

香港中文大學
The Chinese University of Hong Kong

FINAL REPORT

COMM 5961 TOPICAL STUDIES IN NEW MEDIA I:

DATA DRIVEN PRODUCT AND SERVICE DESIGN

Personal Portfolio Website Design Report

Xiaoli WANG

1155099464

MSc in New Media

School of Journalism and Communication

Instructor: Bernard Suen

Chapter 1 | Introduction

When it comes to web design, many people will visualize it as a technical staff which is only about coding. However, beneath the codes lies the more important and fundamental thing, the idea of design. And the Design Thinking, compared to the dominant or more common problem-solving methods, is an “outside the box” thinking approach to generate ideas. It was coined by David Kelley and Tim Brown of IDEO, with Roger Martin, one of the business field’s most important thinkers, in the 1990's. As Tim Brown put it in the book *Change by Design*, “It (Design Thinking) is not only human-centred; it is deeply human in and of itself”, the core thing that Design Thinking concentrates on is to develop an understanding of the people for whom the products or services are designed. Through balancing analytical thinking and intuitive thinking, the Design Thinking offers a means of digging deeply to uncover ways of improving user experiences, increasing the probability of breakthrough innovation.

The Nobel Prize laureate Herbert Simon described the principles of Design Thinking in *The Sciences of the Artificial* in 1996. And the Hasso-Plattner Institute of Design at Stanford, also famous as d.school, which stands at the forefront of applying and teaching Design Thinking, identified five phases of Design Thinking, i.e. Empathy, Define, Ideate, Prototype, and Test (see figure 1). The process of Design Thinking is iterative and non-linear. Understanding

and insight into the target will be levelled up in the repetitive Design Thinking procedures.

While the Design Thinking is a design methodology to come up with ideas of website design, the five planes of user experience design will transform the abstract to concrete (see figure 2). Starting from the bottom layer, the five planes of user experience includes strategy, scope, structure, skeleton and surface. Unlike the non-linear process of Design Thinking, the transition happens in the five planes is linear and each plane of the user experience is dependent on the planes below it.

Overall speaking, the user experience mainly focuses on the accessibility, usability and user friendliness of a product or service. During the user experience design, three essential questions must be studied and answered: *why* people adopt the product or service and become the users, *what* users can do with the product or service, and *how* users interact with the product or service. A good user experience design not only increases the satisfaction of one product or service and benefits the developers, it can also help the users achieve their goals. Thus, the user experience design is a win-win process in nature.

Guided by the Design Thinking and five planes of user experience design, I developed my personal portfolio website gradually. In the following chapter, I

will elaborate how I applied the theories in my website design process in detail.

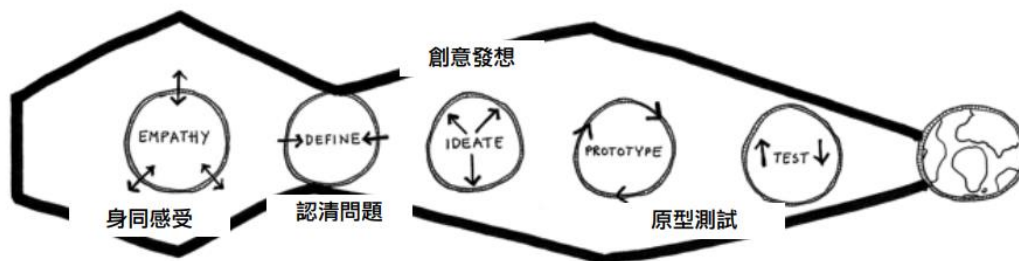


Figure 1. Design Thinking

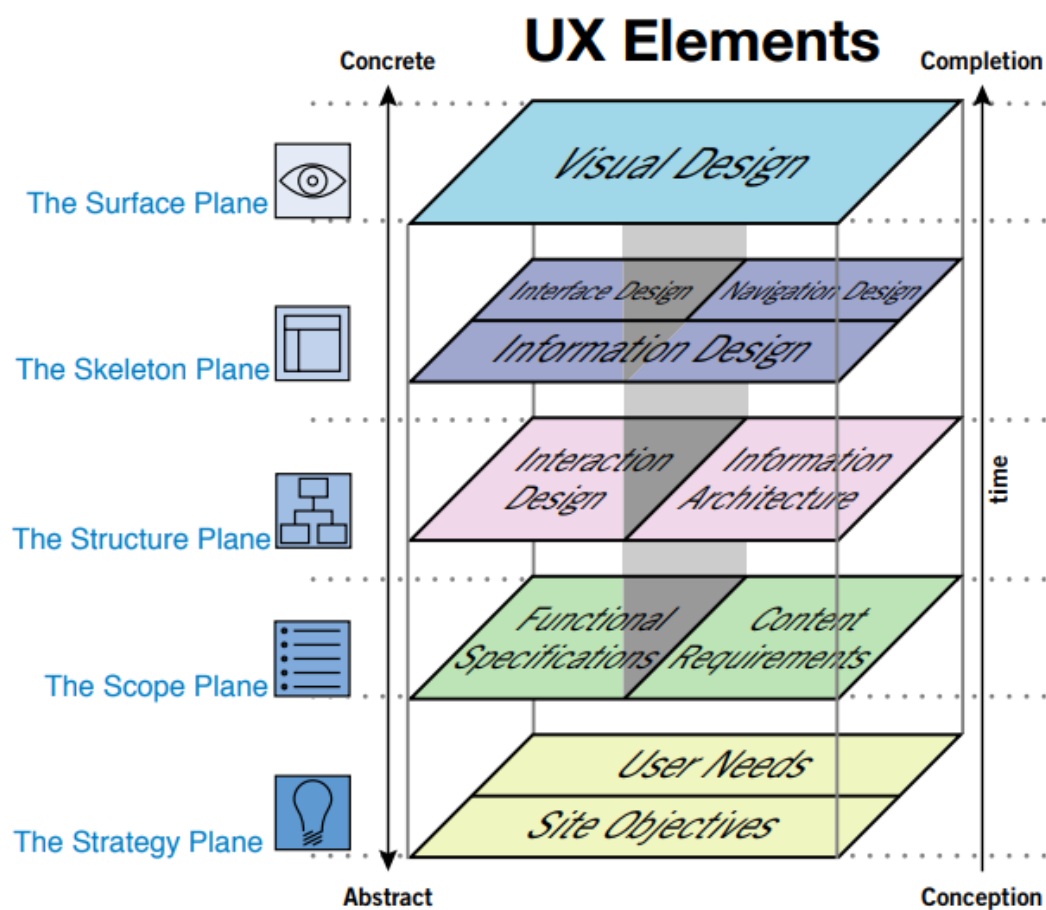


Figure 2. 5 planes of User Experience

Chapter 2 | Empathy and Define : the Strategy Plane

Designers resist the temptation to jump immediately to a solution to the stated problem. Instead, they first spend time determining what the basic, fundamental issue is that needs to be addressed. They don't try to search for a solution until they have determined the real problem.

