



**Improving
Norwegian user's
experience of Moxibustion
in Traditional Chinese Medicine**

Cai Yuanyuan

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Project Description

Redesign of Moxibustion Product for Norwegian market

Theme:

Promotion of Traditional Chinese Medicine to the European market

Research question:

How can a moxibustion tool be designed to improve user experience in a Norwegian market?

Aims of the project:

- Adapt moxibustion to European thinking model and custom.
- Solve the problems of smoke and odor diffused during the treatment process.
- Let users use moxibustion themselves safely and conveniently.
- The therapy is not only to relieve the symptoms, but also is to cure ailments.

Tasks that are to be conducted in the project:

- Methods: Survey, In-depth interview, Single-case Research, user test, market research, data gathering by recordings, notes and photos.
- Improve existing moxibustion tool, re-design, and innovate for the Norwegian market.
- Material: Metal or soft fabric (different from traditional existing product).
- Structure: Tighter and firmer.
- Function: Therapeutic massage and aromatherapy.
- Theories: Design psychology, Design Sociology, User-centered.
- Concept development: Test, observe user behaviors, and improve.
Sale promote, communicate with (latent) customer.
- Evaluation: From the angles of environment, user and market.

Main supervisor: Arild Berg

Co supervisor (s): Astrid Heimer

Acknowledgements

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Additionally, many others have in different ways supported me in my research. I owe special thanks to my colleagues in China at Xi'an University of Architecture and Technology which is my present employer and gave this precious opportunity to study aboard. Furthermore, I would like to thank Doctor Cathrine Nordgård whom has been professional and valuable discussion partners during the project.

Thanks always to my father and mother, for they ceaseless support and assistance, and unflinching faith in my abilities.

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And finally, thanks to all of my new friends here in Norway who have made this time so memorable and fun.

Sincerely, thanks!

May, 2011

Cai Yuanyuan

Abstract

To face the challenge of the new century and impact of the global integrated tide, people's relationship and communication get closer and wider. But sometimes still have potential barriers, which exist to better use of design as a tool for promotion in our life.

In the work presented in this report it has been worked according to my research question:

Through learn from Norwegian culture and life; analysis Norwegian users' need and psychology, to develop a new moxibustion product and introduce a new experience of traditional Chinese medical to them.

This project consisted in introducing a new experience of traditional Chinese medical to Norwegians as a framework of product development. The three graded development stages included in are: improvement design of existing product, innovation design and conceptual design by directing towards the essence of traditional Chinese medical.

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INTRODUCTION



1.1. Background

1.1.1 History and significance of TCM

Traditional Chinese Medicine (TCM) has a long and rich history, and is the third oldest form of medicine. It also plays a very important part in medicine circles nowadays.

The origin of TCM goes back more than 5,000 years even more than the documents recorded history. TCM include such treatments as Chinese herbal medicine, acupuncture, dietary therapy, and both Tui na and Shiatsu massage. Qigong and Taijiquan are also closely associated with TCM. Major theories include: Yin-yang, the Five Phases, the human body Meridian/Channel system, Zang Fu organ theory, six confirmations, four levels, etc.

Chinese Medicine is a complete medical system that is capable of treating disease in all its forms, and at the same time places great importance on preventing disease before it occurs.

Chinese herbal medicine

Chinese herbal medicine is a major aspect of traditional Chinese medicine, which focuses on restoring a balance of energy, body, and spirit to maintain health rather than treating a particular disease or medical condition. Herbs are used with the goal of restoring balance by nourishing the body.

In China, more than 3,200 herbs and 300 mineral and animal extracts are used in more than 400 different formulas(JustHost.com 2010).

1.1.2 Current states of TCM in China and Norway

The isolation of the old China throughout history play a role in TCM is lack of development in other civilizations. However, with the founding of the People’s Republic of China in 1949 and opening of China in 1972 it has been spreading to Western and European countries. The practice of TCM has been shaped over time by many factors including culture, philosophy, politics, religion and science. The Chinese government has pledged to create several export-oriented TCM giants in the coming years. Continuous efforts in promotion of the indigenous therapies by China have put TCM in a commendable position.

Chinese Medicine has been used as front line medicine by the majority of the world’s population since before recorded history, and is still the most widely utilized medical system in the world today. Adverse reactions to Chinese herbs are extremely rare and are negligible when compared to those commonly produced by pharmaceutical drugs.

In recent year, more and more people are interested in TCM. They would like to accept its treatment. They are interested in learning its knowledge and technique to treat patients and studying why it works. TCM as a subject has been added into teaching plan in different famous medical colleges. TCM clinics and school are everywhere in the world and increased continuously every year. With the present development of TCM, its integration with modern science and technology will surely enhance its contribution to human health.

1.1.3 Master project – Moxibustion product

Moxibustion (Chinese: 灸; pinyin: *jiǔ*) is a traditional Chinese medicine therapy using moxa, or mugwort herb. It plays an important role in the traditional medical systems of China. Suppliers usually age the mugwort and grind it up to a fluff; practitioners burn the fluff or process it further into a stick that resembles a (non-smokable) cigar. They can use it indirectly, with acupuncture needles, or sometimes burn it on a patient's skin(Wikimedia).

Practitioners use moxa to warm regions and acupuncture points with the intention of stimulating

circulation through the points and inducing a smoother flow of blood and qi. In traditional Chinese medicine, moxibustion is used on people who have a cold or stagnant condition. The burning of moxa is believed to expel cold and warm the meridians. Moxibustion is also especially effective in the treatment of chronic problems, "deficient conditions" (weakness), and gerontology. Table 1.1 shows the keywords of moxibustion.

Table 1.1 Introduction of moxibustion

MOXIBUSTION	Traditional Chinese medicine therapy
MATERIAL	Moxa or mugwort herb
PRODUCT	Moxa fluff or stick
PROCESS	<p>Moxa → fluff or stick → warm regions and acupuncture points</p>
TIME	Half an hour, once or twice per week
PURPOSE	Expel cold and damp, stimulate circulation, induce a smoother flow of blood and Qi, maintain general health, enhance people's immunity
TREATMENT	Chronic problems, "deficient conditions" (weakness)
WEAKNESS	Smoke and odor
ADVANTAGE	Painless and gentle, sterile procedure. No drugs are used and nothing is injected into the skin.

Although moxibustion has been safely used in traditional Chinese medicine for centuries, it is not for everyone. Because it is used specifically for patients suffering from cold or stagnant constitutions, it should not be used on anyone diagnosed with too much heat. Burning moxa also produces a great deal of smoke and a pungent odor. Patients with respiratory problems may request that their practitioner use smokeless moxa sticks as an alternative.

In Western medicine, moxibustion has successfully been used to turn breech babies into a normal head-down position prior to childbirth. A landmark study published in the Journal of the American Medical Association in 1998 found that up to 75% of women suffering from breech

presentations before childbirth had fetuses that rotated to the normal position after receiving moxibustion at an acupuncture point on the Bladder meridian (Chadwick 2008). Other studies have shown that moxibustion increases the movement of the fetus in pregnant women, and may reduce the symptoms of menstrual cramps when used in conjunction with traditional acupuncture.

1.1.4 Drivers and difficulties of the project

Normally, our physique is really significantly capable of healing its self and traditional Chinese medicine additional increases this ability. In this case, the additional repeated you deal with yourself with traditional Chinese medicine, the better.

Drivers of the project

- Promotion of TCM to Europe

World Health Organization (WHO) is keen regarding traditional medicine and has been active in creating strategies, guidelines and standards of botanical medicines. The global scenario illustrates vividly both promise and challenges presented by the traditional medicines. China needs to identify the extent to which TCM therapeutics is safe and effective so that it could get wider global acceptance.

- Opportunity of studying in Norway

I studied the industrial design from my bachelor to master in China. Now I still have chance study here. So I think this is a great opportunity to have different experience both in major and culture exchanges. Why not I combine two cultures together and get more inspiration through it?

- Knowledge and experience on Moxibustion

As a Chinese I more or less have some knowledge of TCM which already becomes one part of our life. Further I have read some books, articles about it because I am interested in TCM which is not only for treating disease, but also about an attitude of our life. So I have a good knowledge background of TCM to discuss well with specialist or patient.

I am especially concerned about moxibustion and I usually have used it myself in recent years, because it's safe, easy, effective and in general very popular among Chinese people.

- Collaboration with *Cathrine Nordgård*

The “Norsk akupunkturforening” is a Norwegian acupuncture association. It is not only the most authority institution in Norway, but also one member of the European Traditional Chinese Medicine Association (ETCMA), which is an umbrella organization for professional associations that represent different fields within the TCM. The clinique “Akupunktur 1” which is authorized by the NAFO was my collaboration partner during my practical studies. Doctor Cathrine graduated from the most professional school of teaching the TCM in Norway and she also has rich clinical experience using the therapies of TCM. She gave me many professional suggestion and feedback.

Difficulties of the project

- **Europe regarding herb regulations 2011**

European law has strict regulations and restrictions about all of herbal medicines. Even in April 2011, European legislation which has already been passed will come into force which will effectively mean that all herbal medicines will disappear from the UK(Darkstar 2010). Therefore, many groups were found to act and save their herbal choices. I hope the dialog and communication between European and their government will solve the problem of current status in the not too distant future.

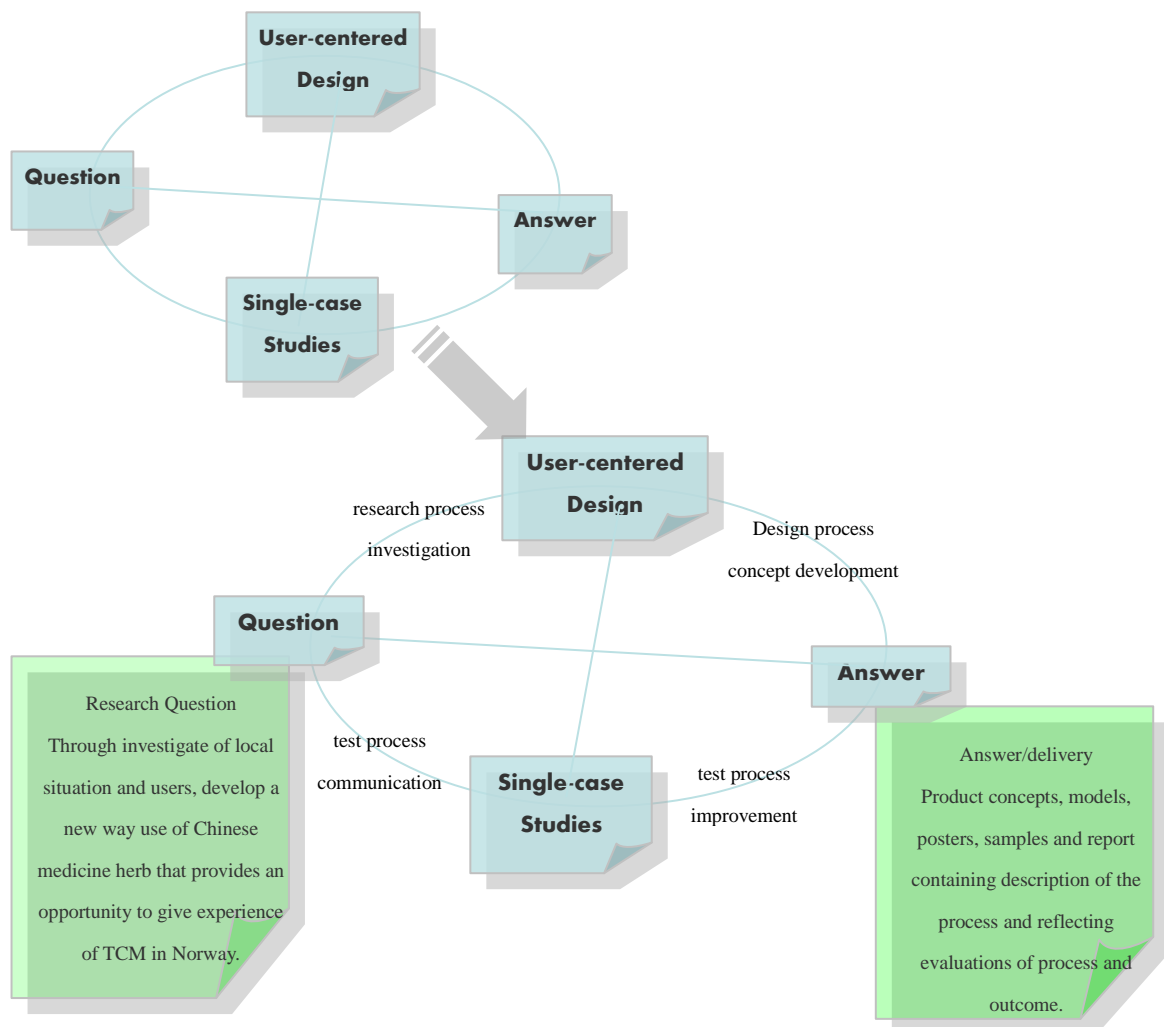
- **Chinese-Western Cultural Differences**

There are fundamental differences in TCM and the western medical system. With some understanding of Chinese culture and philosophies, it may help one to see through and start to appreciate the value of TCM. So it’s a little bit difficult to understand the theory and believe the curative effect of moxibustion for a foreigner who doesn’t know anything about Chinese medicine.

