by himself because he does not want to bother his father.
8	<u>He has experience in case reporting when he has to report about his owned land. He discovers what document he should prepare by calling 191 to ask directly from the police officer.</u> He can get all of the important information and required documents directly from the officer. But, <u>the problem is this method is not very appropriate. 191 is focused mostly on reporting emergency cases. Therefore, it is a bit difficult for him to call 191 to get information.</u> He would prefer another method that can help him to gather information from the official source. <u>He is welcome to download an application to help him solve his problem and plan to use our product if it is available for him.</u>
9	<u>He has experience in case reporting when he has to report about his lost ID card.</u> The reason why he has to report is that people can use your ID to do something bad if they do not report it to the officer. <u>He discovers what document he should prepare by searching and gathering information from the internet. The problem with this method is that. It is difficult for him to verify whether or not the information is up to date. If there are recommendation applications available for him, he is not sure that he is going to use them or not, because he does not want to download an application. He does not think that case reporting is going to be something he does very often</u>
10	<u>She has experience in case reporting when she got into a car accident. She discovers what document she should prepare by only one method. Which is searching and gathering information from the internet. She is very confident in her searching and reading skills. This is not a problem for her. She does not want to talk to anyone to gather information, because she thinks talking and explaining is more difficult than reading on her own. If our application can give her some information she does not require to talk to anyone. She will use it for sure.</u>

The survey and interview report above provide you with the raw data for this research. Next chapter, we're going to use those data to analyze then create personas and scenarios to represent our possible user group.

Analysis

Now, we already got some raw data that we acquired from our interviewee. We're going to analyze those data by developing the personas and scenarios. This lab requires at least 2 personas and scenarios are required.

Personas

According to the book called Observing the User Experience chapter 17, the first step to develop personas after you have collected all of the user data is to analyze them. We could start by extracting some common characteristics from the collected data. In this lab here are some attributes that could help me characterize different groups of users.

- The severity of the case
- Frequency of case reporting
- The difficulty level of using an old method
- The severity of the problem that happens when reporting a case

Before we're going to look at the personas. Let me explain my thoughts about the attributes selection first. According to the interview report on pages 6 and 7, I try to look for a pattern of the data. I have discovered that the method that people will decide to use to discover what document they should prepare varies according to the severity of the case. If their case is not too serious, such as a civil case, people usually do research by themselves. On the other hand, if their case is crucial, most of the time people will consult with other people. Moreover, other attributes such as frequency of case reporting, the difficulty level of using old methods, and the severity of the existing problem also affected people's needs and behavior. You can see more concrete examples later in the report.

Persona 1: Nattawut Manothai

Nattawut Manothai



Lives independent

Low severity

Self research

Busy

Tech

Age: 21

Sex: Male

Location: Rayong, Thailand

Occupation: University Student

Case reporting: Yes.

Internet usage: Everyday 6-9 hours per day

Travel: Personal car

Holiday: 2.

Electronic device:

- iPhone XR 128g
- iPad mini 64g wifi
- Laptop ASUS TUF gaming f15

Roles

Nuttawut is a university student who studies business. Once he was in high school he lived with his parents but since he became a university student he has moved to a student dormitory near his university campus. He lives independently with his girlfriend and goes back to his parents' home every weekend. Nuttawut has class every weekday Monday to Friday. He has 1 private car so he drives that car to university every day. Moreover, He is an introverted person. He would prefer to spend his free time in his private room rather than go outside. He also loves to shop online both from official and unofficial websites.

Case reporting experience

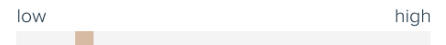
He has experience in case reporting when he is ordering something from an online shop on Facebook and doesn't get the product. He has already made a payment by using a mobile banking application. Since he can not contact the shop so he decides to report this case to a police officer. He prefers not to consult anyone but proceed every step by himself

Current Problems

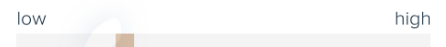
Nuttawut has to prepare some payment evidence. He discovers what he should prepare by searching on the internet. The very big problem with this method is that he doesn't prepare the correct type of document. He knows that he should prepare payment evidence but he doesn't know that he should print it out as paper. Therefore, his case report has been postponed. He thinks self-research is a method that difficult to verify the correctness of the information. Sometimes information is just incorrect or not up to date.

Attributes Ranges

The severity of the case



Frequency of case reporting



The difficulty level of using an old method



The severity of the current problem



Desires

Since he has class every weekday, he does not have much time to go to the station too often. He wants to finish his business as fast as possible without any surprise. He also wants to know every step that he is required in order to finish the case reporting process and the estimated time of each task so he can plan his schedule for it.

Scenario 1: Nattawut Manothai

Since COVID-19 pandemic is still going on, Nattawut can not go to study at the university anymore. He have to study online everyday. Once the class is over, browsing on the online shops is something that he usually enjoy to do. He like to purchase a product from both official and unofficial shop.