– Don Norman, Rethinking Design Thinking

Grand Old Man of User Experience, Don Norman, who also coined the very term User Experience, emphasised the empathy and define phases as above. It is true that one project can only success when targets at the real issue. So, I first start with identifying the objectives, target users and user needs of my website.

2.1 Site Objective

Obviously, this personal portfolio website is mainly developed to present my abilities concerning my dream career and increase the possibility of getting hired. After the deep consideration and reflection, I found that I had two dream careers, namely the consumer analyst or the documentary creator. These two careers seem to be different, but they both originate from my aspiration, which is about exerting efforts to make the effect of communication better. Also, I'm always fascinated by the process of

observing and analysing human behaviour, and both the two careers relate to this process. Although it seems to be clearer to identify one precise career plan, I just found myself couldn't give up anyone of the two dream careers. And I think having two dream careers can also benefits me by indicating that I'm a multi-faceted talent.

So, in a word, the basic objective of my personal portfolio website is to help me find a job of consumer analyst or documentary creator. Based on this primary goal. To realize this goal, I further looking at my target users and the user needs.

2.2 Target User and User Needs

Normally, a job can be found by recruiting or recommending, thus there are two kinds of people becoming the target users of my website, i.e. the recruiters and my industry peers (craft brothers).

In order to figure out user needs, I first empathized and imagined what would be my needs if I was the recruiter and industry peer. Secondly, some researches were also done. Through the process of searching these two jobs on the internet, specifically the job-hunting websites like LinkedIn, 51job, Zhilian, I noted down several requirements and expectations of the two jobs.

Site objectives		Target users		User needs	Journey stages
Primary goal	To Make recruiters interested and contact me, as well as increase the chance to be hired.	Primary user	Recruiters	Find the qualified and potential employees that suit the job requirement.	<ol style="list-style-type: none"> 1. Receive my CV or application email. 2. Find the link or QR code attached and go into my website. 3. View the information on the website, know more about me and get impressed. 4. Consider to schedule an interview with me
Additional goal	To prove I'm qualified and potential by demonstrating my portfolio, working experience, education background, and certificates.	Secondary user	Department managers	Find the qualified and potential employees that suit the job requirement.	
Additional goal	To increase the chance that recommended by the industry peers.	Secondary user	The industry peers	Find the current developing situation of the other industry peers.	<ol style="list-style-type: none"> 1. Find my website link in my self-introduction on social media platforms like WeChat, Weibo. 2. View the information on the website, know more about me and get impressed. 3. Contact me and recommend a job.
Touch Points: 1. Portfolio 2. Work experience 3. Skills 4. Education background					

Table 1. the strategy plane

Furthermore, I did semi-structured interviews with three persons to get the first-hand information about the user needs, one is my friend who is now an audience analyst working for the Nielsen company, second one is another

friend who is a HR working for Huawei company, the last is my previous leader when I worked as an intern in CCTV-12. Questions were asked like “what do you think is the most important thing when you recruit people like me?”, “what is the first thing you look at when you receive a CV?”, “How do you value the job seekers’ digital portfolio?”, “what kind of digital portfolio do you think can increase the possibility of getting one hired?”.

After finishing the empathy, search and interview, I synthesized all the outcomes together and identified the user needs and another two additional goals, which were detailed in the table 1.

Chapter 3 | Empathy and Define : The Scope Plane

Scope is about setting boundaries. In the scope plane, the content, features as well as functions of my website should be identified clearly. Based on the strategy plane, I determined the content requirements and functional specifications.

3.1 Content Requirements

Due to the objectives of the website, offering information to users is the primary property. Overall speaking, there are six requirements for the content.

Initially, it is the identity information that matters greatly to a personal portfolio website. To leave a deep and unique impression on users, the identify information such as slogans, keywords, portraits should be carefully designed.

Secondly, the background information, for example the education, was also taken into consideration. As my friend who is a HR working for Huawei company said to me, many HRs in mainland China still attach great importance to the education background. So, if I plan to find a job in mainland China, I should put the education background information on the obvious place of my website.

Mentioned and stressed by all the three interviewees, the skills and expertise are the third content requirement, which concentrating on the abilities I'm equipped with.

Fourthly, the work experience is also a touch point to users. However, actually my work experience is relatively limited and not that directly related to my dream career, I plan to use the StoryMap to display my experience vividly.

The fifth content requirement is the portfolio, which is the most important part of this website. Two of the three interviewees mentioned that the portfolio was the best way to demonstrate abilities. And I will try to highlight my portfolio in coding my website.

Last but not least, what are also supposed to be found easily is my contact information, like the address, telephone number, email address, LinkedIn profile and social media account (Facebook, Weibo, WeChat).

3.2 Functional Specifications

Since the personal portfolio website is mainly about offering information, the functional specifications are relatively limited. As far as I'm concerned, the functions of my website can be divided into 3 parts.

Firstly, what should be emphasised is the function of viewing and filtering my portfolio. Since my two dream careers relate to two different kinds of work, it is necessary for users of different background to filter my portfolio and find the specific works they're interested in or looking for.

Downloading files is the second function. As the target users are recruiters, department managers and industry peers, not only can my CV be downloaded, the useful analysis reports or research articles that presented in my portfolio will also be opened to users to download.

Lastly, the website should have the function that connect the users and me directly, thus I will use the Drupal as the back-end support and create a contact form.