1.2. Research question

On this background it is worked from following research question:

How can a moxibustion be designed to improve user experience in a Norwegian market? (figure 1.2)

Figure 1.2 Project process

1.3. Methods and challenges

In order to carry out my project successfully, I will use as many as methods to get more information, such as survey, in-depth interview, single-case research, user test, market research, data gathering by recordings, notes and photos, in which the single-case research is my important point.

Challenges during the process

- Communication

Effective communication with people of different cultures is especially challenging (Goldenberg and Mazursky 2002). Cultures provide people with ways of thinking--ways of seeing, hearing, and interpreting the world. Thus the same words can mean different things to people from

different cultures, even when they talk the "same" language. When the languages and cultures are different, the misunderstandings will happen. That means I need to learn some skills in advance about nonverbal communication. This can save a lot of embarrassment and misunderstanding.

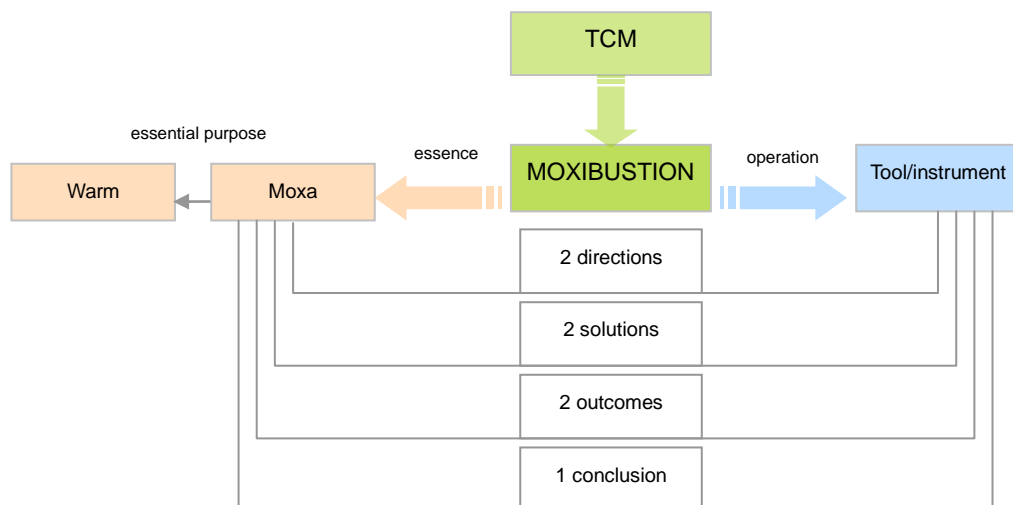
- Touching Norway

One of my important tasks is "cultural studies", in-depth studies of specific issues as an insight into Norwegian cultural values and attitudes. This is a long term accumulated process from every aspect of life.

1.4. Disposition

This project is considered to consist in three main parts: Research on the background of the problem, the concepts evolution the product development. Figure 1.3 shows the main task of design process.

Figure 1.3 Concept process



LOCAL AND CURRENT SITUATION



2.1. Some differences between China and Norway

- **Housing situation**

Smoke Detector (figure 2.1)

Across the most of the world's regulations, Norway requires smoke detectors to be installed in homes, schools, public and commercial buildings and already actualized very well. In addition to sounding an audible alarm when a fire breaks out, smoke detectors also communicate an alarm notification to a remote control location, such as the local fire station.

However, we don't have this efficient system in most of China, except for some school, unit and important or special place. So people still can smoke in most house or indoor surrounding, even though which is annoying.

During the traditional moxibustion, burning moxa would produce a great deal of smoke and a pungent odor unless use smokeless moxa sticks as an alternative.



Figure 2.1 Smoke detector

Open vs Closed kitchen

Compared with the Chinese kitchen, Western-style kitchen has very different characteristics. It is connected with the design of the living room, the kitchen is completely open, and often in the kitchen area to set up a table, cooking and dining in the same interval to complete. So it is larger

and convenient to some extent. However, Chinese kitchen is fully adopted the closed design. This is the traditional Chinese diet is closely related to cooking habits, as habits of Chinese people is deep-fried food fried cooking methods such as cooking fumes, can only take the form of a confined space, and in which high-powered with a range hood to ensure that kitchen fumes to the outside a smooth schedule and will not be stranded in space in the home.

Figure 2.2 Open vs closed kitchen



Kitchen appliance – microware and oven

Most of Chinese and Japanese dishes don't rely on the oven, so that's understandable to many western people. Oven is the most common kitchen appliance used for cooking in Norway, from hearing, baking or drying, can be seen at home and in school. So I would like use this convenient condition with my project idea, why not?

● **China-West culture**

Everything is relative, cultural difference being no exception. Culture, as the total pattern of human behavior and its products, oversteps geographical limits and historical conditions in many ways, and it is characterized by its strong penetrative ness and fusibility(Lash and Lury 2007). Therefore, the culture differences are everywhere. They affect people's ways of thinking and their views of the world. Even in everyday life, the cultural differences show up from the moment the eyes are opened to the minute the dreams are invited(Tolle 1997).

There are some typical examples of the differences.

Firstly, greeting is the first step to form a culture, because people begin to communicate with others. The individuals become a community. How do we Chinese greet each other? Informally, if we meet a friend in the street, we are used to say: "Hi, have you had your meal?" or "Where are you going?" When it is the case of two gentlemen, they tend to shake hands.

However, in the western countries, the above questions are just questions, not greeting at all. They may think you're inviting them to dinner if you ask about their meals. Usually, they'll just give each other a smile or greet with a "Hi". They'll shake hands only in some formal situations. Secondly, think of the situations below. Your mother is busy in the kitchen. She suddenly asks you to fetch a bowl for her. You do so. What'll your mother's response be? Probably she'll just continue doing the cooking. After a while, the dinner is ready. Your mother hands you your bowl of rice. What's your response? Probably just begin to eat.

That's what I want to say. In Chinese families, we rarely say "Thank you" to other family members for receiving help or service. Neither will we say so between good friends. It's such an unpopular response that if you say it, the counterpart will think you are treating him as a stranger, otherwise you are lacking of intimacy.

But in the West, "thank you" is one of the most frequently used sentences. Teachers will thank a student for answering a question; husbands will thank his wife for making a coffee.

From this view, I think the biggest dividing line in logical thinking between TCM and Western medicine consists in epistemology. TCM looks upon the whole universe as one organism; and since the universe is an organism, all things in it are related to each other without exception by being interdependent, mutually restraining, balanced and in harmony(Wang 2008). Owing to the fact that human is also looked upon as a "universe", though on a small scale, the view is entertained that between the internal organs of the human body there also exist the requirement for equilibrium between yin and yang and the phenomenon of mutual reinforcement and mutual neutralization. Besides that, there still have other reasons of different in the medicine effects and Chinese medicine focuses on plants as remedies.

Although these differences, I still think most things have two handles; and a wise man should take hold of the best. The cultural differences should not be the obstacle to the civilization of human being. It ought to be the motivation of our going further.

2.2. Advantage of introducing moxibustion to Norway

- **Climate feature and national sport**

Norway is a country located in Northern Europe on the western and northern part of the

Scandinavian Peninsula. Norway is one of the world's most northerly countries and also has a very elongated shape, one of the longest and most rugged coastlines in the world. The lower inland areas, both in the southern and northern parts of Norway, can have very low mean temperatures in winter. Temperatures can reach below -40°C in the inner areas (Ide signs 2010).

There is a random example to show the climate feature during one year in Norway.

Stavanger, Norway (Latitude $58^{\circ} 58'$ North Longitude: $5^{\circ} 45'$ east, 2/3rds of the way from the equator to the North Pole)

- Altitude: 8 m (26 ft)
- Average temperature: 7.4°C (45°F)
- Average temperature range: 15°C
- Warmest months: July and August, with an average of 18°C (64°F)
- Coldest month: February, with an average of -3°C (27°F)
- Average yearly rainfall: 1180 mm (46 in)
- Driest month: March
- Wettest months: September and October (Cantor 2010)

Compared to the rest of Norway, winter in Stavanger is mild and wet. However, winter in the northernmost parts of Norway can last six months, with three of those spent with polar nights when the sun barely rises about the horizon. In addition, rain is distributed throughout the year with frequent inland snowfalls during the winter. The rainy and windy day is maybe the worst weather here and people usually would not take umbrellas so they must under these raw and damp surroundings. That's right why I would like to introduce the moxibustion here, which can expel cold and warm the meridians, prevent diseases and thus enhance body resistance

The mountainous terrain and the colder weather inland result in a lot of winter sports. Norwegians love outdoor activities especially the ski, snowboard, toboggan, or ice skate. Skiing is Norway's national sport. People usually prepare professional windproof, waterproof and warm ski wear. Sometimes they would use sports heating pad to keep warm their body or some parts of body when outside.

It will be very suitable to using moxibustion under this kind of climate features. Furthermore, moxibustion will relief and cure some somewhat indisposed conditions.

● TCM current situation in Norway

The development of TCM in the Norway is very rapid though it started rather late compared

with some other EU countries. There are many TCM practitioners in such a small country with 4.9 million people. The following are some information summarized from different websites, which can be found in the last references.

TCM Education

The education in the Norway is not yet considered as official university education, and is mostly carried on as part-time vocational education. There are 7 educational institutes in the Norway and educate hundreds practitioners every year.

Education Institutes in the Norway

In Norway, most acupuncture practitioners use the TCM approach, and about 500 practitioners belong to the professional organization, NAFO.

Professional Associations

There are 6 TCM professional associations in the Norway with many registered TCM practitioners. Some associations focus on acupuncture while others on comprehensive TCM therapy such as Tuina, cupping, herbal medicine and medical Qigong etc.

Medical Insurance

Chinese Medicine is not included in the BIG category in the Norway, but still many medical insurance companies cover (in full or partly) the therapy cost according to individual agreement for which extra insurance fee is paid.

TCM Scientific Study

TCM scientific study in Norway mainly lies on the study of acupuncture. Very active among them are Akupunktur- høyskolen, Norsk Skole for Tradisjonell Kinesisk Medisin and Norsk akupunkturforening.

TCM Legislation in Norway

So far there is no legislation on TCM, not even included in the category of complimentary medicine. Herbal medicine is imported and sold as food supplements. Acupuncture, Tuina, and herbal medicine are not regulated officially yet. There is still insufficient supervision on TCM products and clinical practice.

Future Trendy

Acupuncture is widely recognized by patients in Norway. The health ministry has already been

working intensively on TCM legislation in past two years to regulate the TCM market.

2.3 Pilot study questionnaire

At very onset, I made a mass questionnaire online and called as many Norwegians as possible to answer it. I would like to collect the people's general attitudes and thoughts about TCM and moxibustion, which would be very benefit to my project later.

Below is my questionnaire:

Where are you from?

