Design Guidelines of Applying Cultural Context Analysis in Service Design

by

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Abstract

Service design was first introduced in the 1980s. It can be considered as a new and rising field in recent years. More research perspectives on service design are coming to the public view. The interrelationship between culture and design has been explored for hundreds of years, but analyzing its impact on service design from a cultural perspective is still an academic vacancy. One of the core principles of service design is being user-centered. The impact of cultural context on users involves all aspects of life, like user's operating habits, personality, behavior, and comprehension. All of them are closely related to the culture of the environment in which the users live or grow. Many companies or designers do not take into account cultural factors in the process of service design, leading to failures in the final project or business. However, some projects that have big success take into account cultural factors in the design process without any systematic organization of the analysis methods, or because the cultural factor in the project itself is very important. In fact, all service design processes should systematically include cultural elements as one of the considerations.

This research will provide an overview of the service design process. This process provides a way to help service design, especially commercial service design, to analyze

and use cultural context analysis in different design stages and design cases to make a more rational design decision, and to improve the final experience and quality of the service design once it is being used by users.

This study will also explore the new functions that culture research should have in service design, not just the ones mentioned in previous studies in which the final design style has a specific cultural orientation. This cultural context analysis method should be applied to all service design processes as long as needed.

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CHAPTER 1 INTRODUCTION

1.1 Problem Statement

People from all over the world enjoy different service experiences every day. In the U.S. people drive to buy McDonald's breakfast from the drive-in window before they go to work; Chinese white-collar workers order their breakfast through online applications after they wake up. Thirty minutes later, the meal is ready for employees to pick up at the breakfast store located at the first floor of their company. Even if the type of the service is the same, the service can be delivered to users in totally different ways in different places of the world. Services have existed and has been organized in multiple forms for a long time (Copenhagen Institute of Interaction Design, 2008). It is widely acknowledged that in recent decades the developed economies have moved to what is called a 'service economy', an economy highly dependent on the service industry (Meroni & Sangiorgi, 2011). In 2007, services represented 69.2 per cent of total employment and 71.6 per cent of the gross value added generated by European Union (Eurostat, 2009). This means services in different forms and characteristics have developed a fundamental role for the growth and sustainability of innovation and competitiveness. Service is created through interaction

between a service provider and a customer (Stickdorn & Schneider, 2011). The design of the service is all about making the company's services useful, efficient and desirable for users (British Design Council, 2007).

Service Design is a very complex subject, a new holistic, multi-disciplinary, integrative field (Moritz, 2009). Many studies explore the relationship between service design and other disciplines, such as engineering, IT, architecture, psychology, because service design thinking as an interdisciplinary approach includes and connects various fields of activity (Stickdorn & Schneider, 2011). However, few articles systematically discuss the impact of cultural contexts on service design. Besides, when a service design fails to be success, it is hard to link the reasons for its failure to the lack of consideration and analysis of cultural factors that should have happened before and during the service design process. For example, when Uber marched into China in the year of 2014, it did not consider deeply Chinese people's daily traveling habits, which finally led to marketing loss acquisition after one year by DiDi in China (Chen, 2017).

Cultural context is important for two reasons. First, the most critical factor in service design is the user. The inherent intention of a service is to meet the customer's needs (Stickdorn & Schneider, 2011). Users from one group or nation are deeply influenced by the regional and national culture. For example, Americans care about privacy and space, so they do not like to share with others when they take a taxi. Adversely, the Chinese love to be busy and like to communicate with others, so they do not mind and even enjoy sharing

seats when taking a taxi and even like it a lot.

Secondly, service design must be implemented in a specific location or scenario; that is, the service must be used by the end user in a certain cultural environment. At this time, the style of the final outcome in a service design and the feeling of local users should take regional cultural factors into consideration. As Kun-Pyo Lee (2004) claimed, in the design field, designers like to place national shape and colors as a major topic. For example, when Uber did a brand update in the year of 2016, the pattern used for the U.S. Uber is different than for India (Figure 1.1). When local or foreign users see the pattern, they can feel a sense of local culture.

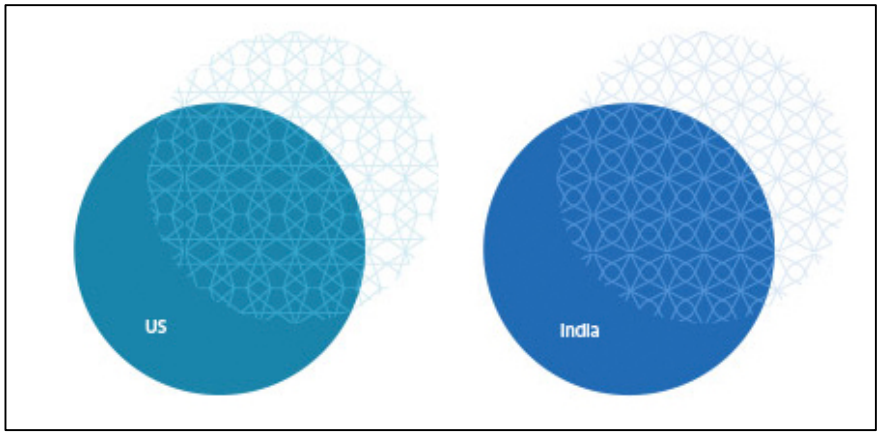


Figure1.1 *2016 Uber Brand Pattern US vs India (Uber Design, 2016)*

1.2 Need for Study

Shostack (1982) proposed that the activity of designing service was considered to be part of the domain of marketing and management disciplines in the early years. Service design is created through interaction between a service provider and a customer (Stickdorn & Schneider, 2011). The current research is to help the designers or enterprise to think and

form the perspective of cultural context, so as to make better service design. Thus, this study or method itself is about the relationships between the enterprise, the user and the service design. The relationships between those factors will be discussed in the next chapter.

Secondly, service design is a linear design with different types, phases, and methods. How to examine the cultural context at different phases of the service design process is a key point of this study. Therefore, basic processes and methods of service design will be studied and summarized in this research.

Finally, the cultural context and how it can make a profound impact on service design is discussed in Chapter Two. The user, the user's behavior, the task and the deliverables object of service design are some of the elements in service design. The impact of cultural context on service design should not be single or superficial. Although the cultural context is a vague concept, there are still ways to summarize its definition, components, classification and characteristics. In this study, cultural context will be analyzed with depth, which includes the existing case studies of how cultural factors are applied in various service design cases.

1.3 Objectives of Study

The main objective of this study is providing a learning and application frame of cultural context, and using it as a cultural analysis process within a service design process to help companies and designers to have better service design results through a thorough analysis of cultural context.

- To study the relationship between services, businesses and users.
- To summarize a classification of service design.
- To study the process and key factors of service design.
- To study the definition, characteristics, and classification of cultural context.
- To study the relationship between cultural context, users and designs.
- To study cases of successful service design that consider cultural context in service design that gain a successful result.
- To organize the guideline of applying cultural context analysis in the service design process.
- To illustrate the application of the developed guidelines with a service design project.

1.4 Assumptions of Study

This study is directed based on the following assumptions:

- All companies or designers value the process of service design, users' background, and the final design results.
- Designers using this guideline have a basic understanding and knowledge of service design process and methodologies.
- There is currently no systematic approach to apply the analysis of specific cultural contexts in the service design process.
- In any service design process, cultural context elements must have a greater or lesser impact on it.

- The analysis of cultural context elements only helps companies or designers make more reasonable and comprehensive decisions through the existing service design process, but it does not mean that cultural context plays the most important role for the final service design results.
- Designers who do not know how to do cultural context analysis in service design will have a better understanding of the service design process and methods that include cultural factor analysis after reading this thesis.

1.5 Scope and Limits

This study focuses on the methodology of designing an extensional cultural context analysis process. The aim of the guideline is to be universal and such that it can be applied in all categories of service design. The guideline works well in all types of service design from public service design to business service design.

However, there are several limits in this study as follows:

- Cultural context of user's behavior, belief, cognition, and ways of understanding may have greater or lesser impact on the service design. Persons from different cultures perceive and organize their environment in different ways, so that it becomes meaningful to design (Harris & Moran, 1979). This thesis mainly focuses on the service design with strong cultural context influences. The learning of the impact of cultural context will mainly be focused on the research

phase of the service process; it will not pay much attention to the impact of the cultural factors on the design style during the service design.