Chapter 4 | Ideate : the Structure Plane

From the structure plane, the development of my website starts. This plane focuses on how do the information and functions fit together and behave, and how can users find what they are interested in or looking for. Due to the fact that this personal portfolio website doesn't have complicated interactive design, I put my emphasis on the information architecture, which is shown in the figure 3.

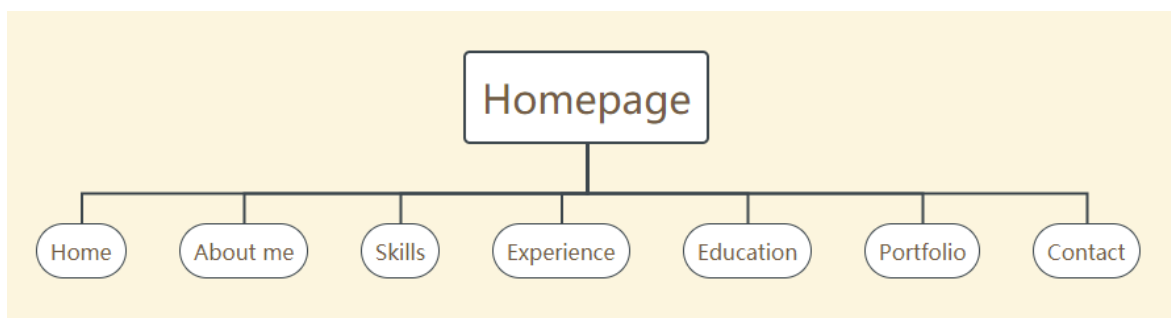


Figure 3. sitemap of my website

Chapter 5 | Ideate and Prototype : The Skeleton Plane

After developing the strategy, scope and structure plane, the skeleton plane is a more concrete phase of user experience design in which I ideated and built prototype of the website. It is wireframe that help to arrange the elements together in one picture of the desired webpage and integrate the three

components of skeleton plane, namely the information design, interface design and navigation design.

In this stage, I chose the software Pencil to draw up possible layout and design options. To begin with, as the Garrett said that conventions come up as a very useful strategy to help user to think intuitively, I searched other people's personal portfolio website on the internet to find the latent patterns of website design. And then I set up grid lines to help format the webpage for consistency and neatness. In the next step I added some text and shapes to resemble the imaginary effects. After many attempts, I decided to design a one-page website, and the comparatively satisfying medium fidelity wireframe prototype was made (see figure 4-10).

Totally there are seven parts of my website, i.e. home, about me, skills, experience, education, portfolio and contact. To provide convenient navigation, I made the navigation bar fixed on the top of the page. Also, in the portfolio part, I added the filter function to help grouping the same category of works, such as photo, video, code and so on.

Besides, I also made efforts to apply the responsive web design on my website, especially, a low fidelity wireframe prototype for the phone was designed on pieces of papers.