How old are you?

under 20 20-30 31-50 over 50

Do you know something about the traditional Chinese medicine?

Yes No

If you know, please select some of them.

Chinese herb Acupuncture

Moxibustion Qigong or Taiji

What kind of channels can you know about the traditional Chinese medicine?

TV programs Internet

Book, magazine or newspaper Relatives and friends

Did you have any experience in using Chinese medicine?

Yes No

Do you trust the curative effect of the Chinese medicine?

Yes No No idea

Would you like to use some Chinese herbs to cure disease or strengthen physical health if they are safe and convenient in your life?

Yes No No idea

Would you like to better understand the traditional Chinese medicine if given chance?

Yes No No idea

Would you like to try some Traditional Chinese medicine when you feel unwell?

Yes No No idea

Could you tell some of your impression or attitude about Chinese medicine?

What do you regard as the biggest difference between Western medicine and Chinese medicine?

Would like to use some Chinese herbs to cure illness or strengthen physical health if they are safe and convenient in your life?

Yes No No idea

Outcome of the questionnaire:

Through sending out this questionnaire to all schools and as many foreigners as I known, after one month, I got about 30 valid questionnaires back. Statistics suggest that most foreigners are interested in the TCM and know something about it, but at the same time they are also curious about the theory and operation. Some of them take a skeptical attitude to the curative effect of the TCM; even they said they must choose the western medicine and treatment timely if they felt not well. Unless it doesn't work, they don't try the TCM at the beginning.

From these outcomes, it's desirable that we have the potential market in Europe and many tried have been already done here. Other deficiency and challenge are just right my study now.

2.4. Expectation

- Promoting TCM

TCM faces challenges both in developed and developing countries. Though it has been used in some countries, especially in Asia and Africa, for thousands of years, people today cast doubt.

I wish I could provide a chance for who has the interested in TCM to discuss common interests, encouraging protection, development and innovation in TCM & Western medicine. Of course, the discussion should also include how to use design as a tool to help new product get into people's life.

- Cultural exchange

Thanks to the means of modern transportation and communication, the world is getting small. The whole world community appears to be no more than a large globe village where the residents came together with different backgrounds and values. Through experiencing the inevitable cultural exchanges and as well as cultural clashes, different cultures can absorb and influence one another. Furthermore, different cultures can learn from each other's strengths to offset their weaknesses and complement one another. I think that is the important reason why we would like to go aboard study and to experience.

IMPROVEMENT DESIGN



3.1. Defining the terms redesign and improvement



While the methodologies described above are applicable to different types of design problems, Otto and Wood (1999) argue that they tend to emphasize either design problems that seek “original solutions” or well-posed parametric formulations. Otto and Wood (1999) believe that for the class of problems known as redesign (adaptive, variant, etc.), an emphasis on original design may be too general. Sferro et al. (1993) argue the legitimacy of this claim, based on an analysis of the current variant design processes in the automobile industry. (Lamvik 2001)

As with original design, redesign problems include the process steps described above but also focus on an additional step, referred to here as “reverse engineering” (Ingle, 1994, Otto and Wood, 1999). Reverse engineering initiates the redesign process, wherein a product is predicted, observed, disassembled, analyzed, tested, “experienced,” and documented in terms of its functionality, form, physical principles, manufacturability, and assemblability. The intent of this process step is to fully understand and represent the current instantiation of a product. Based on the resulting representation and understanding, a product may be evolved, either at the subsystem, configuration, component, or parametric level (Otto and Wood, 1999).

3.2. Existing products analysis

Table 3.1 Existing products analysis

	Material	Way of Working & Scope of Application	Advantages	Disadvantages
	<ul style="list-style-type: none"> *wood *bamboo *steel sheet *wire 	<ul style="list-style-type: none"> *home use *beauty parlor *clinic *hospital 	<ul style="list-style-type: none"> *curved bottom *relative small *solid structure *natural touch and psychology feeling 	<ul style="list-style-type: none"> *need to pay attention *drop out ashes *hardly used for back *not easy to fixed *adjusted time to time
	<ul style="list-style-type: none"> *wood *bamboo *steel sheet *tin foil *wire 	<ul style="list-style-type: none"> *home use *beauty parlor *clinic *hospital 	<ul style="list-style-type: none"> *extend smoothly *solid structure *natural touch and psychology feeling 	<ul style="list-style-type: none"> *handhold *need to pay attention *drop out ashes *hardly used for back *hard to fixed *need cut to moxa stick to small one
	<ul style="list-style-type: none"> *cooper *iron *plastic *rubber 	<ul style="list-style-type: none"> *home use *beauty parlor *clinic 	<ul style="list-style-type: none"> *refinement technique, and beauty exterior *traditional Chinese culture-Five elements pattern *smooth touch feeling *facility 	<ul style="list-style-type: none"> *easily overheated *handhold *need to pay attention *adjusted sometimes
	<ul style="list-style-type: none"> *cooper *plastic 	<ul style="list-style-type: none"> *beauty parlor *clinic *hospital 	<ul style="list-style-type: none"> *refinement technique *facility *stable structure 	<ul style="list-style-type: none"> *hard to fixed *need assistance
	<ul style="list-style-type: none"> *bamboo *wood *jade 	<ul style="list-style-type: none"> *home use *beauty parlor 	<ul style="list-style-type: none"> *combined with massage *special for acupoint of navel 	<ul style="list-style-type: none"> *limited use *limited curative effect *handhold

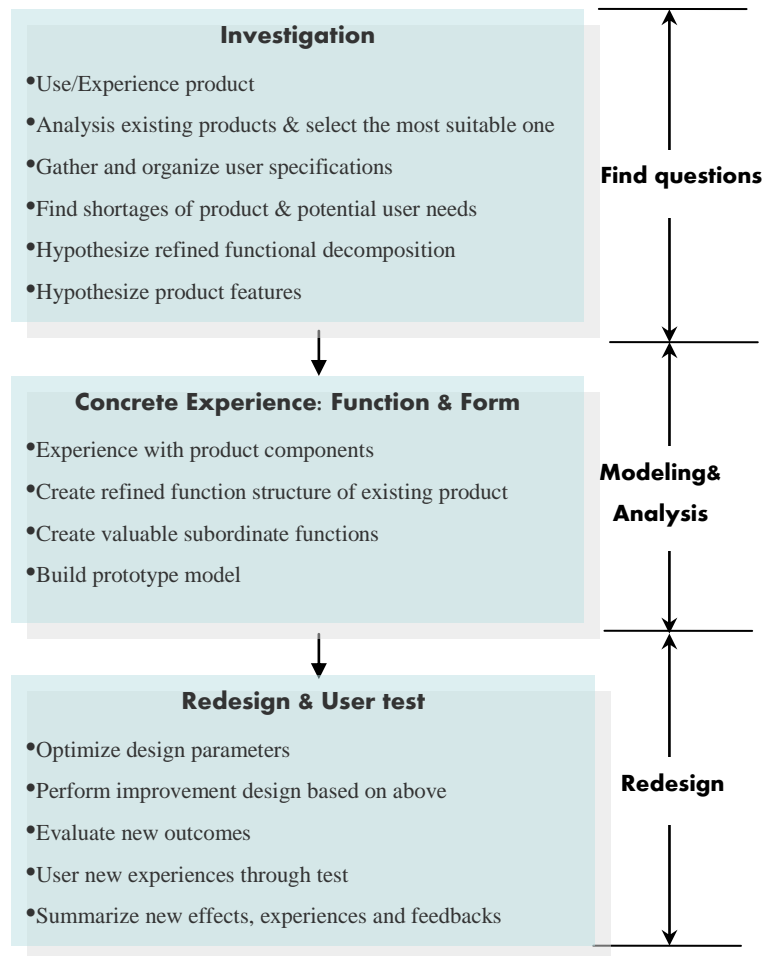
	<p>*cooper *cooper-coated iron</p>	<p>*home use *salon</p>	<p>*small and exquisitely *smooth touch feeling *facility, carry wherever you like</p>	<p>*easily overheated *unsound structure *drop out ashes</p>
	<p>*alloys *stainless steel *tech *plastic</p>	<p>*hospital *clinic *salon *beauty parlor</p>	<p>*telescopic, flexible, foldable, adjustable 360° *high-power thermal effect *safe & easily controlled *wide applicability</p>	<p>*clear inconvenient *too big *overheated risk</p>

3.3. Method

- **“Know your product”-philosophy**

Andreasen and Støren have developed a methodology for redesigning products based on an intensive investigation of the product to be redesigned, known as ‘Know your product’ (Andreasen and Støren, 1993).

In “know your product” the product is analyzed from the customer to production, with all the customer properties traceable through the entire analysis. This makes it possible to determine which of the product properties should be improved and which parts of the product and the production systems cannot be changed.

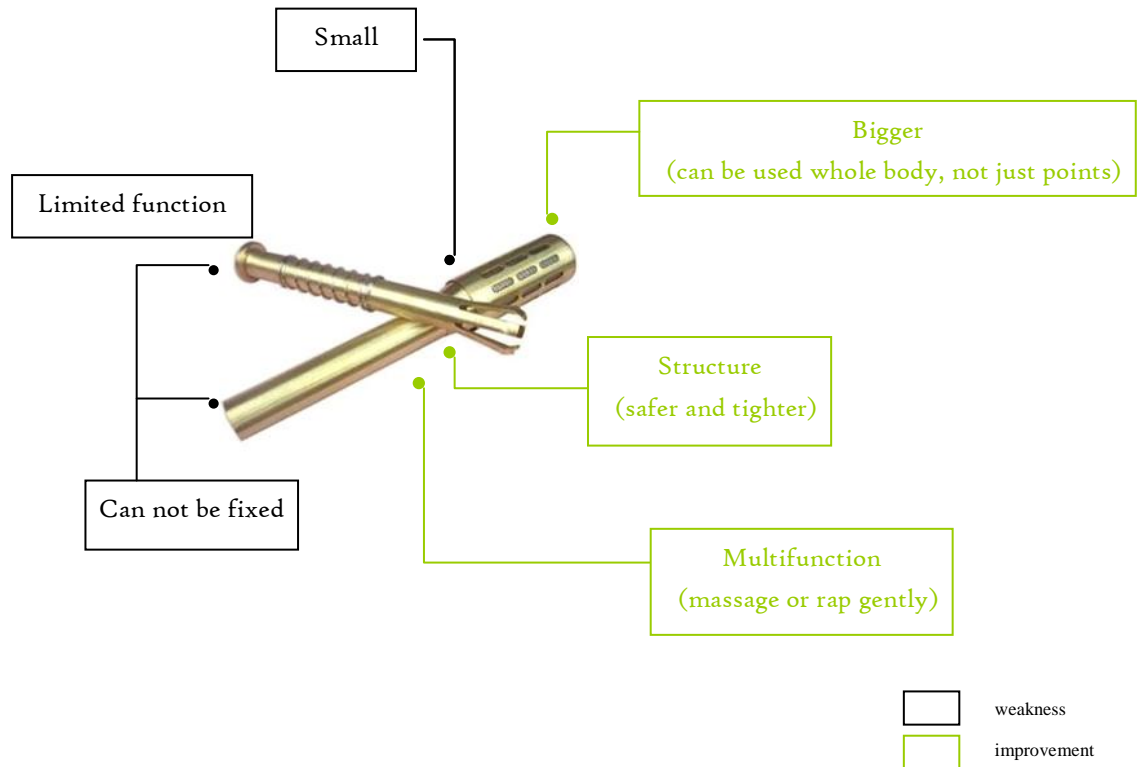
Figure 3.2 Three phases of research method

There are three phases (figure3.2) embody the methods I used in my improvement design: finding shortages, modeling and analysis, and redesign. In the first phase, finding shortages, the intention is twofold. First, a product is treated as a black box, experienced over its operating parameters, and studied with respect to customer needs and predicted and/or hypothesized functionality, product components, and physical principles. The second step of the finding shortages phase is to experience the actual product in both function and form. This sub phase includes the full disassembly of the product, design for user analysis, further functional analysis, and the generation of final design specifications.

The second stage of the methods involves the development and execution of design models, analysis strategies, model calibration, and experimentation. The third and final stage of the methods then initiates product redesign based on the results of the finding shortages and modeling phases.