- The service design process is complicated in that the guideline of cultural context analysis that will be applied cannot cover every step of the service design process. However, culture analysis can be used in key steps during the process.
- The final carrier of service design can be varied from architecture, engineering, interaction design and so on. This thesis mainly focuses on the service design with the final outcomes of interaction design, product design and graphic design.
- Because service design needs to be renewed and updated according to market changes and commercial strategies, the approach is limited by time constraints. Further research will need to be done in the future.
- Due to the complexity of the service design, the final service design prototype cannot be tested in the real large-scale user market.

1.6 Procedure and Methods

Step 1 Basic concepts overview

Identify the basic concepts of service, service design, culture, and cultural context.

Method: Study the relationships of all the factors. Start from the origin and history of service design to figure out the authentic business needs from the company business side.

From company to users, three key characters, company, user, service, should be clear by its meaning in this thesis.

Step 2 Theories and process overview.

The research and exploration of service design process structure.

Method：Study and compare the current theories related to service design to confirm one main service design process as the base of the cultural context analysis guideline. Research the “first step” of the service design and design the service design process itself. When the basic structure is completed, sort the service design methods and tools according to the stages of a service design.

Step 3 Build an ideal service design process

The ideal process is not a brand new one. It will be built based on the current one, the Double Diamond, as a foundation of the cultural context analysis process.

Method: The current design process, like double diamond, mainly has four steps, including *discover, define, develop and deliver*. The ideal process in this thesis will explore one more step before *discover*. That step will stand at that point of company business strategy to consider how to design the service.

Step 4 Learn and define the impact of cultural context

Focus on the influences of cultural context on users in service design. The cultural context research and analysis mainly targets the first round of service design process.

Method: Summarize the potential historical influences of cultural factors on design areas, like product design and brand design. Some of the impact may be the same for service design. Define the cultural context and determine the link between cultural context and service design. Some theories show it has strong connection.

Step 5 Establish the cultural context analysis methodology and apply it into the service design process.

Redesign and create applicable cultural context analysis methodology to match the redesigned ideal service design process.

Method: When the basic structure of the guideline is completed, the checklist and judgement conditions of cultural context in each funnel chart along the timeline of service design process will be built. A qualified service design project will be developed in the last step.

1.7 Anticipated Outcomes

The primary outcome of this study is providing a cultural context analysis process for a main service design process that is extended and optimized. The guideline is not generated just for better experiences of users; it is more about how companies use the method to provide a better culturally supported service design for their users and gain more benefits for both their service and commercial result. Therefore, companies or designers will understand better the view of business they do. A practical mobile-based application service design project will be developed according to the final guideline.

CHAPTER 2 LITERATURE REVIEW

2.1 Discussions about Service

In today's society, services exist in all aspects of people's lives and are available anytime anywhere. However, it is difficult for people to give a clear definition of service, and it is difficult to distinguish or divide the difference between products and services. To give an easier and quicker way to understand and define service, clarifying the relationship between the key factors in service is a good idea for this study.

Services are built through interaction between a service provider and a consumer (Stickdorn & Schneider, 2011). Organizations make significant efforts to find out what customers want or need, especially in consumer goods, and try to differentiate their products and services to attract distinct market segments (Kimbell, 2010). Much research is planned before the business establishes and constructs the service to understand what influences people to buy, how customers make decision, the role of different factors in shaping consumption including access to information, other people's activities, and the wider context including global marketing and social marketing (Kimbell, 2010). However, as designers, though it is possible to prescribe the exact configuration of a product, she or

he cannot prescribe in the same way the result of the interaction between customers and service providers, nor can she or he prescribe the form and characteristics of any emotional value produced by the service (Holmlid, 2007).

2.1.1 Service and Marketing

Of all the domains that have something to contribute to service design, marketing is probably the one that can claim to already have done so in significant ways (Kimbell, 2010). The term "service" first appeared in the economics and marketing area. As a sector and as an important activity, it has risen on our economic and social horizon over the past forty years (Meroni & Sangiorgi, 2011). In the past, marketing was considered to be predominantly about tangible goods and products. Services were regarded as exceptions to the general marketing, that of tangible goods. In advanced economies services are produced and exchanged more than tangible products. Thus, in the late 1970s the field of services marketing was developed, separating itself from the field of goods marketing (Gummesson, 2007).

As for the differences goods and service, as well as the boundary of the service, most modern business theorists describe a continuum with pure service on one terminal point and pure commodity good on the other (Gustafsson & Johnson, 2003). Lots of the early focus in marketing was on goods (Kimbell, 2010). However, for now, most services provided by companies fall between these two extremes (Figure 2.1). For example, a restaurant provides a physical good (the food), but also provides services in the form of

ambience, the setting and ordering food, etc. One of the differences that has been mentioned is that services come to existence at the same moment they are being provided and used. In contrast, products are created and exist before being purchased and used (Morelli, 2002). The guideline designed in Chapter Three and Chapter Four of this study mainly focuses on the service of the upper middle part (above New car) of this spectrum (Figure 2.1).

Figure 2.1 *Service-Commodity Goods Continuum (Gustafsson & Johnson, 2003)*

2.2 Service Design

Service design is the bridge connecting the service, service provider and customers. It can be seen as a holistic way for a business to gain a comprehensive, empathic understanding of customer needs (Frontier Service Design, 2010). In today's business environment, the idea and concept of "service design" is overused in the market place. A

lot of information about service design is flooding into the design and market area. To set up a logical and reasonable guideline with strong academic support, the theoretical methods related to service design need to be refined and summarized.

2.2.1 The Definition of Service Design

Stickdorn and Schneder (2011) claimed in their book that if you would ask ten people what service design is, you would end up with at least eleven different answers. Here, two perspectives to define service design are listed. First, it can be defined according to the domain it belongs to. The term "service design" was coined by Lynn Shostack in 1982. In the early years, the activity of designing service was considered to be part of the domain of marketing and management disciplines. In the same year, Shostack proposed that service design is the integration of the design of material components (products) and immaterial components (services). The statement corresponds to the relationship between goods and services mentioned before. It stipulates the form of service design and it is still applicable today. Beyond that, the second way to define the service design is clarify the needs and relationship of business and customer. Miller (2015) stated that service design is an approach to designing services that balances the needs of the customers with the needs to the business to build seamless and quality service experiences. Through collaborative methods that engage both customers and service delivery teams, service design helps companies gain true, end-to-end understanding of their services, achieving holistic and meaningful improvements. How the enterprise intervenes in the customer journey

throughout the entire process is shown below (Figure 2.2).

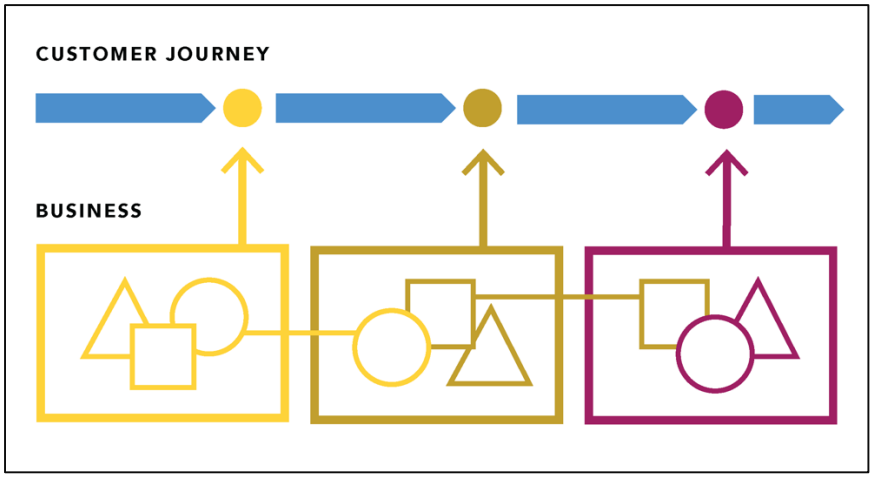


Figure 2.2 *Business and Customer Journey (Gibbons, 2017a)*

2.2.2 Understanding the Users in Service Design

The essence of the service design is a business activity. Nevertheless, a service has little or no intrinsic value unless it comes to the moment of its use or consumption (Osterwalder et al., 2010). To have either the optimal result of a service itself or commercial profit, undoubtedly, for a service provider, the one who designs the service, the top priority understanding their users' needs and wants. As a result, service could be used frequently and recommended heartily by customers (Heinonenv & Reikko, 2013; Stickdorn & Schneider, 2011). It is difficult for the service provider to create and add value for the customer if there is no knowledge about their needs (Kotler & Armstrong, 2012).