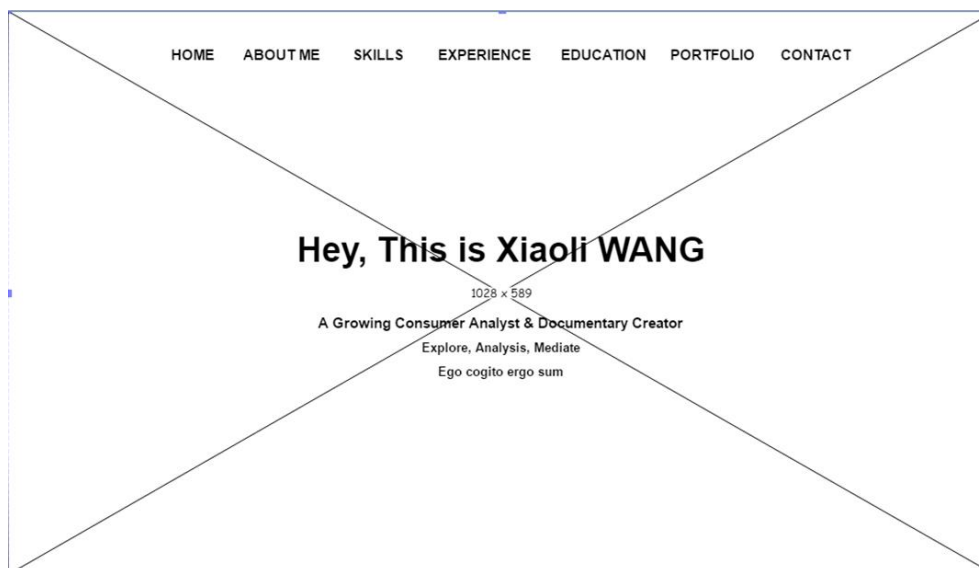


Figure 4. wireframe of the home part

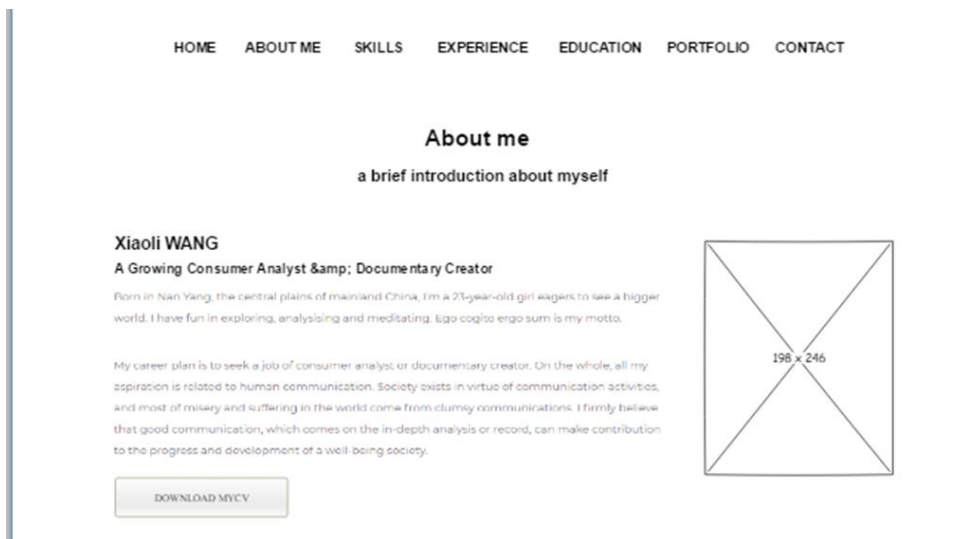


Figure 5. wireframe of the about me part

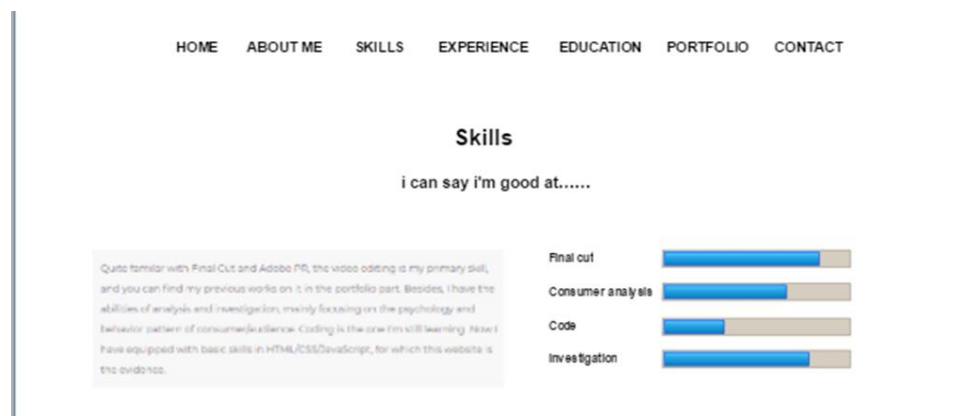


Figure 6. wireframe of the about skills part

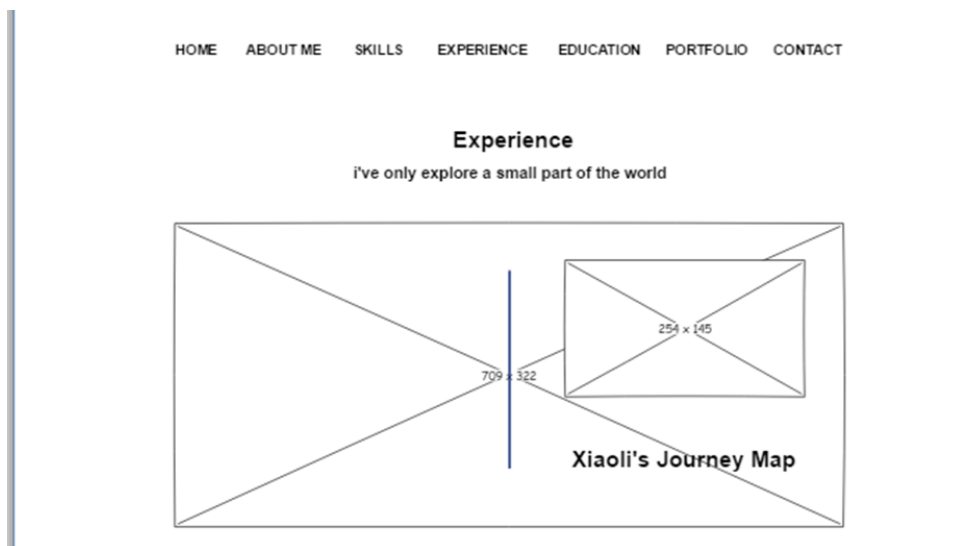


Figure 7. wireframe of the experience part

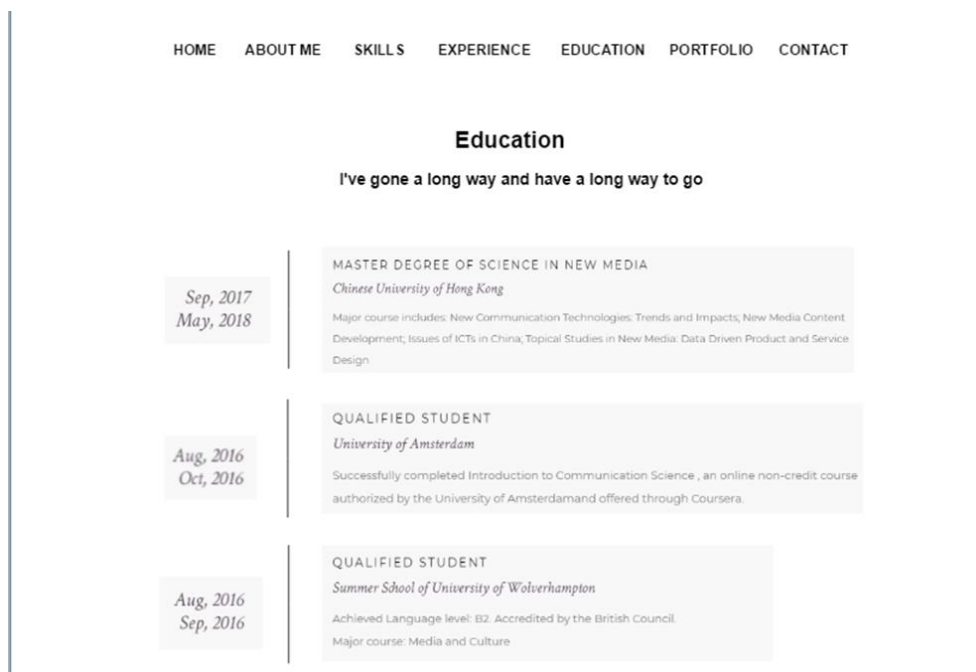


Figure 8. wireframe of the education part

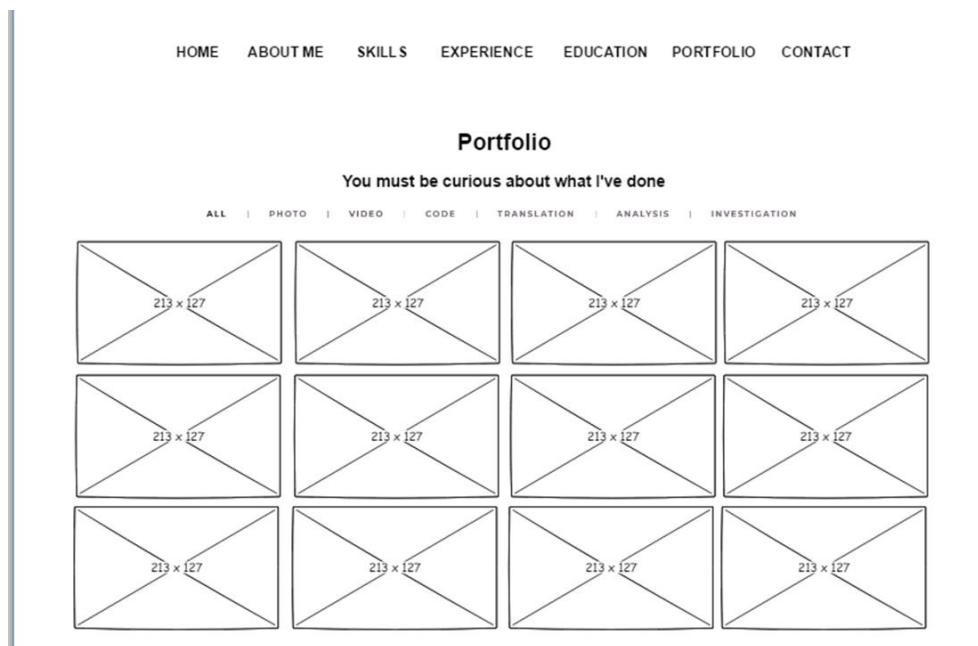


Figure 9. wireframe of the portfolio part

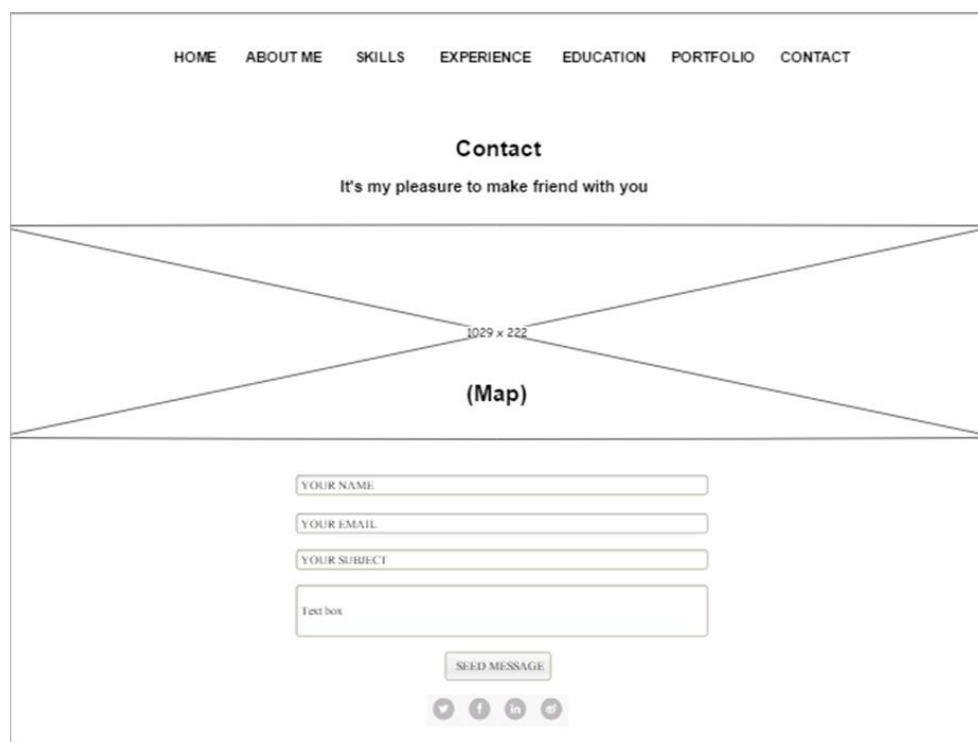


Figure 10. wireframe of the contact part

Chapter 6 | Ideate and Prototype : the Surface Plane

“Design thinking is a misnomer; it is more about doing than thinking. Bias toward doing and making over-thinking and meeting.” – d.school

As the d.school put it, Design Thinking is more about doing than thinking, and the surface plane of user experience design do prove it. This stage is most concrete and is all about visual design and coding. In this part, I will mainly introduce the design of colour scheme and typography of my website. For more details, please visit my website:

<http://dev-xiaoliwang.pantheonsite.io/xiaoli/index.html>

6.1 Colour Scheme

Since both my dream careers are about observing and analysing, a sense of steady and reliable should be delivered to the users from my website. So, I adopted the monochromatic colour scheme and made the grey to be the dominant colour (see figure 11, 12). On one hand, this monochromatic colour scheme can give out harmonious and steady feeling. On the other hand, grey reflects hints of the contrasting complements of any colour paired with.