- **Analysis existing product**

Figure 3.3 Analysis target product



Beyond redesign or improvement tasks, I think the main effort may be needed to satisfy the needs of customer from the existing product. An original redesign, in this context, implies that a major conflict exists between the customer needs and the current product in the market. Because of this conflict, it is deemed that an entirely new product concept is needed.

3.4. Improvement design process

3.4.1 Detailed design

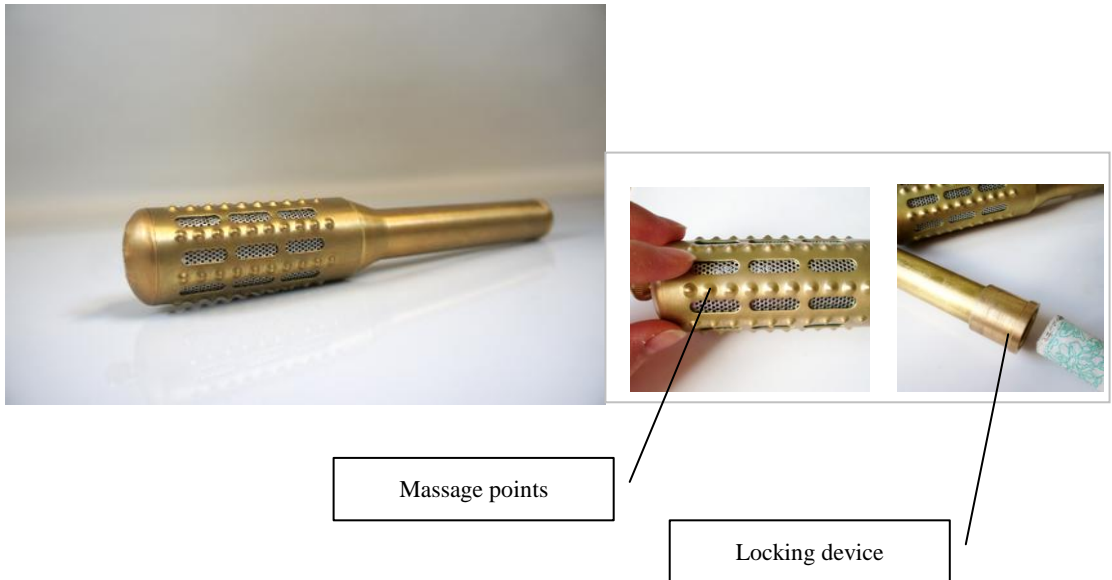
The Detailed Design phase (figure 3.4) builds on the existing optimum product to incorporate technology choices and project requirements and ensures compliance with the Norwegian market. A limited amount of construction/testing activities will occur in an effort to refine and validate the design.

Figure 3.4 Details of modeling process and test



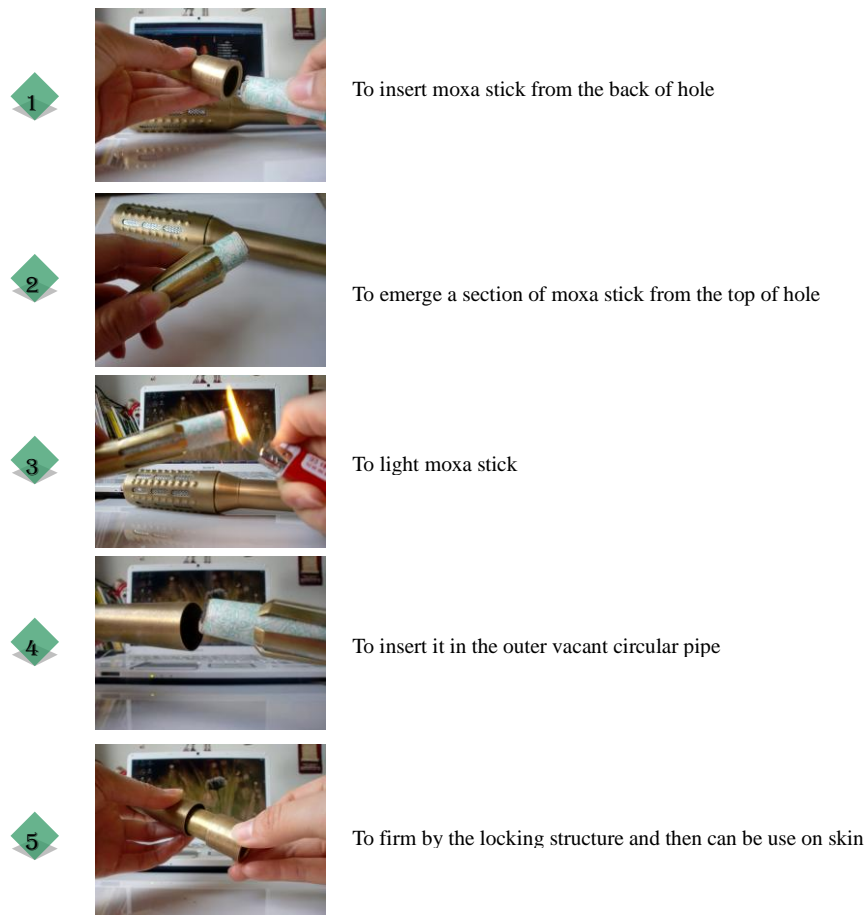
- Bigger – can be used whole body
- Structure – safer and tighter
- Multifunction – massage or gently rap

Figure 3.5 Final metal moxibustion stick



3.4.2 Operation process

Figure 3.6 Operation process of product



3.4.3 User test

Figure 3.7 User test scenes



It's very important for designs to have a good conceptual model that is explicitly represented to the user. This makes it easier for people to understand what they're doing. It makes it easier to learn unknown thing if you want user to know what is going on(Mitchell 1996). It's also critically important that whenever you perform an operation, you get feedback so that you know that the operation has been received. So it's also important for designers to add feedback.

Usually the thing I know to do when I start on a project is to listen and look very intently at the

people with whom I'm working. I try to spend as much time as I can listen to them describing a variety of things. Then, if I can do that enough, I can really drop into the kind of ethos of the project.

The real problem of design is trying to understand people in their everyday settings—at home, at office, on the playground, in an automobile, or in a school setting. To understand how people operate in these everyday settings requires us to follow them around, watch them, and try to understand what tasks they're trying to accomplish and thereby to better understand what their real needs are (Yin. 2009).

I also try to learn as much as I can about the physical constraints and the operational constraints of a product and then to really imagine myself as the user. I think this probably is the method that I always try to maintain. I think of myself as a user using this kind of medical instrument for the first time, then for the fifteenth time, and I try to test any thought I have against that parameter.

Why would I want to use it again, and what am I learning? Why is it exciting or attracting? What is it, for example, about a psychologist at in a clinic that makes people want to go back and back again? What would I advocate it or could learn from it?(Technology 2010)

3.5. Conclusion

This chapter analyzed the existing products in Chinese market nowadays and chose the optimum one to improve for the new users. After introduced to Norwegian people; through a series of user tests, some problems have arisen, which reflected some users' thoughts and needs from different angles. These problems mainly focused on:

"It looks like a microphone, isn't it?"

"It is a little bit heavy if I use it over 5 minutes."

"It's not cute, looks like a weapon at a distance."

"You should give an operation manual with your product."

"What about the ashes leaking out from the ventilation holes?"

"The metal texture can be felt smooth and clean, but maybe slant cold and hard in the autumn and winter."

These feedbacks gave more inspirations to develop my project at the next phase.

1. Widen vision and thought, even though the existing product is very well in some aspect.
2. In view of the above question, come up with each solution.
3. It is possible that whatever same or totally different design would be accepted in a new market, so try as many as possibilities without hesitate.

INNOVATION DESIGN

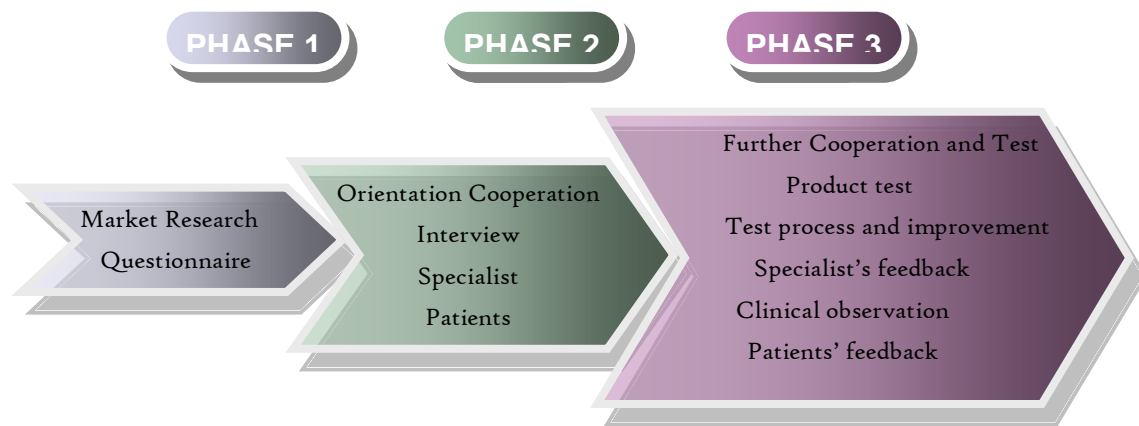


4.1. Defining the term innovation

The term innovate is defined by the Oxford Dictionary as make changes; introduce new things, and innovation as innovating; instances of this; something new that is introduced (Hornby, 1974). Here the term new is introduced. Innovation includes an element of originality not by itself, but also an element of acceptance by its audience. Innovation is not limited to technological innovation. It also includes changes in: work practices involving both technical and organizational systems; in the way products and services are created, distributed and marketed; in the ways products and services are used.(Lamvik 2001)

As the dictionary explains, innovation can denote both a process (innovating) and its result (something new that is introduced). According to the definition proposed by the OECD in its “Frascati Manual” (European Commission, 1995, OECD, 1992a), innovation involves the transformation of an idea into a marketable product or service, a new or improved manufacturing or distribution process, or a new method of social service. The term thus refers to the process. (Lamvik 2001)

4.2. Drivers for innovation

Figure 4.1 Implementation plan of innovation phase

- R&D

To create the conditions for a more dynamic Norwegian, “Where excellent research improves knowledge capital and leads to innovation in successful and dynamic business”.

In order to more understand the existing market and could work well with doctor Cathrine, I visited the most famous local drug shop “apotek” and talked with the assistants. I got information something about the import situation of the foreign drugs especial the Chinese drugs.

- Professional Collaboration

The “Norsk akupunkturforening” is a right Norwegian acupuncture association. It is not only the most authority institution in Norway, it also one member of the European Traditional Chinese Medicine Association (ETCMA), which is an umbrella organization for professional associations that represent different fields within the TCM. Each member association is made up of individual practitioners, and by January 2009 they represent approximately 9000 practitioners in 12 countries. Their main purpose is to promote the wider recognition and acceptance of TCM therapies by European governments and the public. They exchange views and experiences over matters of mutual interest, such as the statutory regulation of our therapies and the development of our educational programs. They are a reference point for consultation regarding any healthcare policy and regulation in Europe that may impact on their professions and patients, and they offer particular expertise in all fields of TCM. Collaboration with this kind of institution will have the power to influence or convince for my practical study.

At last, the clinique “Akupunktur 1” which is authorized by the NAFO, signed the practical

agreement with me. Doctor Cathrine Nordgård was interested in my idea and objective after talked with me.