In a business activity, the pre-stage of a service design, customers or consumers are the persons that service provider cares about. When moving to the service design stage, the

customer or consumer is replaced by the term “User”. As Norman (2013) states, the human-centered design process should start with a good understanding of people and the needs that the design is intended to meet. Despite the differences of these terms used in different academic situations or different timelines, they all emphasize the importance of understanding value and the nature of relations between people and other people, between people and services, between people and companies, and between companies of different kinds. Those are considered to be central to designing services (Kimbell, 2010). Some of the famous theories and approaches related to understanding the users in service design, proven to be significant, should be learned and understood.

2.2.2.1 The Experience Cycle

As said earlier, service design is a business activity, and it represents the relationship between customers and service providers in the marketing area. Putting customers first did not come in the beginning of service design. The idea went through a lot of development. One of the transitions is changing from the sales cycle to the experience cycle in business.

The sales cycle is a model commonly used in business, and it frames the basic structure of marketing and sales activities. The sales cycle describes a series of steps leading to a purchase, including awareness, consideration, and selection. The goal is to push customers to buy. A common characteristic of sales cycle models is the funnel shape that begins with a large pool of candidates, narrows to a group of interested prospects, and narrows again to those who purchase (Dubberly & Evenson, 2008).

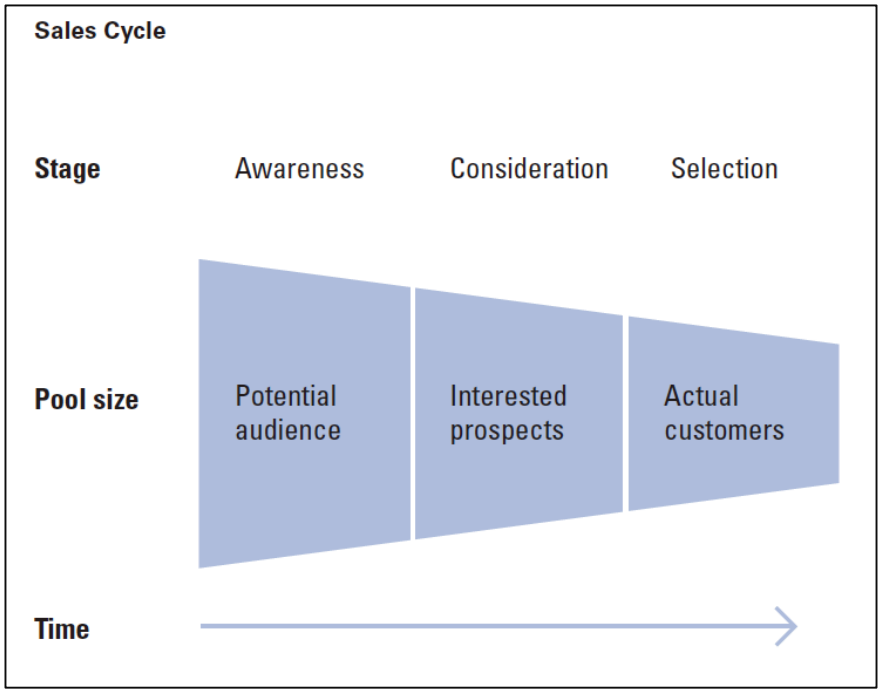


Figure 2.3 *Sales Cycle* (Dubberly & Evenson, 2008)

It is acknowledged that the sales cycle has value. Therefore, designers should be familiar with it. However, as designers, they should also know the experience cycle as an alternative method of understanding services. The experience cycle is a more useful model not only for designer but also for marketing and salesmen, because it is more likely to lead to an experience of lasting value for customers, and thus greater long-term value for service providers. The experience cycle was created in the 1980s. It is a new tool, synthesizing and giving form to a broader, more holistic approach being taken by growing numbers of designers, brand experts, and marketers. The experience cycle frames the producer-customer relationship, which has been proven to be crucial in a service design, from the customer's point of view and aims to move well beyond a single transaction to establish a

relationship between producer and customer and foster an ongoing conversation (Dubberly & Evenson, 2008). The experience cycle model describes the steps people go through in building a relationship with a product or service (Figure 2.4). The five blue small cycles in the big cycle are five attributes for an ideal experience. A good product or service design should capture user's imagination, help users navigate the product and the world, become a part of users' lives, unfold and grow as users' skills increase and delight so much that users tell other people about it (Dubberly & Evenson, 2008).

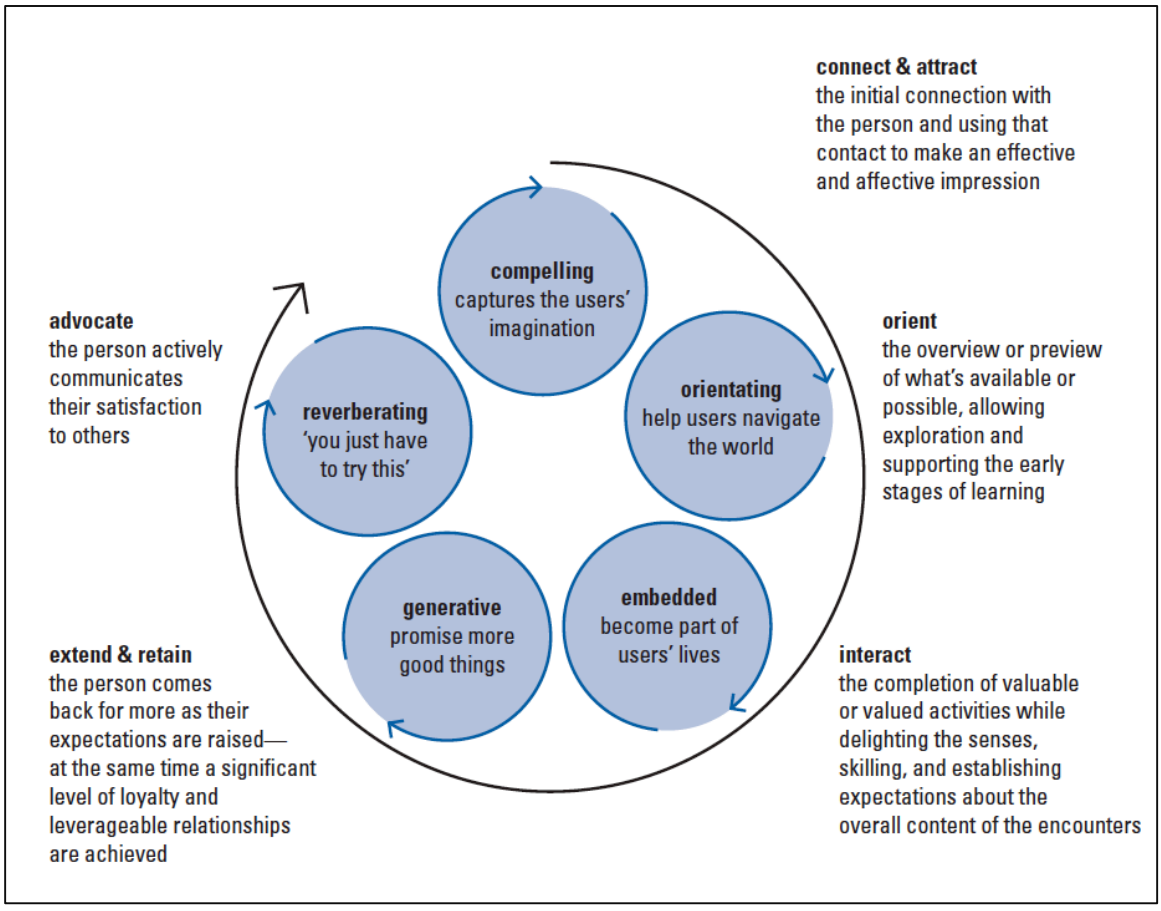


Figure 2.4 *Experience Cycle (Dubberly & Evenson, 2008)*

The change from the sales cycle to the experience cycle is significant. The frame suggests a shift in focus from "the sales" and the purchase results to the user's feelings and view in the whole systematic experience. The experience cycle is not only a process focused more on users, it also transforms how designers think. As long as the service process becomes a benign circulation, a better business result can be achieved.

2.2.2.2 User- Centered Principle of Service Design Thinking

When it moves from business to design or service design area, user-centered has been brought into human's eyes more obviously. Stickdorn and Schneder (2011) illustrated one of the theories through five core principles of service design that are being approved in the sphere of service design. The five principles include user-centered, co-creative, sequencing, evidencing and holistic (Figure 2.5). The user-centered is the first and also the most important one.