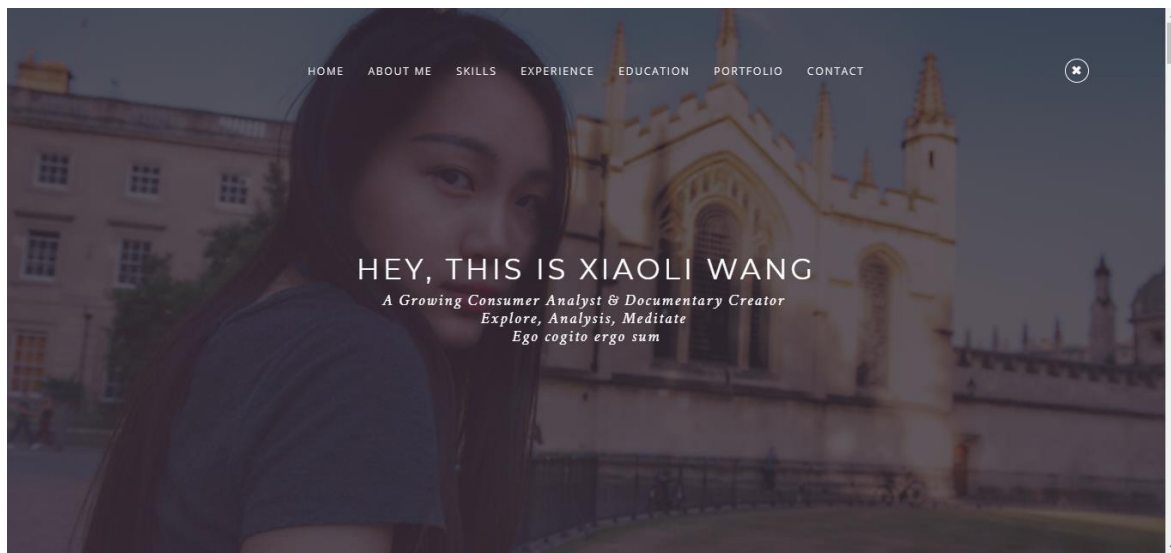


Figure 11. the colour scheme design

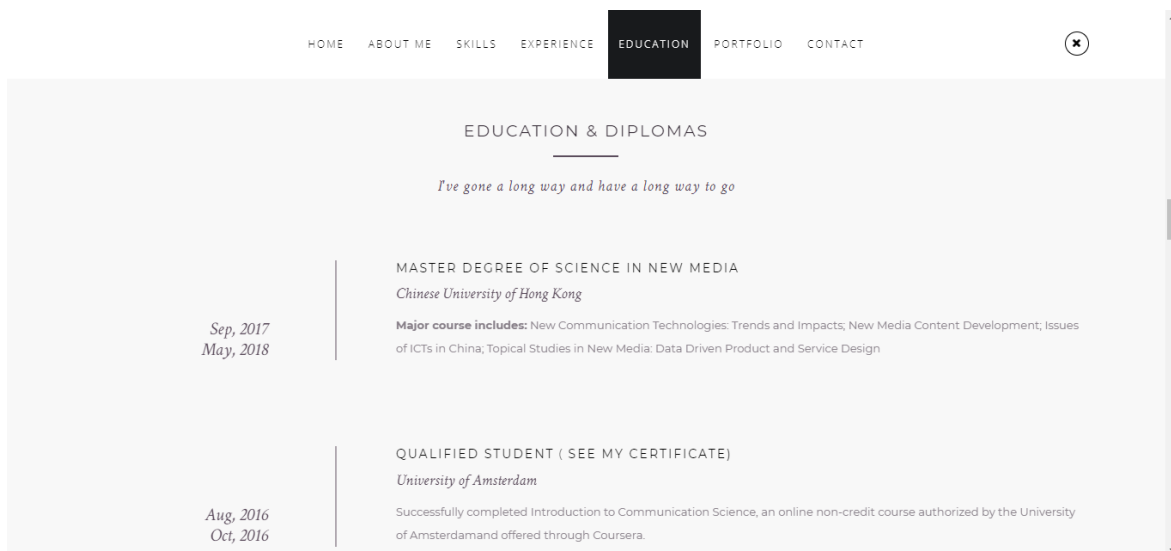


Figure 12. the colour scheme design

6.2 Typography

Two kinds of fonts were used in designing the website (see figure 13, 14). For most of the information, I used the font of San-serif, which displays better on screen and makes the website contemporary and simple. And for some sentences that are more emotional, such as my motto and every

complementary sentence under every headline of the part, I used the font of Serif to show a sense of classic and reliable, as well as adding some variance to make my website a little bit vivid.



Figure 13. the typography designs



Figure 14. the typography designs

Chapter 7 | Test, Analysis and Re-Empathy, Re-Define, Re-Ideate

One of the principles of Design Thinking is that it is an iterative process in which we should bear the users in mind and try to empathise them repeatedly, and redefine problems in an attempt to identify alternative strategies and solutions that might not be instantly apparent with our initial level of understanding.

In this stage, I returned back to users to get feedback by using both the qualitative method and quantitative method.

7.1 Qualitative Research: Usability Test

The official ISO 9241-11 definition of usability is: “the extent to which a product can be used by specified users to achieve specified goals with effectiveness, efficiency and satisfaction in a specified context of use.” Thus, the core of this usability test is to find out the degree of effectiveness, efficiency and satisfaction of my website.

According to Jakob Nielsen, testing with five people is enough to identify as many usability problems as using many more test participants. So, in this method, I invited five people including the three I interviewed in the strategy plane and two classmates. The friend who is now an audience analyst and the two classmates were told to behave as the industry peers of mine (the secondary target users), and the other two people, one is a HR and another is my previous leader, were told to behave as they were looking for qualified employees (the primary users). The Think-aloud protocol approach and task-based test were adopted to get as much feedback as possible.

7.1.1 Think-aloud Protocol

Before the test, I first figured out the user journey on my website (These journey phases are different from the phases in the strategy plane because

here the emphasis was put on the process that relates with my website directly.) and designed corresponding questions to ask about the usability. The details are shown in the table 2. Besides, other questions about the effectiveness, efficiency and satisfaction were also be asked. And the five subjects were told to feel free to comment on my website. Their comments and behaviours on this website were also recorded.

	Phase	Usability
1	Land on the page	Are users willing to stay at the website?
2	Browse the page	Is it easy to get information about me? (1) Is the information extensive and relevant? (2) Is the design of font or color user-friendly?
3	View my portfolio	Is it easy to view or find the work they are interested in?
4	Download my CV	Is it easy to find the download button?
5	Contact me	Is it easy to contact me? (1) Is it easy to send message? (2) Is it easy to find the contact information?

Table 2. the journey phases and questions about the usability

The results of the Think-aloud protocol of usability test did reflect some problems that I neglected and challenge the previous assumptions. Specifically, there was no difficulty or complain about the phases landing on

the page and contacting me. What is more important to note is the phases of browsing the page, viewing my portfolio and downloading my CV.

For browsing the page, subjects showed their dissatisfaction because two reasons, the first reason came from the HR, which was that the background information is not that directly relevant to the jobs I pursued. Too many words in the education part was the second reason that caused the subject's dissatisfaction. They commented that it was tired to read and somewhat boring.