Doctor Cathrine graduated from the most professional school of teaching the TCM in Norway and she also has rich clinical experience using the therapies of TCM. No matter in professional field or normal life aspect, the conversation and discussion between us without any barrier. She gave me courage to face my difficulty and go on my studies because of her kindness. So I believe under this kind of atmosphere, we will have a meaningful collaboration to combine different culture well. Of course, I never know I know so little about our own culture until I go abroad. I still need fall back to learn lots of knowledge and culture. In this way I can ensure our communication and collaboration would go well. (Cai 2010)

- Environment-friendly Design

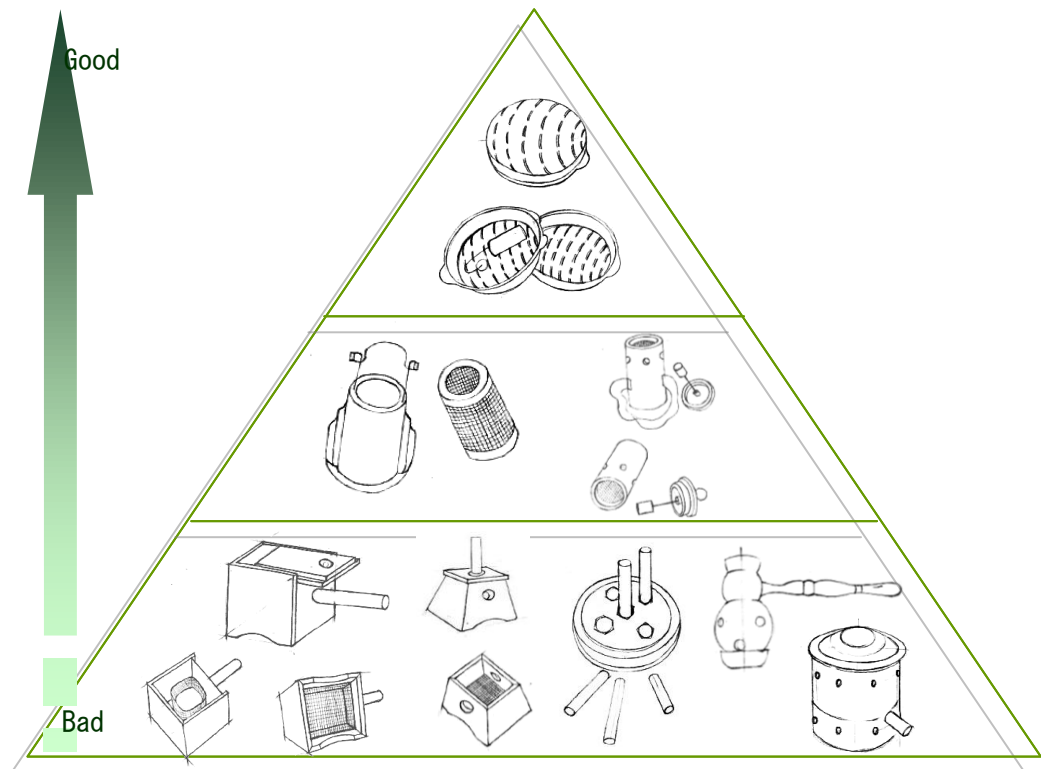
I had considered environment-friendly material and production from the design phase. I chose the environmental protection materials and design the product more compact, light and higher reuse. That's also in tune with the old eastern ethical ideology that man is an integral part of nature.

4.3. Innovation design process

4.3.1 Innovation pyramid

Figure 4.2 shows all of my sketches at this stage. After discussed with Cathrine Nordgård during my practical studies, we made a pyramid to express which is better to improve and develop to the final product. We agreed to the metal ball at the top one that looks simple, smooth and more modern.

Figure 4.2 Selection of the optimum concept through pyramid




4.3.2 Shape and material

Figure 4.3 Product realizing process



 R: 8 cm metal (copper better)

 10-min

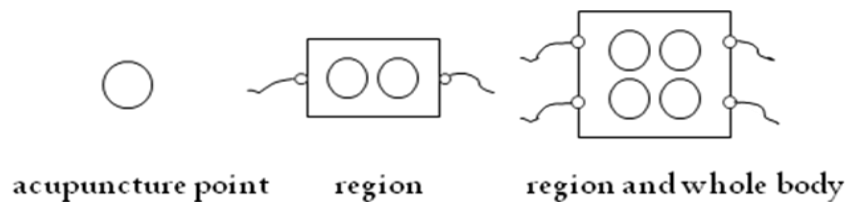
 Bamboo Fabric:
absorb smoke and odor strongly

In compared with the existing moxibustion tool, this one likes a ball - small, smooth, complete, and easy to carry. It's made by metal and very different from the existing product in Chinese market. This shape and material made more desirable or valuable or profitable for European market. Its diameter is about 8 cm, which is just right for a moxibustion stick could last a quarter of an hour. It also means user doesn't need measure time during the treatment.

Besides, it also has an attachment- a pocket to absorb smoke and odor emitted by moxa. On the other hand, it also can protect skin from overheat. (Cai 2010)

4.3.3 Idea of modularization design

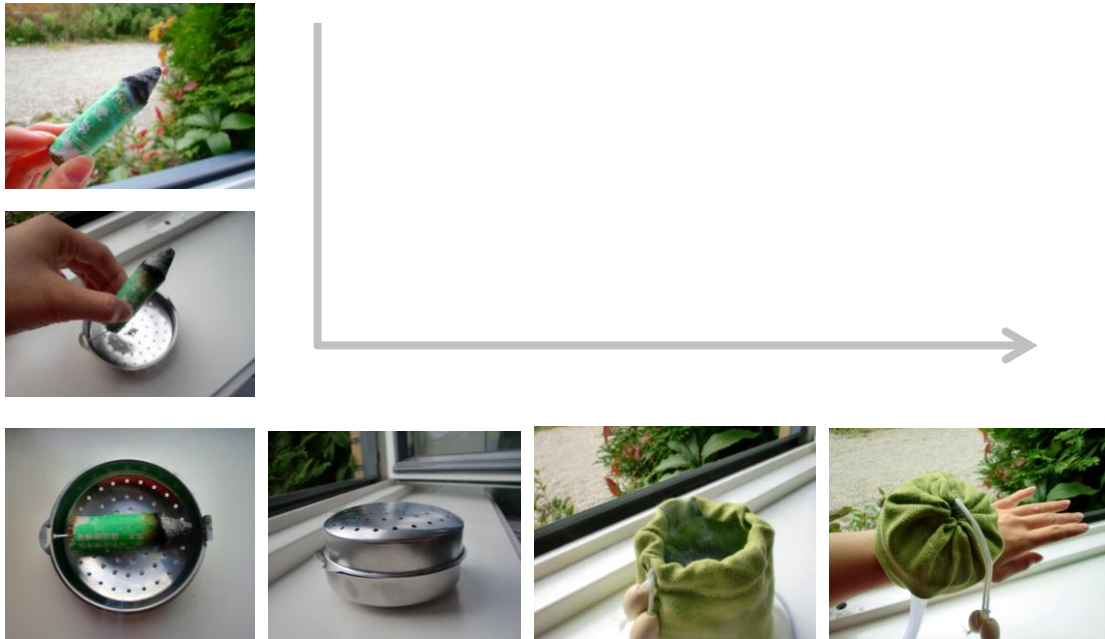
Figure 4.4 Modularization design of product and some details of product



Each metal ball is a independent unit. It can be used for small acupuncture point. But for different ailment, we have different ranges to use moxibustion. So we can permute and combine each unit to make bigger one, which can be used in region, whole back and so on.(Cai 2010)

4.3.4 Product operation process

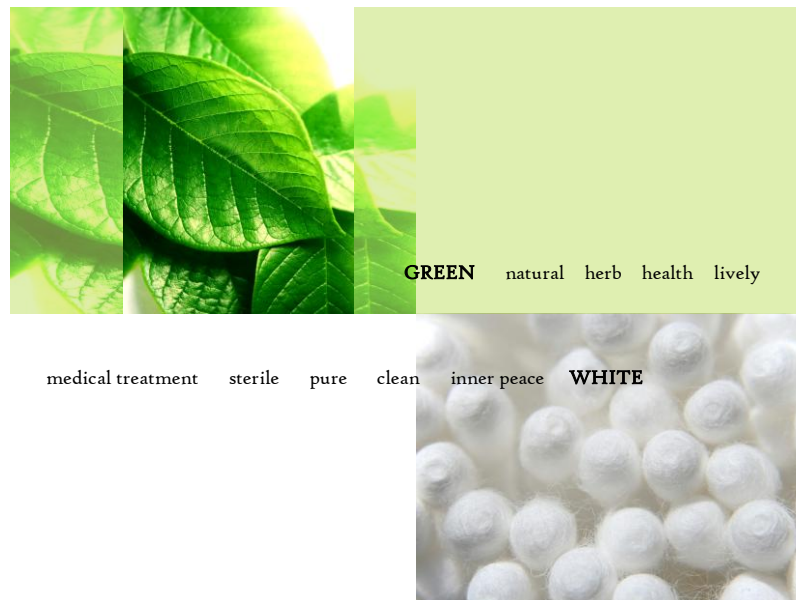
Figure 4.5 Product operation process



Here is the operation process, light the moxa stick, fix inside of the shell, put it into the pocket, and tighten the rope, attach the hook and loop fastener on certain acupuncture point.(Cai 2010)

4.3.6 Psychological function of colors

Figure 4.6 Psychological function about two colors of product



I use two colors on my product to convey my concept to users, green and white, which are very different from the traditional Chinese colors. Green means natural, herb, health and lively; white means medical treatment, sterile, pure, clean and inner peace. That's the information I'd like to

convey to users.(Cai 2010)

4.4 Feedback

I was very lucky to live with a Norwegian family nearly two weeks and sample the real Norwegian way of life during the last Christmas. The host Torbjørn is a warm kindly person and also has profound knowledge, so he knew lots of things about China and very interested in the old cultures. There were many topics of our talk from geography and culture to our normal life, from the difference conflict to common features.

Torbjørn Jensen
 Born: Jan. 6th, 1951
 From: Myre, Nordland, Norway
 Working in: Nordlandsbanken ASA
 Position: Bedriftsrådgiver



Figure 4.7 Photo of interviewee

At the same time, I got to know Torbjørn suffering from rheumatism and neck pain, so I sent my moxibustion ball to him and taught how to use it in details. I wished my product made by hand could be effective to relief him by insisting on using after a certain time. I have kept the contact with Torbjørn by email since then and got the feedbacks about the home moxibustion from him.

Figure 4.8 Interview scene



The following are some letters from Torbjørn concerning exchanges of ideas and feedbacks of home moxibustion.

Dear Yuan !!

It made me very, very happy to get your e-mail J Thank you very much! You know I think of you pretty often; wondering how you are doing, and how your days are here in Norway. For sure I know your studies will take most of your time; and I'm also sure you are very much looking forward to go back to China, and to your husband of course J Still I want you to know how much we appreciated your visit to us here during Christmas time. And I felt that we were able to establish a warm friendship, and hope we can continue

that. And I also hope we can keep more in contact; also chatting, and txt messages. But I agree that maybe sending e-mails is a very nice way too J

Time flies so fast; now it's only about 3 months till you will leave Norway ... and 3 months since you were here. And I still have a hope to see you again before you leave. What about visiting us a few days before you have to go back?? Do you have some exams ahead? I still have problems with my shoulders and nape, and I will reduce my job to 50% and 50 % retired pension. But I feel okay about it, and I'm now into a process in the bank where I reduce numbers of customers so it will be possible just working 50 %.

Today we have a terrible weather; it's raining a lot and strong wind too. Well I'm looking forward to all snow will vanish, and we have spring J I still didn't find a good Norwegian name to your product, but I still will think about it. My experience is that when I use it for maybe 10 minutes; all the room will be filled with strong smoke Maybe that can be modified?

Tina, John...and Bastian are all doing well

Take very good care, my dear friend !

Greetings from all of us here at Myre!

And a hug from me J

Keep in touch

Dear Yuan !