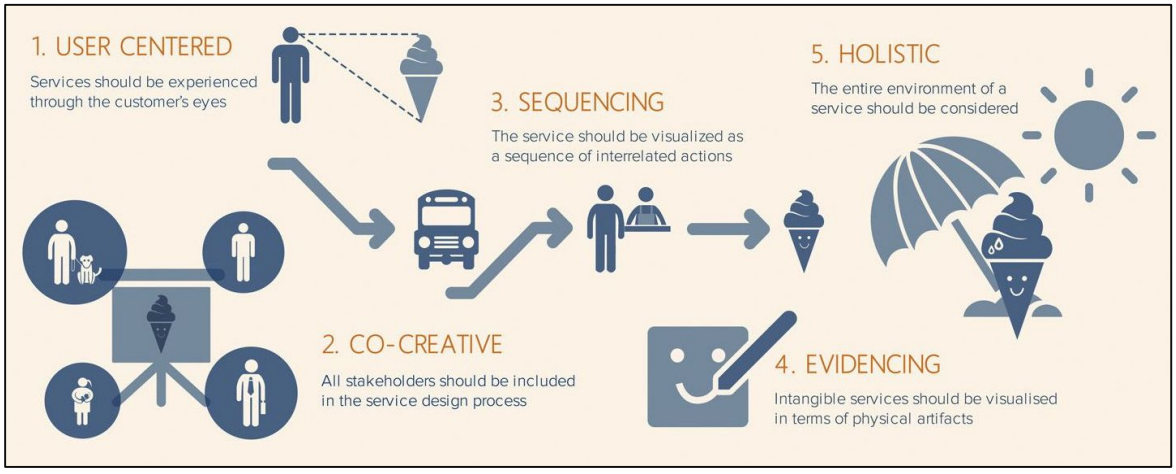


Figure 2.5 *Five Principles of Service Design Thinking*

User centered means that everything should be experienced from the customer's point of view. Though statistical customer descriptions are crucial, a true understanding of habits, culture, social context and motivation of users is important as well. This knowledge is needed to put the customer at the center of the service design process. This requires a genuine understanding of the customer beyond statistical descriptions and empirical analysis of their needs. On the basis of this, service design as an interdisciplinary aspect requires a user-centered approach to have a common language that all stakeholders speak to avoid misunderstanding – simply because they all have individual backgrounds and experiences (Stickdorn & Schneider, 2011). Recognizing the importance of the user-centered in service design, the approaches regarding how to find out target user's needs will be discussed in the next chapter.

2.3 Service Design Process and Tools

"The design process is the specific series of the events, actions or methods by which a procedure or set of procedures are followed, in order to achieve an intended purpose, goal or outcome" (Best, 2006, p. 208). Every service design specialism has a different approach and ways of working, but there are some commonalities to the creative process (British Design Council, 2015). This section will give a basic overview of the regular service design process and tools that are broadly used in current service design projects. Before moving to the content, some terminology used frequently in service design should be clear. Here,

the definitions of tool, method, methodology and process are given by Vincenzo (2012). In this section, process and tools are introduced. The method of how to apply them into a service design will be given a thorough discussion in the design guideline chapter.

Method is a way of doing or approaching something, especially in a systematic replicable way.

Methodology is a system or collection of methods used in a particular area of study.

Process is a series of actions or steps taken in order to achieve desired outcomes.

A tool is something used in the performance of an operation; an instrument.

2.3.1 Service Design Process: The Double Diamond

Designing the design process is the first and the most important step before moving into the formal service design phase. In practice designers often tailor the existing design process model, adding or subtracting steps to fit their own situations (Dubberly & Evenson, 2008). Best (2006) agrees that although there is no single best practical design process, there are core activities which can be adapted to fit a particular project or situation. Best contends that while there may be standardized processes that are adopted to solve design problems, this standardized process is necessarily adapted to the situation or problem at hand. She describes this as:

Standardized Processes have a defined set of project steps, a timeframe and a known or expected outcome.

Customized Processes that are more detailed processes adapted from standardized models to suit a particular problem or project.

In conclusion, it is suggested that designers should choose a suitable standardized design process based on their own design experience and project situation before proceeding with service design, and further customize the design process to make it reasonable and adaptable to target project. Designing the service design process, the methods used at each stage of the process, and ways of using each method is the first step in designing a service. Reusing an identical process in different service design projects should be avoided, as the project situation will be different.

Various companies, organizations and educational institutions have created and invented famous service design processes that have been already come into use in the design industry. In this study, a detailed introduction to each design process will not be given.

The Double Diamond

The basic service design process used in this study is based on "The Double Diamond" , articulated by the British Design Council in 2007 which consists four distinct phases – Discover, Define, Develop and Deliver (Figure 2.6). Unlike some of the other models presented above, it places emphasis on the Discover phase as one of the most critical (Nessler, 2016). In all creative processes a number of possible ideas are developed ('divergent thinking') before refining and narrowing down to the best idea ('convergent

thinking'), and this can be represented by a diamond shape. But the Double Diamond indicates that this happens twice – once to confirm the problem definition and once to create the solution. That is why there are two end points at the end of each diamond. One of the greatest mistakes is to omit the left-hand diamond and end up solving the wrong problem (British Design Council, 2015).

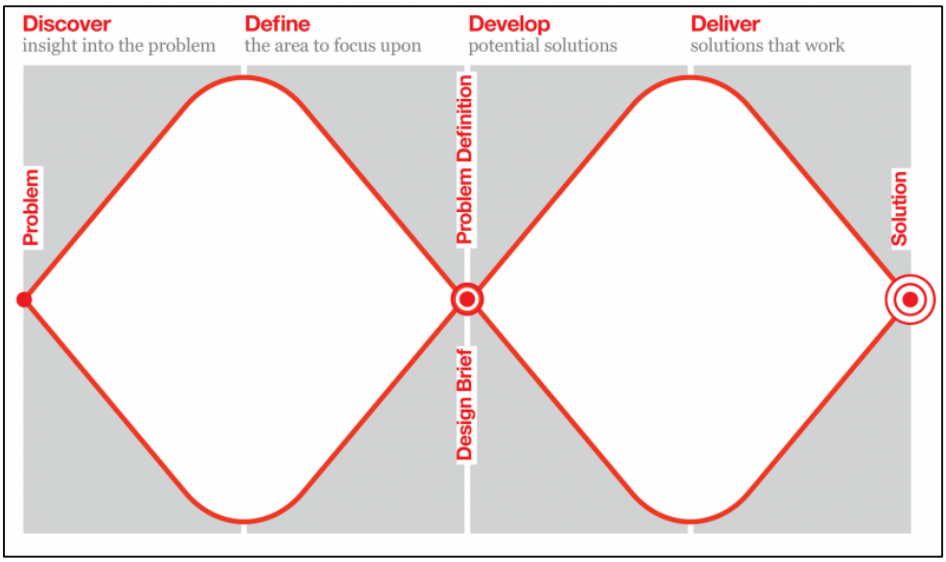


Figure 2.6 *The Double Diamond (British Design Council, 2007)*

The four phases of the Double Diamond can be simplified and merged into two main stages of the process. Stage one "Think" is doing the right thing (diamond one – discover and define). It requires looking for the right problem to solve and defining the task worth being done. Stage two "Design" is doing things right (diamond two – develop and deliver).

The Revamped Double Diamond is a design process framework based on the British Design Council's (2015) Double Diamond. It aims at making sense of the design process

and providing guidance and clarity in order to tackle a design challenge. It gives a deep evaluation of how what a designer should do at each step of double diamond process (Figure 2.7).