For viewing my portfolio, the problem mainly lies in the filter. One subject said that the font size of the filter above the portfolio was too small to notice.

For downloading my CV, all of the subjects mentioned that it is easy to find the download button. However, two subjects also said that it would be more convenient if the download button was also put in the navigation bar.

Besides, three subjects also asked me whether there is a Chinese version. They said that English was not their first language, so it cost some effort to get the information on the website. Because I plan to look for a job in the mainland China after graduation, it is necessary for me to design a Chinese version of my personal portfolio website. And in the A/B Test, I created a Chinese version to find out if the Chinese version was more pleasant and friendly to users.

7.1.2 Task-based Test

Task-based tests were also conducted. I designed two tasks, namely, (1) To find my portfolio about analysis, (2) To find my Weibo link.

Except one subject failed in the task #1 because this subject didn't notice the filter bar above the portfolio, all of the subject succeeded the two tasks. Consequently, there isn't new problem or deficiency reported.

7.1.3 Problems and Solutions

Based on the Think-Aloud approach and task-based test, I identified the current problems about usability and thought up the corresponding solutions (see table 3).

Phase	Problem	Solution
Browse the page	(1) The background information is not that directly relevant to the jobs I pursue. (2) Too many words.	Redesign this part, add some pictures or photos, and highlight the information that directly relevant to the job I'm pursuing.
View my portfolio	Filter is not obvious.	Enlarge the font size of the filter or add background color to it.
Download my CV	It will be more convenient if the download button is also put in the navigation bar.	Add a download button in the navigation bar.
	No Chinese version,	Created a Chinese version

Table 3. the problems and solutions of my website

7.2 Quantitative Research: A/B Test

As mentioned above, I created the Chinese version of my website as the B version (see figure 15-17). And the hypothesis before the A/B Test is that the Chinese version is much easier for my target users to get information, thus the bounce rate will be decreased, and the average session duration time will be increased.



Figure 15. the Chinese Version of my website



Figure 16. the Chinese Version of my website



Figure 17. the Chinese Version of my website

The A/B Test of my website started from 8th Dec. to 11th Dec. and only last for 4 days due to the time limitation. Up to now, 237 sessions were gathered in this experiment. Specifically, there were 120 sessions for the original version and 117 sessions for the B version. And the results of the A/B Test are as follows.

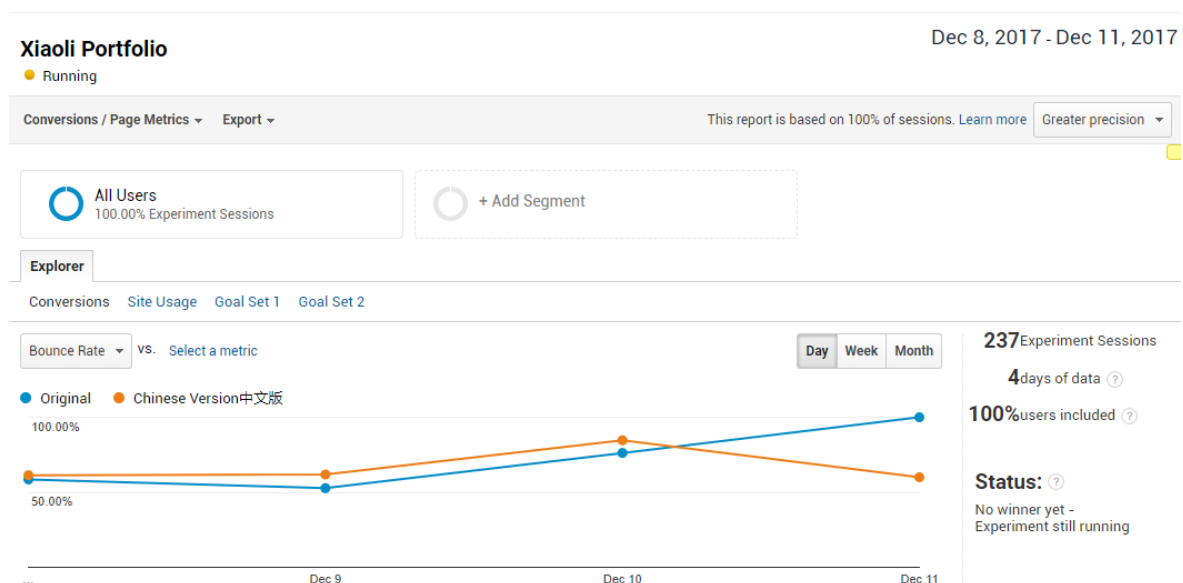


Figure 18. the result of A/B Test-Bounce Rate

Dec 8, 2017 - Dec 11, 2017

Xiaoli Portfolio

● Running

Conversions / Page Metrics ▾ Export ▾

This report is based on 100% of sessions. [Learn more](#)

Greater precision ▾

All Users
100.00% Experiment Sessions

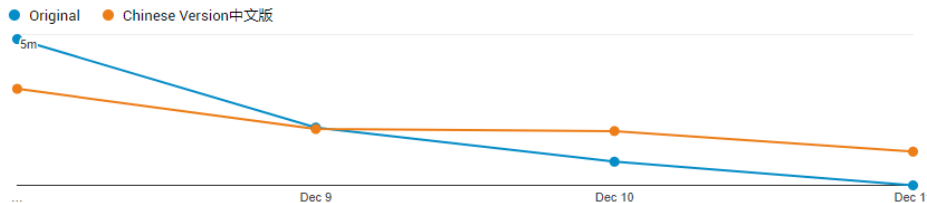
+ Add Segment

Explorer

Conversions Site Usage Goal Set 1 Goal Set 2

Avg. Session Duration ▾ vs. Select a metric

Day Week Month



237 Experiment Sessions

4 days of data ?

100% users included ?

Status: ?No winner yet -
Experiment still running*Figure 19. result of the A/B Test-Avg. Session Duration*

From the figure 18, we can see that in the previous three days, the bounce rate of original version was lower than the Chinese version, but in the last day of this experiment, the bounce rate of original version was much higher than the Chinese version. While the figure 19 indicated that the average session duration of original version was lower than the Chinese version except in the first day. With these figure and data, there are some hints that the Chinese version performs better than the original version. But I don't think I can draw any conclusion arbitrarily about whether my hypothesis is supported or not. More data is needed.