Thank you so much for you long, and interesting e-mail. You know you are very good at expressing, you thoughts and feelings. That make your e-mails even more interesting, and give them a very personal feeling. I like that so much. We had a very sunny day today, but pretty cold; I guess only + 4 C right now. Last night we even had temperature below 0. Still, all snow is gone now, and we hope for a little warmer temperature too. Right now we feel so sad, because our cat Bastian died last Thursday morning Even it was expected because he was very old (17 yrs. And 7 months) and got weaker and weaker...it was very sad. Luckily he had no pain, so he just slept away very quietly. But he has been a big part of our family all these years. Would you believe that all these years I had to get up with him every night If he should get out, get in...sometimes I had to join him and cuddle with him before he eat hehe. I think some night had to get up 3 times, but 1 -2 times were common. Bastian and I had very strong ties between us; and it was like that even a couple of hours after we got him. Even he was very social and loved people; he also was just "my " cat. Funny to talk like this about a cat J

Even I like the dark period of the year; this is time of the year is so special too. Snow is vanishing, days get longer, and we have sun....soon it will be sun for 24 hours. That really effects our minds, and make everything brighter, and maybe easier to think positive. Even mainly I try to think positive always. I'm happy that you find some good aspects about Norway, and hopefully gave you new

ideas, and new thoughts about life in common. We are all changing all the time, and both people we meet and environment will affect us. We are lucky to live in a peaceful corner of the world, and still have space around us that make it possible to live a good and relaxed life. In every countries there are good and bad people, and I'm sure you met both kinds here too. Sometimes I'm not proud at all about being Norwegian; too many people here are to selfish, and mainly all our "problems" are luxury problems; so much is too easy to achieve here. That make many Norwegians intolerant and very selfish and greedy. But I guess you find all over the world..... Good enough there are nice people everywhere too. I feel very happy to meet you, and my hope is till to meet you again J Maybe the midnight sun can give you inspiration to visit here again?? Hehe

Take very good care.....and keep in touch!

Greeting...with a hug

Torbjørn

Summarizes from these communications:

1. more effectively reduction emission of smoke;
2. how to deal with the remains after the combustion of moxa stick;
3. easier and safer operation process;
4. reusable and prettier.
5. exchanges of mind and soul will give inspiration sooner or later, even though it is not correlated with the topic at the moment.

CONCEPT DEVELOPMENT OF CONVERSE THINKING

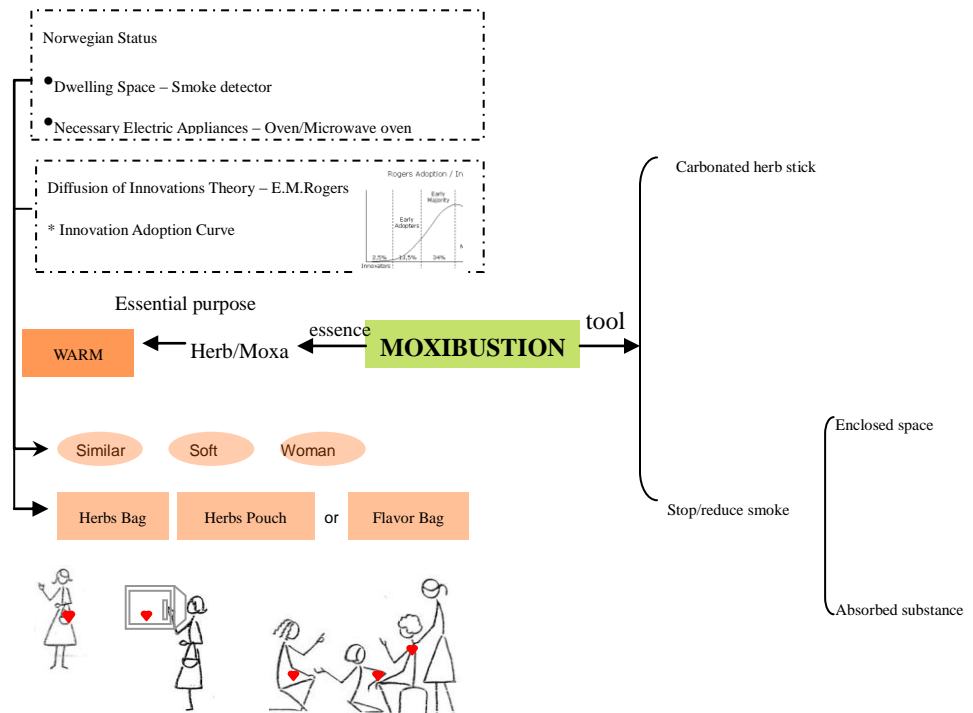


5.1 Leap of thought

Straight Thinking vs. Converse Thinking

In my last two phases of work, I drew attention to the most suitable moxibustion tool, which would be introduced to Norwegian market. My original ideas focused on how to improve and develop new tools. Why not start from the essence of the moxibustion and create the totally new and easier accepted product for Western users.

Figure 5.1 Two directions of product development



5.2 Environmental benefit

Although creative environmental design can be approached in many ways, the goal is quite simple: addressing environmental factors in the design, manufacture, and use of product.

- the MET (materials cycles, energy and toxicity) –method (Lamvik 2001)
- 1. materials cycles: design for re-use, recycling disassembly; weight reduction, waste reduction
- 2. energy consumption: reduction of fuel/electricity consumption, low energy materials
- 3. toxicity: suspected substances, black-listed substances, substitutes, maximum concentration

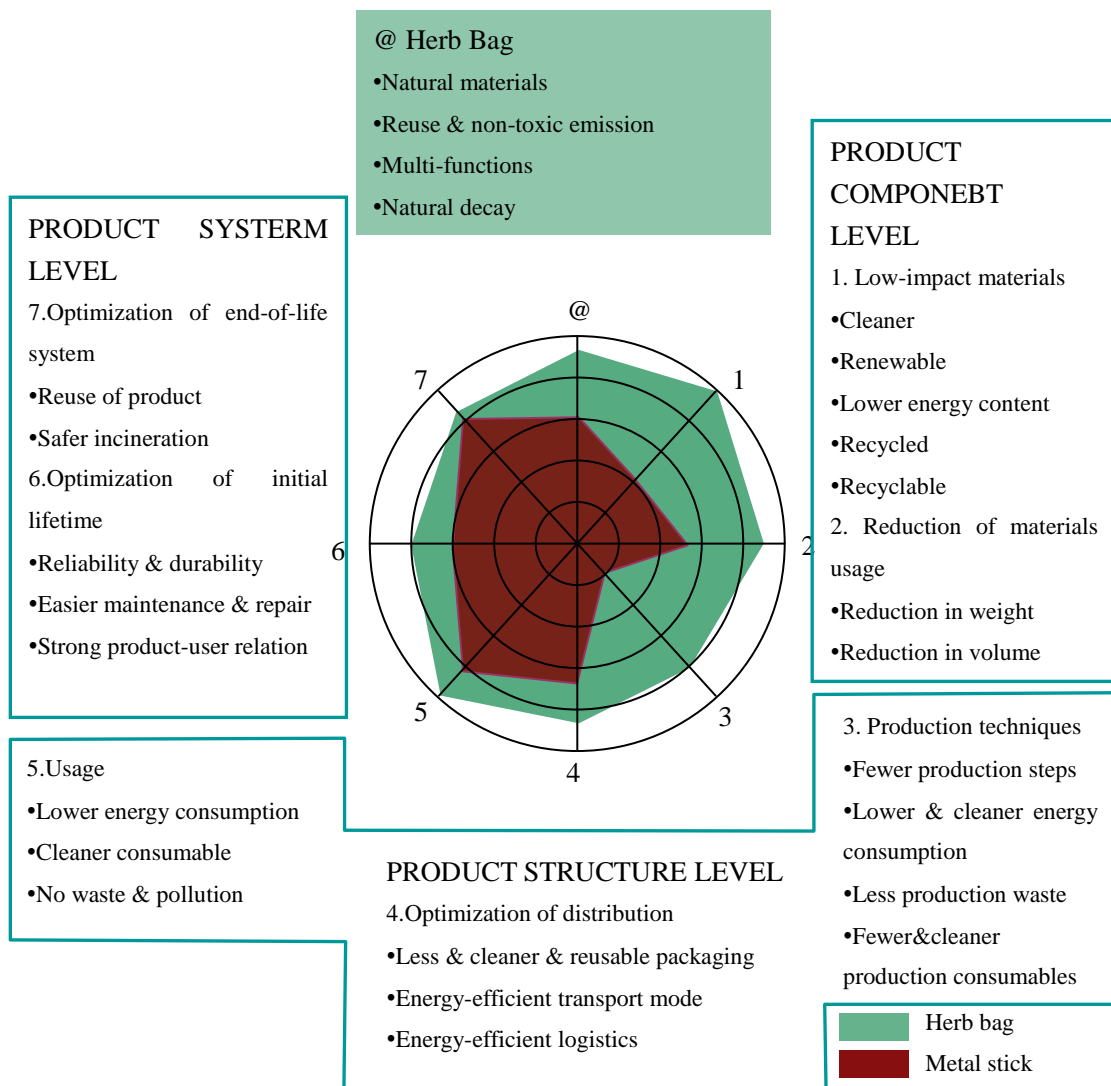
Table 5.2 Project analysis through MET (materials cycles, energy and toxicity) –method

	Material cycles	Energy use	Toxic emissions
Raw material	plant	natural energy	non-toxic emission
In-House Production	herbs and fabrics (degradable fabrics)	electricity	non-toxic emission

Distribution	eco-circulation containers	Vehicle transport	automobile exhaust
Usage/Operation	reuse	electricity	non-toxic emission
Service	none	none	non-toxic emission
<i>End-of life</i>			
Recovery	herbs and fabrics	hand made	non-toxic emission
Disposal	Natural decay	none	non-toxic emission

● Eco-Design Strategy wheel

Figure 5.3 Project analysis through Eco-Design Strategy wheel



5.3 Design process

5.3.1 Quick shape by clay

In order to see the outcome the sooner the better, I used clay molding at the beginning stage (figure 5.4). And then adjust the shape and details to satisfy the human hand operation.

In this project, the related human population measurement date is mainly about the size of hand spreading and holding. I can not find the related authoritative data, so I measured by random selection from Norwegians, in whom were divided man and female two groups; each group around ten people. The last date is the average (figure 5.5).

Figure 5.4 Quick shape by clay



Figure 5.5 The average size of hand spreading and holding

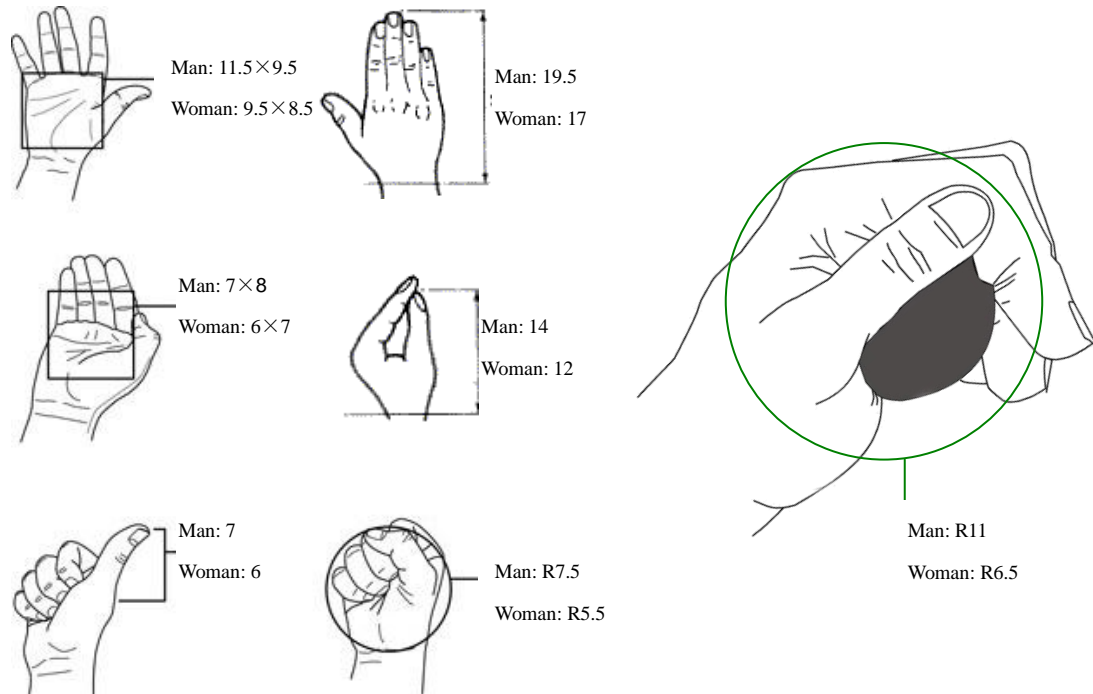


Figure 5.6 The hand hold situations of concrete product



5.3.2 Materials

- Herbs – Moxa

Moxa comes from the herb mugwort, and has been used medicinally in Chinese Medicine for thousands of years. The Moxa plant, in Chinese called Ai Ye, is a member of the Artemisia family, (*Artemisia vulgaris*) and flourishes throughout China and is therefore relatively cheap. The fresh leaves are picked in the spring and dried in the sun. They are then ground into a fine powder or moxa 'wool'.