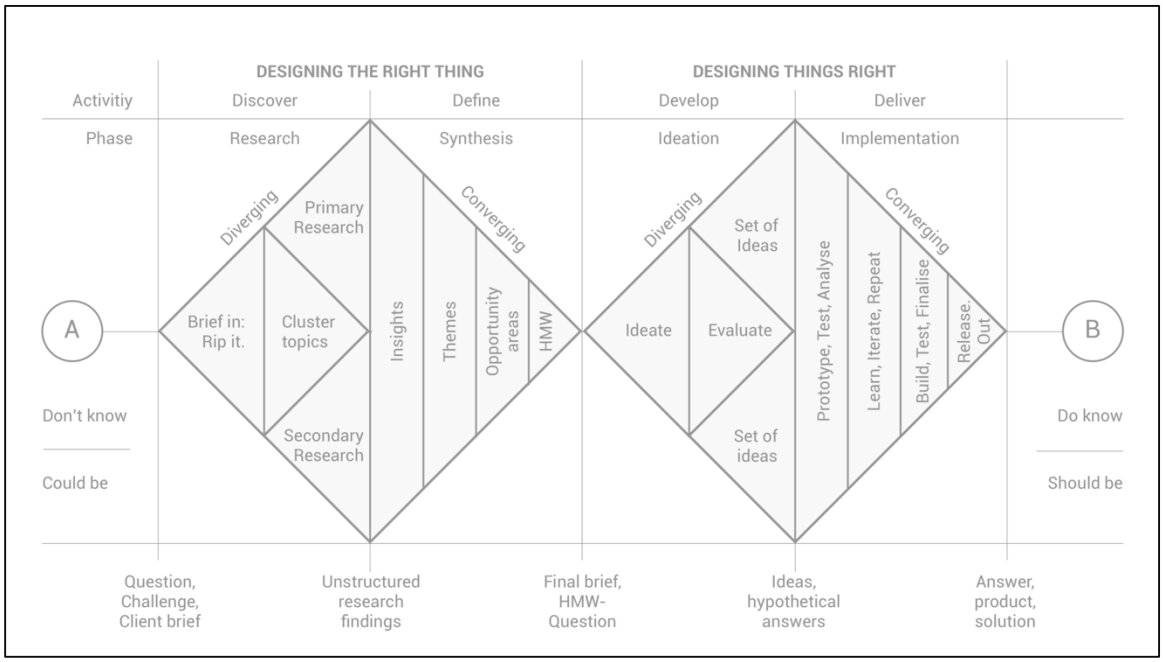


Figure 2.7 *Revamped Double Diamond (Nessler, 2016)*

- Discover/Research – insight into the problem (diverging).
- Define/Synthesis – the area to focus upon (converging).
- Develop/ Ideation – potential solutions (diverging).
- Deliver /Implementation – solutions that work (converging).

In addition, some other ways to employ this service design process can be discovered. For example, it can be combined with the service design tools to illustrate what designers should include at each point (Figure 2.8). Generally speaking, the design process should

not be static and rigid. Designers should design the process first to make the process better serve the service design.

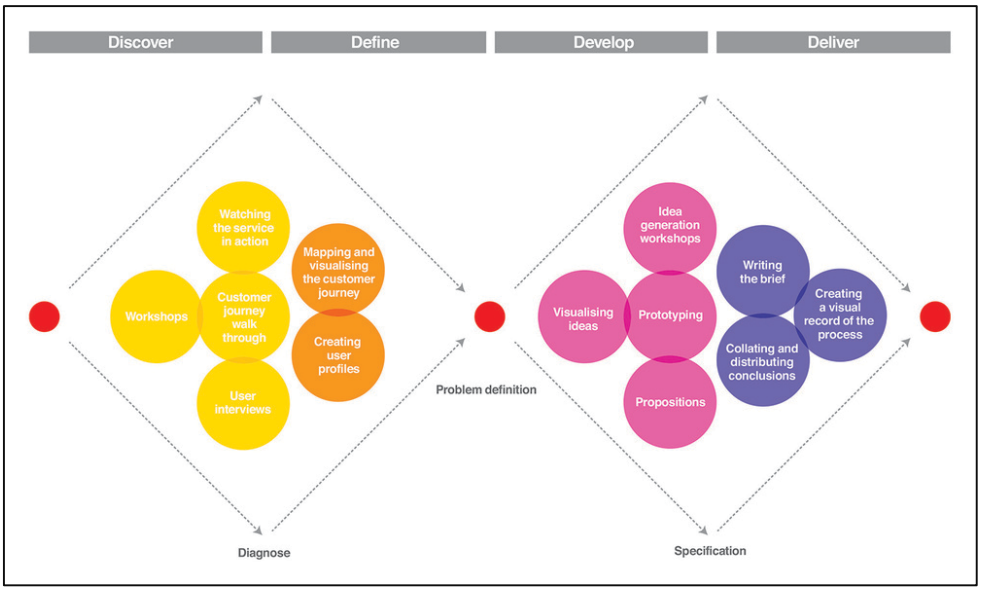


Figure 2.8 *Double Diamond Process Combined with Design Tools (Vikanightingale, 2015)*

2.3.2 Fuzzy Front End

Many design and service design processes have been thoroughly explored, and they all emphasize the importance of discovering user's pain points and user's needs, and how to discover these key points. But as mentioned before, service design is not just about providing services to users. Its starting point is to make profits for the enterprise or to find new opportunities for the enterprise in marketing. This is often overlooked by designers and teams due to the value that the user is the most important in a design. A product design process called iNPD should be included in this study, because it not only promotes a user-centered focus but it also emphasizes the importance of Fuzzy Front End (FFE) in the

service and product development process.

Fuzzy Front End (FFE) is the starting point where opportunities are identified and concepts are developed prior to entering the formal product development process. Innovation on the front end is where exciting breakthroughs are created through a process that allows for creativity and value creation in a systematic manner different from the formal development process (“Fuzzy End Innovation”, n.d.). The research is focused on general practice and aimed at understanding how companies make best use of design. FFE also believes that businesses need to think about implementing a design process that considers and accommodates all of the activities which occur around and beyond the core design work as much as designers can (British Design Council, 2007). Identifying the opportunity, understanding the opportunity, conceptualizing the opportunity, and realizing the opportunity are four phases in iNPD process. All four phases are part of FFE. The first three phases constitute the primary parts of the fuzzy front end (Cagan & Vogel, 2002). The Discover phase in Double Diamond is referred to as the FFE (British Design Council, 2007). Thus, this study will only focus on the first phase of FFFE in iNPD, which is identifying the opportunity.

The process is like a series of funnels (Figure 2.9), where opportunities are expanded through a gathering process and then filtered down to one or a few ideas based on the team’s analysis and interpretation. These remaining ideas are then expanded again in more focused depth with one investigation leading to the next area of focus (Cagan & Vogel,

2002).