Day 1

20.00 PM - Nattawut browsing a shop in Facebook, looking for a nice T-shirt.

20:30 PM - Nattawut have made a purchase with the shop on Facebook. He make a payment using mobile banking application.

One week later, Day 8

He didn't receive the product and can not contact the shop. He decided to report the case to the police officer. He know that the first thing he have to do is to making a research before he will be able to go to the police station. Luckily, his case is quite common. There are a lot of information on the similar case on the internet. He enter the website called www.pantip.com. It is a very popular online forum, where people can share their experience. He navigate to the post that have similar case with him and he discover that he suppose to capture all communication and payment evidence. He capture every message and save it in his mobile phone. He is ready to go to the station

Day 9

10:00 AM - He go to the police station and report the case. Police officer said evidence that are saved in mobile phone is not acceptable. He should print it out on the papers. Therefore, his case reporting have been postponed.

11.30 AM - He went back home to print it out on the paper

17.00 PM - He went back to the police station to report the case again. This time his case reporting is successful. Police officer tell him to contact the bank in order to freeze the account.

Day 15 (Since he never know that he need to contact the bank by himself, he didn't plan his schedule to do that. He have to wait until he not too busy)

12.00 AM - contact the back

There are 4 interviewees who can be represented by the Nattawut Manothai persona. Which are interviewees 3, 7, 9, and 10. They share some common characteristics.

- They all live independently. (didn't live with family or live with boyfriend/girlfriend)
- They all have low severity cases, for example civil cases.
- They all have electronic devices and use the internet every day.
- They all discover what document they should prepare by the self-research method.

The problem that usually happens with this user group is that they may get incorrect information from the internet and cause the reporting process to delay. Information on the internet may be incorrect or not up to date. Moreover, this user group does not have much time to go to the station too often. They want to know every required process so they can plan their schedule. Lastly, This user group is comfortable using technology and the application.

Pesona 2: Rungnapa Udomrak

Rungnapa Udomrak



Lives with family

High severity

Consult lawyer

Unstable holiday

Age: 51

Sex: Female

Location: Bangkok, Thailand

Occupation: Business

Case reporting: Yes.

Internet usage: Everyday 10-12 hours per day

Travel: Personal car

Holiday: Unstable

Electronic device: iPhone 12 128g

Roles

Rungnapa is a business women who have to take care of her kids. She is a hard working women. Therefore, her free time is unstable. She live with her family. There are 3 people in her family. Which are her 2 daughters and herself. Every morning she have to wake up around 7AM to take her daughters to school and then come back home to take care of her online shop. She is the owner of online toys shop on Facebook and Instagram.

Case reporting experience

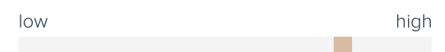
She has an experience in case reporting when she has been framed on selling infringement toy products. She have bought some toys from an official dealer to resell in her store as usual. However, there are some scammer who try to sue her and want to get some money from her. This is quite a crucial case so she can't handle this by herself. she decided to report this case to a police officer. Luckily, she has a lawyer friend that she can consult with.

Current Problems

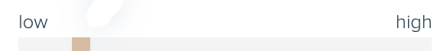
Eventhough, she has a friend as a lawyer but she does not want to bother her friend too much. She decide to consult her friend as few as possible and try to research by herself as a second source of information. This leads to another problem, she has to look for information from many different sources to ensure that she has prepared a correct document.

Attributes Ranges

The severity of the case



Frequency of case reporting



The difficulty level of using an old method



The severity of the current problem



Desires

Since she is a hard working women. She do not have enough time to spend on the research. She want to look for an information from just 1 or 2 official sources so she can save some of her time. However, she do not want to download anything to her mobile phone because she already have too much application in her phone and she think the case reporting is not something that she have to do very often.

Scenario 2: Rungnapa Udomrak

Rungnapa is an owner of the online toys shop on Facebook and Instagram

Day 1

6.00 AM – Rungnapa woke up and prepare breakfast for her 2 daughters

8.00 AM – Rungnapa took both of her daughters to school.

10.00 AM – Rungnapa arrive at Sampheng(place where she can get some toys for her shop). Toy shop have warn Rungnapa about scammer who will try to sue her, please be careful

Rungnapa run her business as usual

Day 20

Police officer contact Rungnapa to go to the station, because someone have sue her that she selling infringement products. She contact her lawyer friend immediately to get his advice but she doesn't want to bother her friend too much so she try to research by herself as much as possible.

Day 25(Appointment day)

On this day is a appointment day that Rungnapa have to go to the station, but she decide not to go because she is very busy.

Day 29(Day before new appointment day)

Tomorrow is a new appointment day, She discover what document she should prepare by using 2 methods which are researching and consulting. She making a research by try to ask someone on the internet because she find it difficult to do self-research for this type of case. She prefer to ask from someone rather than read from some place. She ask some questions on many social media applications such as Facebook, Instagram, Twitter. Finally, she combine all of the information she got from every source together and she is ready to go to the station.