Moxa brings healing to body, mind and spirit.

Because its nature is Yang, moxa warms and activates the energy (or Qi) in the body; it affects not just the body, but the mind and spirit as well. Sometimes it's not our physical body that is cold: our minds can get cold and bitter, or our spirits can be frozen and inflexible. The movement and warm of moxa can bring healing to all parts of the body, mind and spirit.

● **Eco-friendly fabric - bamboo fabric**

C2C material

Bamboo is a plant that grows quickly and readily, and it doesn't require much care. It's a resource. As with flax-from which linen is made the process of making bamboo fabric, when done without chemicals requires time.

Figure 5.7 The lifecycle process of bamboo fabric



Benefits of bamboo fabric

1. **Antibacterial** – keeps odor free and feeling and smelling fresh
2. **Highly sweat absorbent (Pulls moisture from skin for evaporation– moisture wicking)**
– keeps skin dry
3. **Powerfully insulating** – keeps you cooler in summer and warmer in winter

4. **Hypoallergenic** – natural bamboo does not cause allergic reactions
 5. **One of the softest fabrics on the planet** – lovely feeling
 6. **Naturally UV protection** – protect from skin cancer
 7. **Made from the most eco-friendly plant on the planet** – bamboo
- **Creating the feeling of soft**

Figure 5.8 Materials tests



In order to choose the most suitable material, I also tried and tested other materials such as flexible plastic, paper, plastic film and a kind of cotton pile fabric resembling velvet. All of the tries were to provide the feeling of soft, because this project is contact with human skin directly under treatment. It is more important to create the warm, soft and comfortable atmosphere especially under such a circumstance.

5.3.3 Product Operation process

Figure 5.9 Using Moxibustion bags in normal life

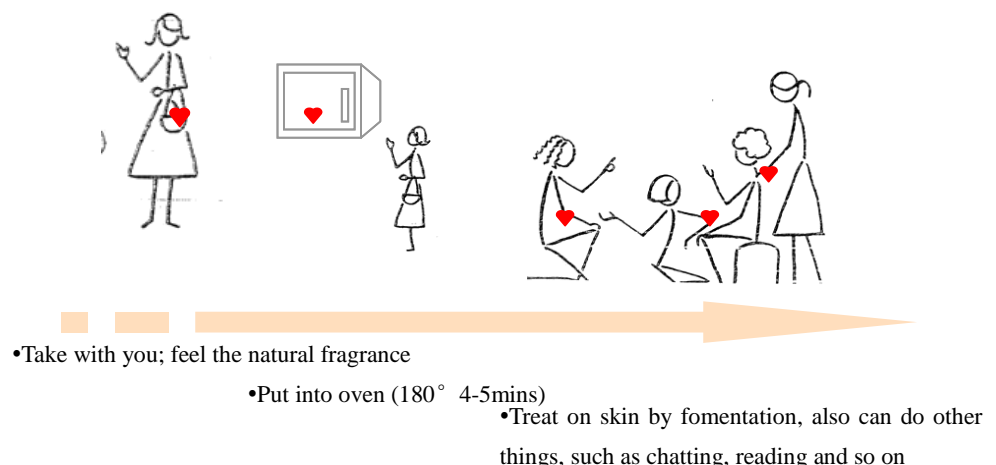


Figure 5.9 shows the using process of moxibustion bag in our dailies. Compared to the moxibustion stick (chapter 3) and mental ball (chapter 4), it is easier and more convenient, especially for the new users. The atmosphere of treatment process will be relaxed and

comfortable.

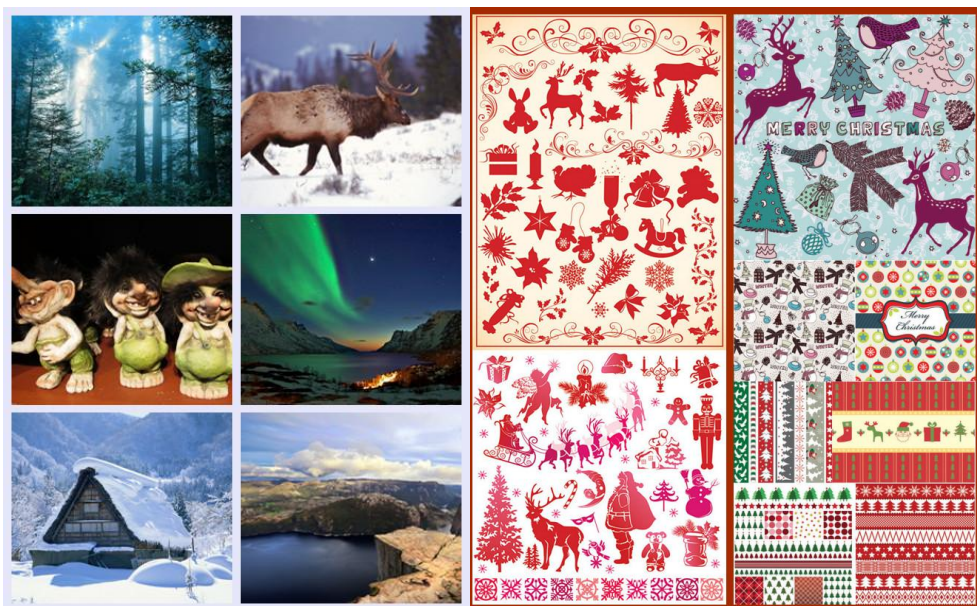
5.3.4 Inspirations of idea

Norway is famous because of its wonderful sceneries and beautiful countryside. Land and sea are very closely linked in Norway. A harsh climate and rugged terrain have made the Norwegians look to the sea for their livelihood. Hardworking and efficient, the Norwegians have created a high standard of living from limited resources. The discovery of petroleum in Norwegian waters has brought greater wealth to the country. Situated far from centre of culture such as Florence, Rome and Paris, Norway has often been isolated from major European cultural trends and developments. Yet a strong culture was flourishing here from at least the ninth century. Findings from burial sites indicate that the Vikings were great shipbuilders with a strongly-developed artistic tradition represented in crafts, wood carving and jewelries.

As a foreigner living 2 years here, there things from heavy snow in winter to original forest in summer, from the amazing aurora to gallant fjord, from the mysterious monster to strong Christmas atmosphere are my most impressive scenes for Norway. Maybe some of them aren't the typical features of Norway, but I am experiencing here and they are very different from my life before, so I love them and attempt to merge them into my design idea.

Figure 5.10 Photos of Norwegian impression

Figure 5.11 Some typical cardboards of *Panduro Hobby*

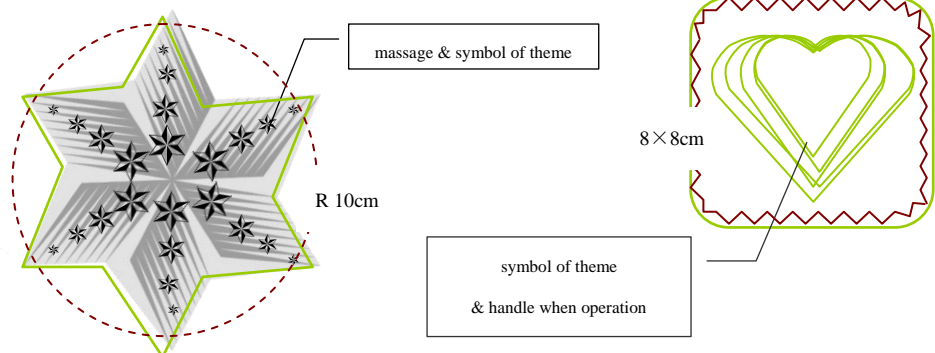
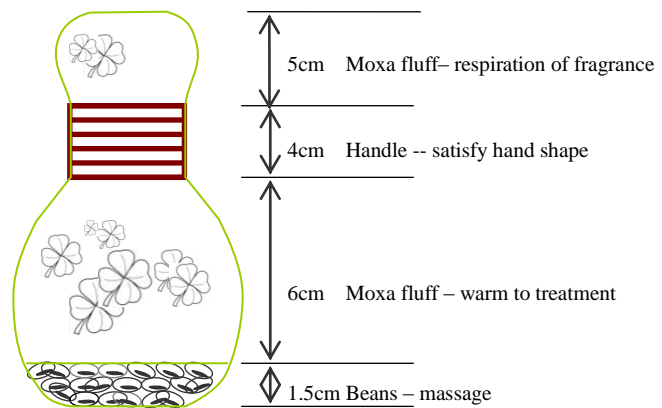


5.3.5 Final Product

Figure 5.12 Four final products



Figure 5.13 Structure and function explanation



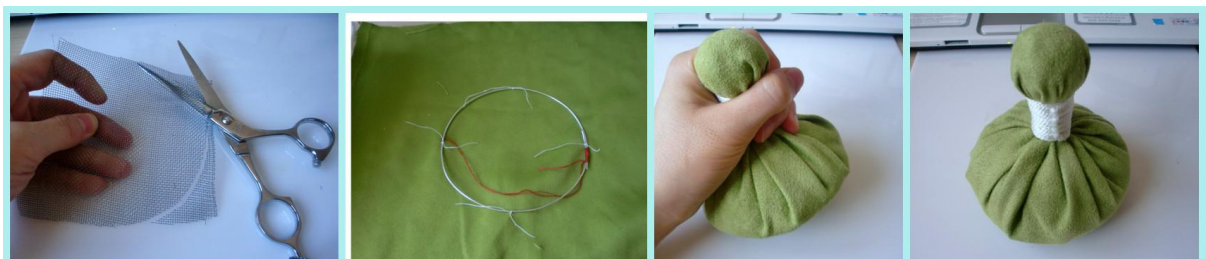
- **Warm still in snow**

Snow and long winter strike me most in the first year I lived here, though I from the north of China and experienced the snow before. Because of pollution-free, here likes an entirely white world of fairy tales in winter. The snow is the most beautiful and pure I had ever seen. I wish to combine this element into the moxibustion product, which bring warm in the long and cold winter.

Figure 5.14 Theme product 1



Figure 5.15 Realizing process of product 1



- **Green vigor**

The second project comes from the shape of a plant – gourd, which is alike not only in appearance but also in spirit. Firstly, the shape of gourd is larger at two ends and smaller in the middle waist, a convenient place where can be held as the handle when operation. Secondly, the gourd is viewed as a wonderful remedy for all diseases from Chinese ancient culture to now. The meaning is very in conformity with my product – simple, natural and treatment whatever physiology or psychology. The last, Norwegian forest is also famous in the world. In addition to having natural beauty, Norwegians are also advocate simple nature, treats people sincerely.



Figure 5.13 Gourds

Figure 5.16 Theme product 2



Figure 5.17 Production process of product 2



- **Give my heart to you**

Panduro Hobby is my favorite shop in Norway, which carries a huge stock of high quality crafting materials; provides the most inspiring craft and hobby range -- plenty of ideas for gifts, activities and hobbies. Especially by the time of festival, new and fantastic festival kits appear and inspire crafters.

The shape of *heart* has been used to countless evolutions, but just one eternal meaning – a symbol of spiritual and emotional. I had seen many inspiring kits using the shape of heart in *Panduro Hobby*. This time I also combine this element into my product, on the one hand is to convey a mental care to users, on the other hand it's also a functional part – as the handle.