7.3 Dashboard Design and Analysis

To measure and analyse the performance of my website precisely, I created the dashboard on Google Analytics. Based on the objectives and the user needs identified in the strategy plane, 8 metrics were set to monitor the users'

public information and behaviours. To have a better understanding of my website, I added segments of “New Users” and “Returning Users” to my dashboard as well.

As shown in the figure 20, from the left, the first metric is about the devices that users used to view my website. It is obvious that most devices are the mobile phone, following by the tablet. This indicating that I should put emphasis onto the mobile phone users and make more efforts to ensure the usability of my website in mobile phone.

The second metric is the new sessions of everyday, which can show the communication effect of my website.

Bounce rate is the third metric. From the data we can tell that the bounce rate of new users was the highest. And it is necessary for me to figure out solutions to attract the visitors who first come to my website.

Because my personal portfolio was designed as one-page, I also set the scroll depth to measure the degree of how users engaging in my website. The data reveals the similar pattern of the scroll behaviour of all the three kinds of users.

The next metric is the sessions of everyday, which to some extent overlaps with the metric of new session. I can have a big picture of the total views of my website by this metric.

Xiaoli's Portfolio Dashboard

Dec 8, 2017 - Dec 11, 2017

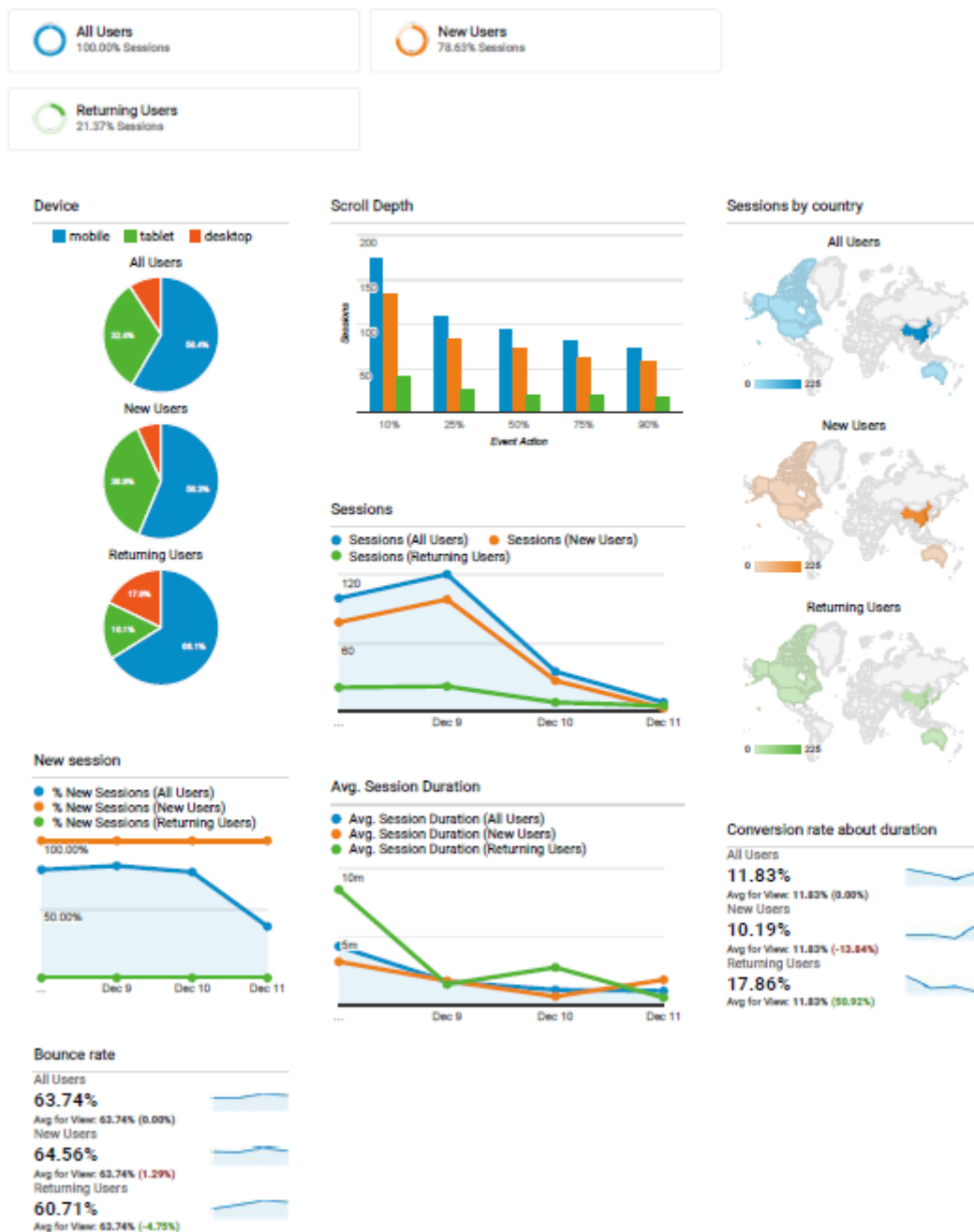


Figure 20. the dashboard of the website

The metric of average session duration follows the session. It reflects the average session duration users stay on my website. However, the data seems very fluctuant.

The seventh metric is the sessions by country which give me the information of where do my users come from. As we can see, the users are mainly from China and this is because I post and shared the link of my website to my friends on the Chinese social media platform.

The last one is the conversion rate about duration. This is the primary KPI of my website which measures how many users spend more than 3 minutes on my website. Since the more time the target users spend on my website, the more interests they show in hiring me. So, this metric can help figure out whether my website is running in a right way to the objectives.

Overall speaking, this customized dashboard benefits my website a lot by measuring the performance in different sets of data. During the process of analysing the data, I went back to the empathy, define and ideate phases of Design Thinking. Also, it is true that these tests including both qualitative method and quantitative method examined the deficiencies and flaws of my website. Therefore, I think more efforts should be made to improve it during the following winter vacation.