Day 30(New appointment day)

10.00 AM Rungnapa and her lawyer friend go to the police station and making a report. All of her document is correct and acceptable.

There are 3 interviewees who can be represented by the Rungnapa Udomrak persona. Which are interviewees 1, 8, and 6. They share some common characteristics.

- They all live with their family
- They all have high severity cases such as house burglary, fighting
- They all have electronic devices and use the internet every day.
- They all discover what document they should prepare by consulting methods.

The problem that usually happens to this user group is that sometimes they may find it difficult to consult someone they usually do, because of some personal reason. For example, they may not want to bother their friend too much. For that reason, they sometimes have to do research by themselves. For this persona, they usually do not want to spend too much time doing research. They want only 1 or 2 official information sources where they can find everything they need easily. Moreover, they are usually not comfortable with self-research. They still prefer to gather information by consulting someone. Finally, They do not want to download any programs or applications to their device.

PERSONAS (1)



Nattawut Manothai

University Student
21 years old
Live Independently
Self-research

He have bought something on the internet and does not get the product.

Actions

FRAUDULENCE

Does not get product

- ✓ Browsing an online shop on Facebook.
- ✓ Make a payment.
- ✓ Does not get the product.
- ✓ Can not contact the shop.

RESEARCH

Decided to report case

- ✓ Search for a similar case in [Pantip.com](#)
- ✓ Prepare the documents based on collected information
- ✓ Prepared payment and communication evidence then saved it as JPG file

REPORT CASE

Go to the station

- ✓ Arrived at the police station
- ✓ Wait for my queue
- ✓ Start reporting the case

POSTPONED

Invalid document

- ✓ Discovered that my document is invalid. I suppose to print it out on the paper not JPG file.
- ✓ My case reporting has been postponed because my document is invalid.

REPORT CASE

Back to station

- ✓ I have print all of the document out.
- ✓ I went back to the station
- ✓ Wait for my queue
- ✓ Start reporting the case
- ✓ Case reporting success
- ✓ For next step, police officer tell me to contact the bank to freeze the account by myself

Thinking

- ✓ I hope I can get my money back.
- ✓ I wish I know which shop is trustable.

- ✓ I will report this case so shop owner will get arrest
- ✓ I will get my money back

- ✓ I better make an appointment first, so I do not have to wait for too long
- ✓ I have every document ready everything will be smooth

- ✓ I better be more careful and make a better research
- ✓ There must be some official source of information that I can get every detail of the required document.

- ✓ I never know before that I have to contact the bank by myself
- ✓ I have class tomorrow, I can not do it
- ✓ There must be some official source of information where I can know every step so I can plan my schedule

Feeling

- 🔴 ANGRY with the shop owner
- 🟡 ANTICIPATE to get the money back

- 😊 CONFIDENT because I have everything ready for the case reporting.

- 😊 TRUST that I will get my money back

- 😡 ANNOY because my case reporting have been postponed

- 😟 WORRY because I am too busy to contact the bank soon.
- 😟 WORRY that I will not get the money back.

Experience



Ideas / Opportunities

Invest in new feature such as article publisher feature that could give an information such as how to prevent yourself from the shop that can not be trust or online shop blacklist.

Help user discover what document they should prepare by let user pick the case that they want to report and then return all of the required documents with it's detail.

Invest in appointment making feature, so user can make an appointment first before arrive at the station. On the other hand, police officer will be able to prepare for user's case

Find a way to accept more varies type of document or conduct an official source of information where user can ensure that they have a correct document before came to the station.

Help user discover what are the required step or process that user have to encounter so user can plan their schedule.

Conclusion

After the research, we discovered many new things that may guide our application design. Here is the list of some users requirement that we should consider once we design the application.

Before research

Originally, I plan to develop a mobile application that can help the user discover what document they should prepare before reporting a case at the police station by letting the user pick the case that they want to report and then application will return all of the required information.

After research

According to the persona of Nattawut Manothai, we discovered that there are many users who prefer to do self-research. Most of the users in this persona have low severity cases. Therefore, they would love to have an application that they can look for a piece of information that they really want without consulting anyone. However, we have to make sure that we always state that this information is up-to-date and always give all of the document detail such as what file format? how many copies? and also process detail such as how long would it take? what else do users have to do? If we can do that, we will be able to satisfy users who are similar to Nattawut Manothai.

On the other hand, there are some users who prefer to consult with someone. We called this type of user Rungrapa Udomrak. We discovered that this type of user does not want to download the application because they do not want to waste their storage space and they think, case reporting is not something they will do very often. Therefore, we better develop an application as a web application, not a mobile application. So users will be able to use it without downloading. We also have to assign a priority to each case, because we know that this user group wants to consult someone rather than read from some place. Therefore, we suppose to have a police officer who will be an admin of the site and be able to give some suggestions to users. However, that will increase the workload of a police officer. Therefore, only some cases with a high priority will get suggestions directly from officers.