Figure 5.18 Theme product 3



Figure 5.19 Production process of product 3



- **The eyes of night**

Norway, especially north of Norway is a perfect place to see northern lights, or the aurora borealis in late autumn and winter. It's a pity that I haven't caught that moment in these two years. But I experienced that the sky was alight with stars on every clear night. They were big and close; just like eyes.

Figure 5.20 Theme product 4

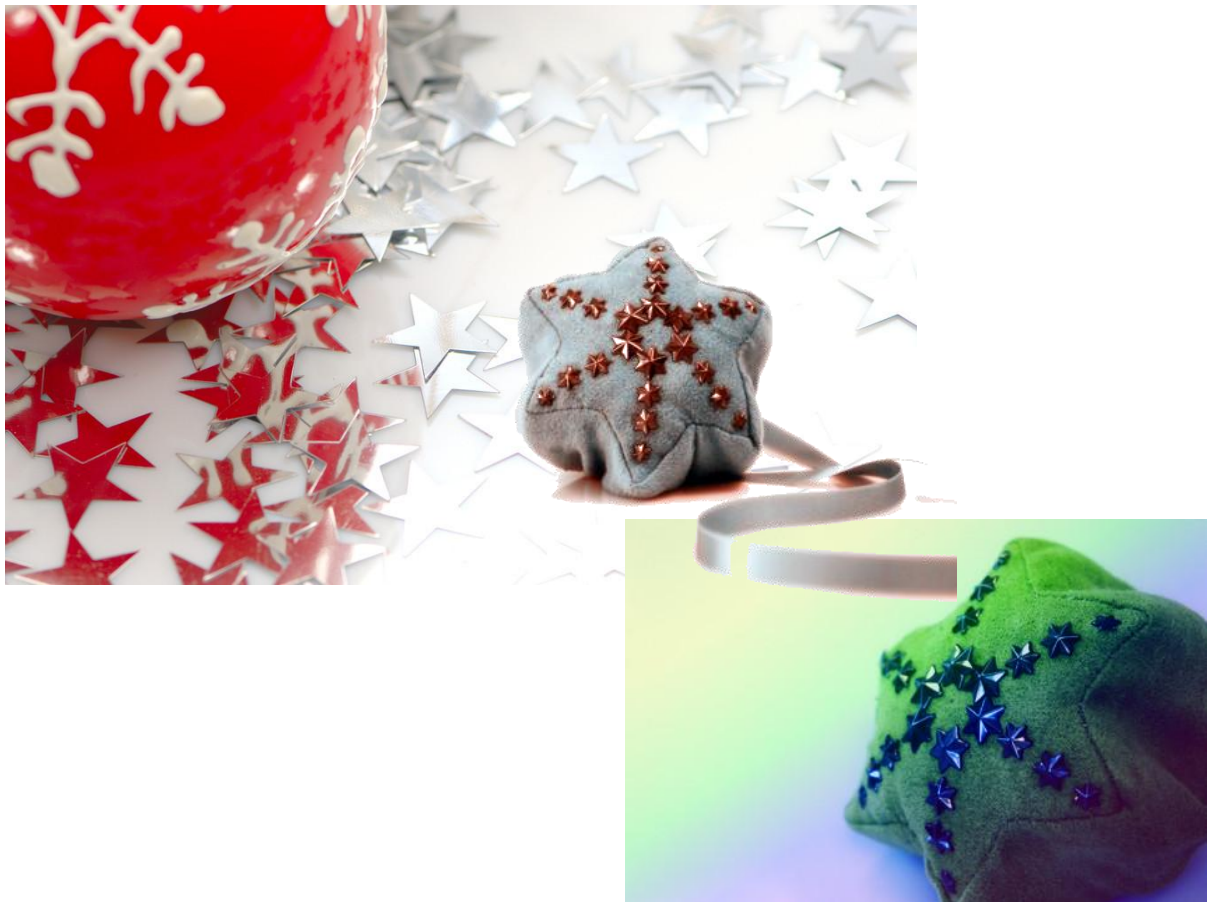


Figure 5.21 Production process of product 4



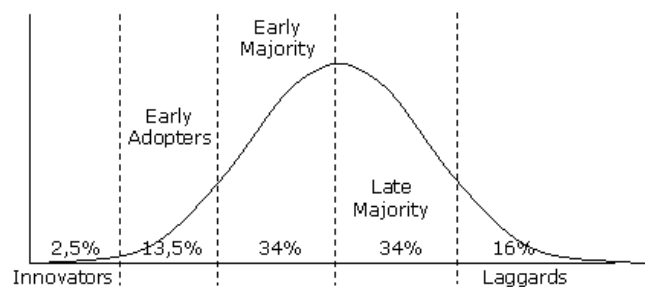
5.4 Marketing strategy

5.4.1 The early target group

Diffusion of Innovations Theory

DOI theory sees innovations as being communicated through certain channels over time and within a particular social system (Rogers, 1995). Individuals are seen as possessing different degrees of willingness to adopt innovations and thus it is generally observed that the portion of the population adopting an innovation is approximately normally distributed over time (Rogers, 1995). Breaking this normal distribution into segments leads to the segregation of individuals into the following five categories of individual innovativeness (from earliest to latest adopters): innovators, early adopters, early majority, late majority, laggards (Rogers, 1995).

Figure 5.22 Roger adoption / innovation curve (Rogers, 1995)



Target group –start from *female*

Because of the diffusion of innovation theory, innovation curve is at the low and slow level at the early stage. It means just few people will try the new product, especially for the totally different and strange product. So I would like to focus on a part group of users at the beginning, then spread more widely and more quickly by the early adopters.

So my first target group is girls and women, who play the significant role in the world and easier to contact with my product.

1. They are perceptual and sensitive, having exuberant feelings. They love shopping, share whatever things or secrets, also like to get together. So they will be the earliest information communicators.

Figure 5.23 female characteristics of communication

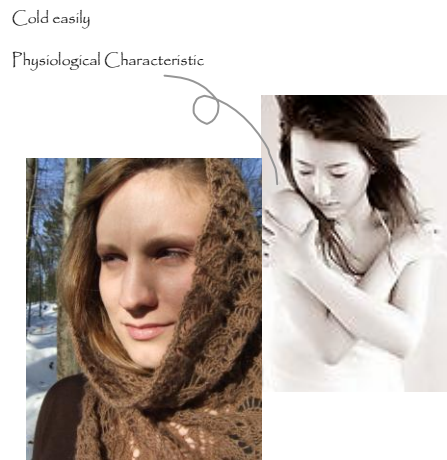


2. They are always the core of a family, because they need to take care of every family member and arrange the major and minor things of life. As an eligible and smart housewife, she must pay more attention to whatever physical or mental health of her families. So they will be interested in and concerned with the new health product.

Figure 5.24 female characteristics about family



3. Because of the female physiological characteristics, they are easier chilling and fatigue, especially in winter. So how to keep warm and strengthen body resistance are very important to them. Besides, moxibustion can also achieve the beauty effect by increasing blood circulation. That's a very critical reason to introduce my product to them.

Figure 5.25 female physiological characteristics

5.4.2 Product logo design

I used some elements related with my design concept:

- **Fingerprint** – as a symbol of responsibility for thousands of years in Chinese culture. I also believe it represents the individual identification and security from western science angle.
- **(Red) heart** -- The heart has long been used as a symbol to refer to the spiritual, emotional, moral, and in the past also intellectual core of a human being. As the heart was once widely believed to be the seat of the human mind, the word *heart* continues to be used poetically to refer to the soul, and stylized depictions of hearts are used as prevalent symbols representing love. Furthermore, the color of red reinforces the meaning and provides the feeling of warm.
- **Leaf** – a symbol of herb; a kind of natural vigor and energy.
- **Natural warm** – to express a soul and core of moxibustion.

Here are some of my logo design:

Figure 5.26 Different concepts of logo design

The following is the final project of product logo.

- **Red and Black** – to emphasis the core of moxibustion; to express the feeling of authority.

Figure 5.27 Final logo



5.4.3 Steps of the strategy

I believe it is very important that how to entered the new market successfully for a totally new product at the beginning. We need good idea, design and group to make the whole plan. Beside that, it is necessary that we should adjust our plan and strategy in accordance with the reflection of market. So it contents three main steps of the marketing strategy for the moxibustion products.

- **Immediate and Short-term Actions for entering market**

It is the main aim of this chapter -- defining the early target group; starting from the softest, simplest and most convenient product; testing or using at authoritative schools in Norway; recommending by specialists; sales promotion through demonstration.

- **Longer-term Action for widening market**

After more and more people know what moxibustion is through the early adopter spread, the next step is to widen the target group from women to other Norwegians whoever need. Furthermore, building up the exclusive store for moxibustion products, which not only the herb bags, but also include more professional tools -- moxibustion ball and stick. Then, it is just the suitable time to input a variety of promoting skills, including graphic and television advertisement.

- **Slowing Down Policy to Speed up for developing market.**

The last also is my biggest aim of this thesis, which is to promote traditional Chinese medicine to European market. Starting from the acupuncture and moxibustion let more and more

Europeans know the core and principle of traditional Chinese medicine. So from this step, it will be a long journey to introduce more treatments of TCM, at the same time to elaborately plan how to integrate TCM into local life and culture.

CONCLUSION



6.1 Summary of outcomes

The theme of this project is to introduce a kind of easy and convenient moxibustion product to Norwegians, furthermore to make the moxibustion as popular as acupuncture at here. The basis for the research was that due to the features of Norwegian nature environment, it is necessary to use some TCM therapy just as moxibustion. The goal of the project was to introduce different experiences of moxibustion through create different products. After then, user can choose whatever professional or household one to use by them self. The means for reaching this goal was the (potential) users' communication in each product development and creativity changes phases.

The result of this project is directed towards an evolution process of new product; it means the project had been achieved the three different design development phases through investigation, user communication and different design methods. The benefit of this evolution process involves:

- reduction or elimination of risk of damaging impacts on humans and nature
- introduction of the different healthy values
- motivation of (potential) users for using a totally new health care method
- optimizing eco-efficiency dimension on the product level

During the whole process, I had consolidated the knowledge of my bachelor, at the same time, found the new problems, meanwhile learned to use the new method to solve them.

1. Always keep to the method and principle of user-centered, not just ask and observe, but also participate and involve in those who are my communication target.
2. Customer acceptance is vital for the transition from product focus to service or commerce focus. That's just why I turned toward the soft and perceptual product concept in the 5th chapter. Furthermore, compare to male, the female are even easier linked with this case.
3. It is a pretty good way to get new inspirations and develop different directions of concept through group work. Each participant has their own strong points and talents. What I should do is to listen closely to the opinions, consider and discuss seriously. At last, take the essence.
4. Give the users who are the target of communication a physical image of prototype will be easy to communication(Yao 2010), especially for the new product haven't been used before. When communicate under different cultures and using different languages, it is necessary to show some physical images to the non-design background users.
5. It is possible that whatever same or totally different design would be accepted in a new market, so try as many as possibilities without hesitate.
6. It is necessary each communication should have clear topic, but the content could be the wider the better if it is around the topic. Exchanging of mind and soul will give inspiration sooner or later, even though they can not be use at this moment.
7. As a student, compared to the outcome, the more important is to experience whole design process. It will give more knowledge which can not be grasped just in class or in book. in class or in book.
8. Above all are my findings during the research and study. They are might not suitable for some other situation. However, they maybe can give some inspirations for others who are doing the related research or interested in this field.

6.2 Recommendation for further research

Three different solutions have been presented in this thesis, and they can all be elaborated

further. However, it is more important to take the existing and currently developed product into practice and test. As time was limited, it is important to further user test and interview to understand after familiarized this kind of new product what new needs should be added to create more satisfied effect.

- Take the finished products to test and practice in some medical schools or clinics related to TCM. Though communication with specialists and students, explore the benefits and weaknesses of each one.
- Go on research on Norwegian people's behavior and lifestyles, exploring more promoting strategies and product functions to go along with the high quality of life.
- Influencing or changing people's behavior and thought is probably a lot more difficult approach than changing technical systems. It is necessary not only to increase our cultural communication, but also to insure a more positive and harmony international environment. For instance, legislate to accept and standardize Chinese herbal medicine.

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