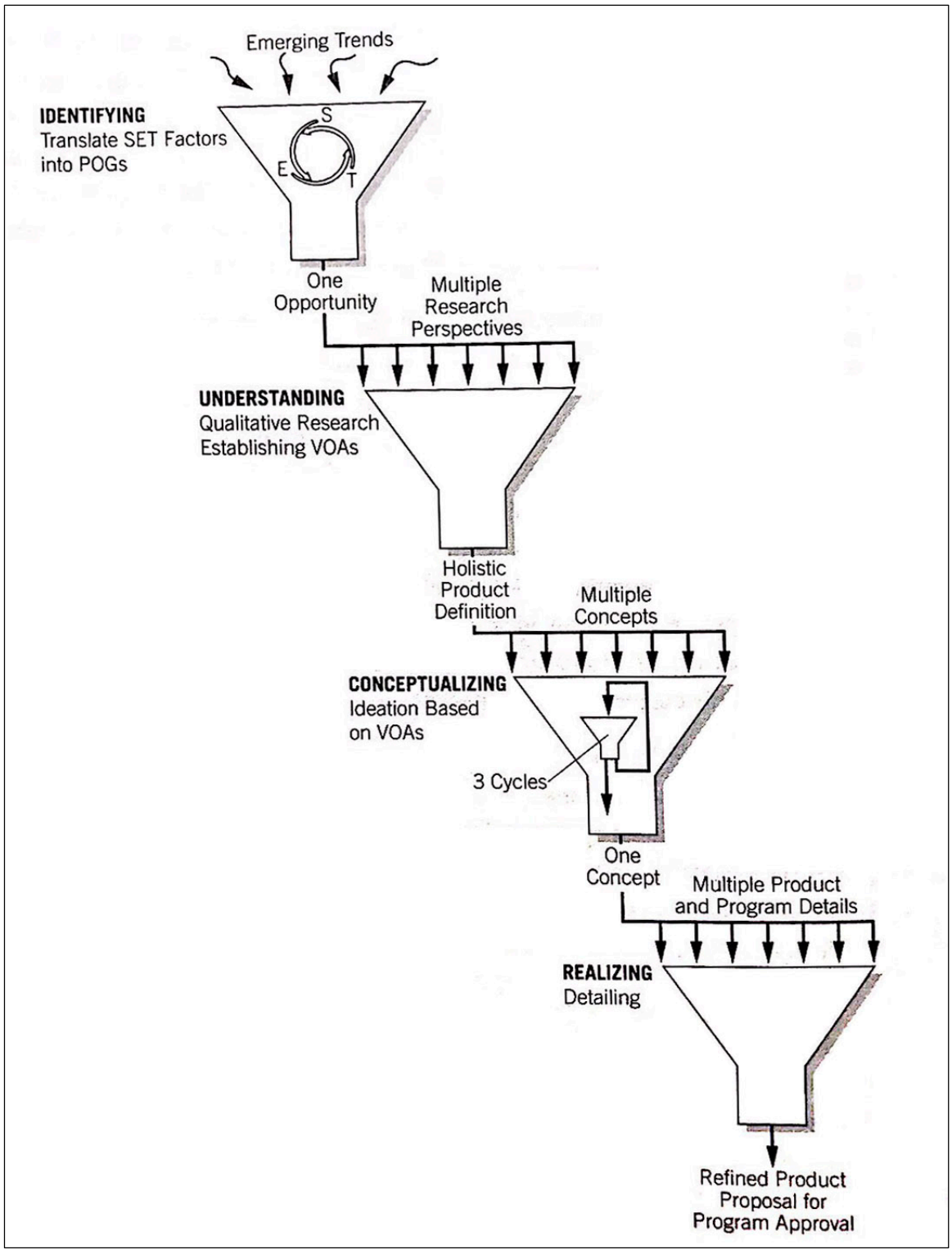


Figure 2.9 *Fuzzy Front End as A Series of Funnels (Cagan & Vogel, 2002)*

The first phase focuses on the identification of, and selection of, product opportunities. For companies seeking new service opportunities, this phase is crucial. For those who have already identified a service opportunity, or for those involved in the modification of an existing service, this phase can still lead insights into directions to take to refine and specifically define the opportunity. Opportunity for the service or product may be that of the competition, or the upper management of the company. SET (social trends, economic forces and technological advances) analysis is one of the best tool in this phase to identify POGs (Product Opportunity Gaps). SET factors (Figure 2.10) helps in generating as many opportunities as possible in a short amount of time, to filter the ideas down to a few of more serious interest, and then to investigate each at a cursory level to enable the generation of an initial scenario (Cagan & Vogel, 2002). A more specific instruction of SET will be included in the guideline.

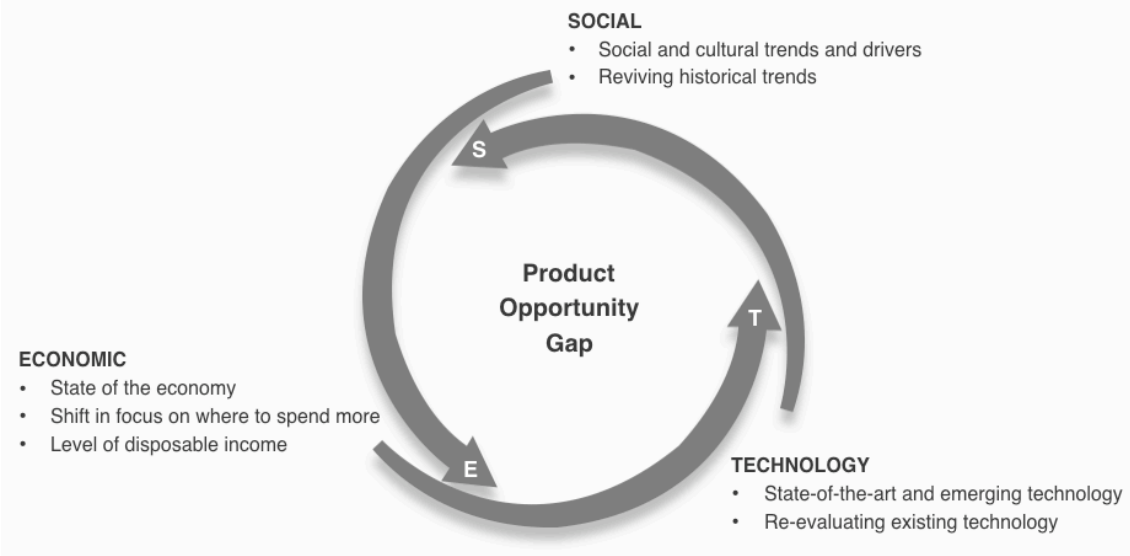


Figure 2.10 *Scanning SET Factors Leads to POGs (Cagan & Vogel, 2002)*

2.3.2.1 Value Opportunity Analysis

To have a better sorting of opportunities, getting know the value opportunity of the service should be achieved before the first phase. Value Opportunity Analysis (VOA) is to evaluate how products successfully stand out in the marketplace when being compared with other competitive products (Cagan & Vogel, 2002). The VOA chart lists each value opportunity class and its attributes in a column. The values are measured as low, medium, and high for each attribute (Table 2.2). If a product did not meet any level, no line is drawn. Cagan and Vogel (2002) put forward an assumption that if there was any intent to pay attention to an attribute, then there would be at least a low measure of success; if not, then the blank line means failure. The seven opportunities listed in this analysis method and the attributes of each opportunity are fixed; that is to say, during the VOA process of different products (or projects), all categories of this table are same. *Profit Impact* (across the company), *brand impact* (on company brand), *extendable* are listed below the chart. They are not VOs, but they are included in the chart because they indicate the overall success of the product. A successful VOA can help a team target the opportunity and know how well the design turns out.

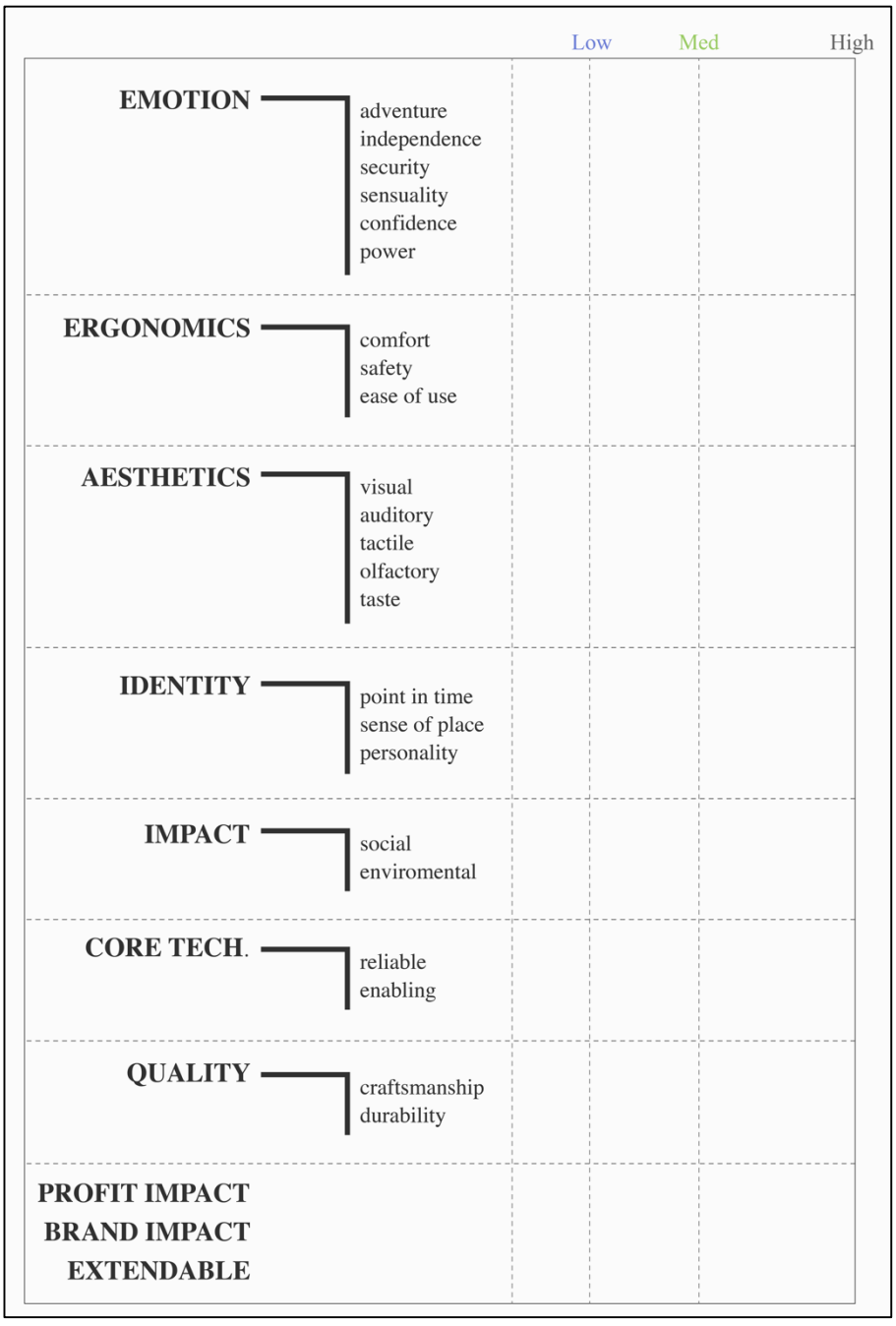


Table 2.2 *Value Opportunity Analysis (VOA) Chart (Cagan & Vogel, 2002)*

The analysis is useful in trying to understand what value opportunity attributes the designer team targeted and how the new design will turn out. Besides, the chart is most

useful as a comparison against competitive designs. In the VOA, the chart on the left indicates a current product or solution to a problem, while the chart on the right represents the design that is going to be focused on. When learning about the target market, understanding how dated products failed allows designers to discover how many improvements the new product should make (Cagan & Vogel, 2002).

Next, a VOA of Uber China and DiDi is given (Table 2.3). Uber China eventually failed, two years after entering the Chinese market, and was acquired by DiDi, resulting in the finalization of Uber's failure to localize in China. Uber China has completely accepted the services and functions of Uber USA, and it is very functional and succinct. But when Uber faced the problem of localization, Uber did not give a good solution, which led to the lag behind the DiDi in product safety and usability. Simply translating the functional modules from English to Chinese with an unchanged interface made it to be difficult to grasp the emotional needs of Chinese users. For example, Uber China does not set up a Customer Service Phone, thus handling complaints only through email, making Uber China criticized by users and drivers. In China, users have become accustomed to dialing customer service calls at any time to deal with problems quickly. User Eidosper (Chen, 2017) once complained: "Uber emphasizes that customers do not understand their product, then I can only say that Uber does not understand China."

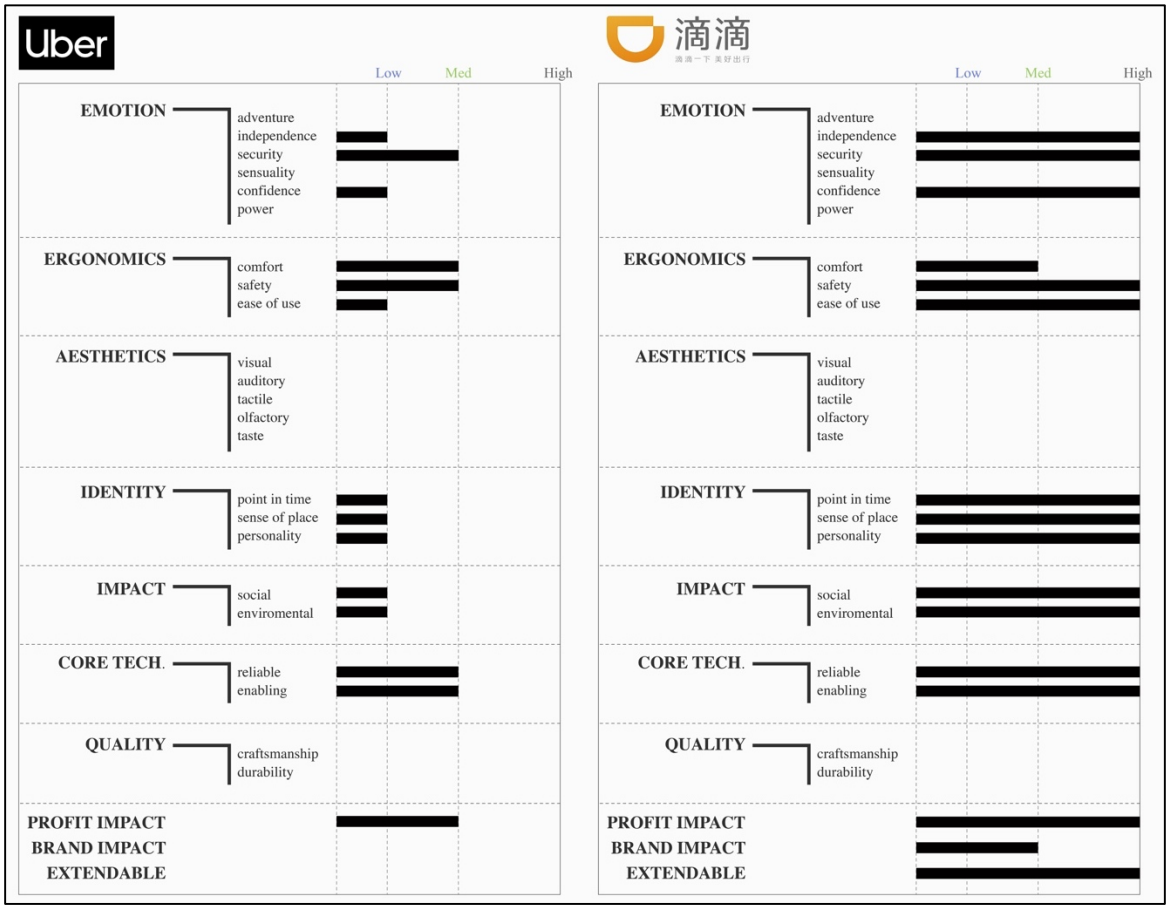


Table 2.3 *Value Opportunity Analysis (VOA) Chart of Uber China and Didi*

DiDi is completely different from Uber China. According to the VOA chart, as a local company, DiDi has firmly grasped the emotional situation and needs of passengers and drivers in the Chinese taxi scene. As a new ride mode, DiDi tries to give passengers and drivers maximum security and usability according to the habits and psychology of Chinese users at every stage. Didi has created a space and a time for the Chinese to socialize to co-create a good riding atmosphere. A large-scale Internet product must not only grasp the pain points of user, but also grasp the relationship between user and society, and product

and society to achieve a comprehensive influence. At this point, DiDi is doing much better than Uber China.

2.3.3 Service Design Tools

This part brings together a wide range of service design tools and methods. There are hundreds of service design tools that have been created. These tools can be used in almost any combination, and there is not only one way they can be used. Experimenting with existing methods and new aims was how many of these tools came to be developed in the first place (Stickdorn & Schneider, 2011). Since the service process of this study pays more attention to the first two parts – discovering and defining—the research phase takes on an important role during the service design. Cultural context analysis also focuses on user's background and behavior; these analysis and research are also concentrated on the first half stage of the service design. While it is not realistic to use the full set of methods on a given service project, nearly all service designs would benefit from multiple research methods and from combining insights.

Here is a short description of some famous service design tools. The approach of how to organize and sort some of these tools will be illustrated in the next chapter.

Card Sorting: Card sorting is a method used to help design or evaluate the information architecture of a site. This method helps create or refine the information architecture and help designers understand their design topics (Usability.gov, n.d.).

Figure 2.11 *Card Sorting*

Personas: a profile representing a particular group of people, such as a group of customers or users, a market segment, a subset of employees, or any other stakeholder group. It is not a stereotype, but is an archetype based on the real research (Stickdorn, Hormess, Lawrence & Schneider, 2018).

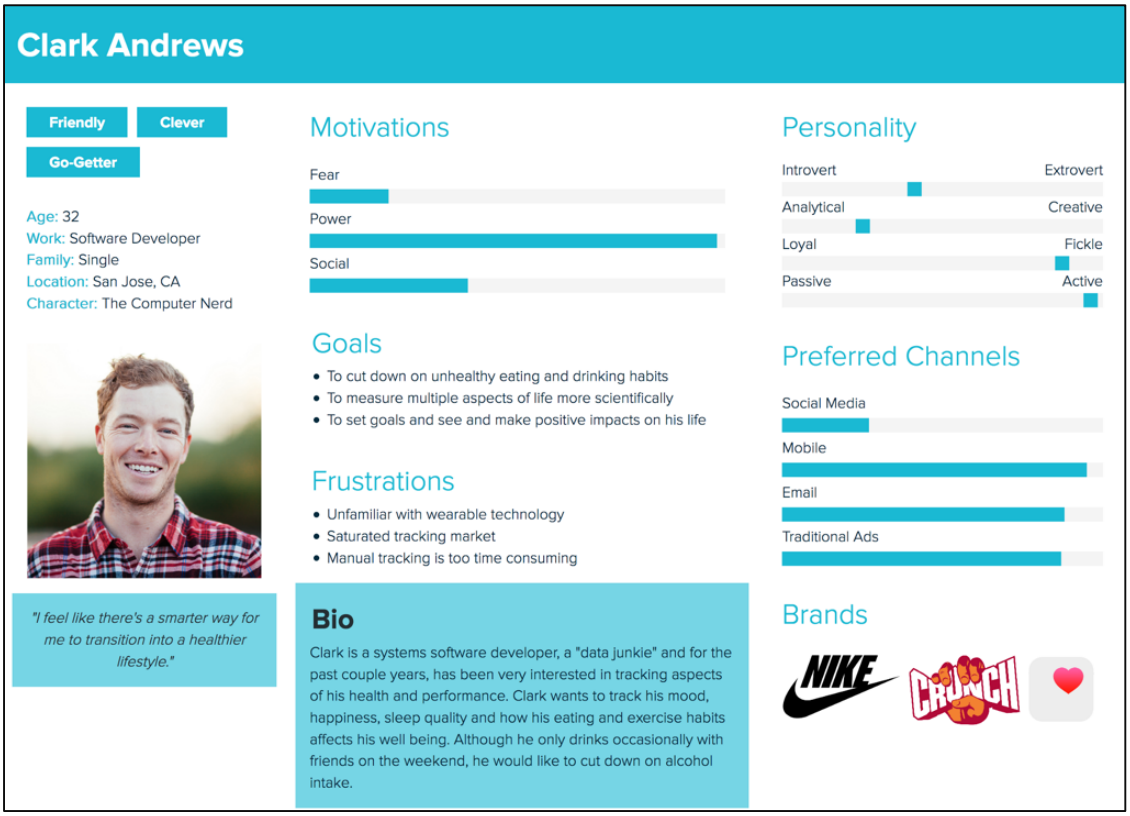


Figure 2.12 *Example of Persona*

Service Prototypes of Digital Artifacts and Software: can be anything from rough scribbles of the interface, actors playing devices, and digital mock-ups or click- models up to working pieces of experimental code that already run on the mobile device (Stickdorn et al., 2018).

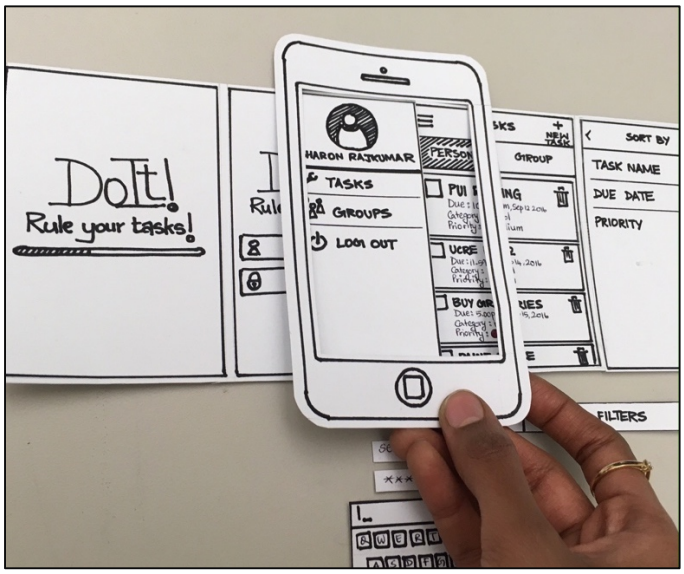


Figure 2.13 *Paper Prototype of An Application*

2.4 Culture Context and Service Design

According to the history and literature of design, the influence of culture on design has long been proven. Service design, as a newly developed discipline in the field of design, must be influenced by culture in some aspects. Cultural context impacts user's behavior, belief, cognition, and ways of understanding. Persons from different cultures perceive and organize their environment in different ways, so that culture becomes meaningful to design (Harris & Moran, 1979). This section will demonstrate the deeper connection between service design and culture.

To understand culture, attention can be turned to the work of Hofstede. Following Hofstede (1994), the culture is defined as the collective programming of the mind which distinguishes the members of one group or category of people from those of another.

Culture is a particular viewpoint of life by a certain group of people (Shen, Woolley, & Prior, 2006). This particular viewpoint is influenced by, and also influences all aspects of life from politics, religion, and for our case and purpose, design (Kroeber & Kluckhohn, 1952). The concept of culture in design area means a lot: personality, emotionality, regionalism, identifiability, uniformity, or diversity. During the long history of design development, it has been demonstrated that culture has a huge effect on design from craftwork design, graphic design, furniture design, product design to brand design.

Context refers to the situation, background, or environment connected to an event, a situation, or an individual (Wurtz, 2006). Cultural context looks at the society individuals are raised in and at how their culture can affect their behavior (O'Connor, 2012). Culture incorporates learned values and shared attitudes among groups of people. It includes language, norms, customs, ideas, beliefs and meanings. The cultural context is different than cultural background. Cultural background means the group from which individuals descend and that share a distinct identity. People from the same cultural background share the same culture which can include history, language and religion (Paveepoint, n.d). In conclusion, cultural context emphasizes that the behavior of the central characters in a text are influenced significantly by their culture, which means, in a service process, how central users understand, react, and interact with service or stakeholders as well as how they evaluate the service results, are deeply bound up with their cultural context.

An interesting example can be given. Starbucks having to adapt a specific part of their

service in Japan in order to accommodate to a local cultural context is an example of the relevance of the factor culture in the experiencing of a service. In the United States, Starbucks employees write down customers' name on coffee cup. It is a familiar moment for all customers all over the world. Also, one of the goals of standardizing the way in which the barista treats customers in the Starbucks is to create familiarity: no matter where users are in the world, they get the similar treatment (Been, 2017). This standardized familiarity however, might feel alien and actually unfamiliar when experienced for the first time for people raised in a different cultural context. When buying Starbuck, having a name that is somewhat difficult to pronounce or write down could result in certain feelings ranging from awkwardness to shame or foreignness, sometimes even leading to the invention of a 'Starbucks name'. In Japan, Starbucks customers are called by the name of items they order instead of the user's name, because of privacy being more delicate issue. And even in a country that might feel culturally closer to the United States like the United Kingdom, one could argue that not everyone is used to an overly personal moment of interaction when buying coffee (Been, 2017).

Figure 2.14 *Name on Starbucks Coffee Cups United States vs Japan*

As said earlier, the essence of service or service design is a business activity. In business situations, a classification of the particular culture by the importance of context can be useful. The more a business manager knows about the culture and the context of the business dealings, the better he or she will be able to tailor the message to the needs of the receiver (Waner & Winter, 1992).

2.4.1 The Relationships Between Culture and Service Quality

The relationship between culture and service satisfaction has brought to scholar's eyes since the end of the twentieth century. Some studies establish the link between cultural dimensions and service quality dimensions by studying a subset of possible relationships. (Furrer, Liu, & Sudharshan, 2000). When services are established in the international environment, international segmentation was the center of a controversy over the degree to

which service activities could or should be standardized globally and the degree to which they should be tailored to national groups (Levitt, 1983). For example, in the case of Coca-Cola and Starbucks, the existence of global markets cannot be denied; no matter where you are in the world, you get the same kind of treatment with the same kind of beverages that you know. However, not every service should be standardized globally. Lovelock and Wright (1998) also classified service processes in four categories: people processing, possession processing, mental stimulus processing, and information processing.

Information-based services depend on collecting manipulating, interpreting, and transmitting data to create value. For example, the customer goes to the bank to deposit cash to someone else's account. After the instructions are given, basic information processing ensures the transfer of money from the customer's account to another account number. In this case, neither customer nor the recipient needs to be present. Only the information is required (Bhasin, 2018).

Mental stimulus services involve only mental work. It is classified as intangible. Theatre performance is one such activity which can be intangible. The customer is not required to be present and not even an object of the customer is required. Users just needs to understand what is happening. Advertising, movies, religion, and education are some of the examples which require a mental stimulus (Bhasin, 2018).

People-processing services is the type of service processing requires the customer to be present physically for the service to be delivered. For example, food delivery, healthcare

and fitness training (Bhasin, 2018).

Possession-processing services involve tangible actions to physical objects. The customer is not required to be present while giving the service. For example, repair and maintenance work, laundry or dry cleaning are services do not require the customer's presence (Bhasin, 2018).

	Who or what is the direct recipient of the service	
	People	**Processions**
	People Processing	**Procession Processing**
Tangible Actions	Services directed at people's bodies: Passenger transportation Health care Lodging Beauty salons Physical therapy Fitness centers Restaurants/ bars Haircutting Funeral services	Services directed at physical possessions: Freight transportation Repair and maintenance Warehousing/ storage Janitorial services Retail distribution Laundry and dry cleaning Refueling Landscaping/ lawn care Disposal/ recycling
	Mental Stimulus Processing	**Information Processing**
Intangible Actions	Services directed at people's minds: Advertising/ PR Arts and entertainment Broadcasting/ cable Management consulting Education Information services Music concerts Psychotherapy Religion Voice telephone	Services directed at intangible assets: Accounting Banking Data processing Data transmission Insurance Legal services Programming Research Securities investment Software consulting

Table 2.4 *Four Types of Service Processing* (Grove, Carlson & Dorsch, 2002)

People-processing services necessarily involve a high degree of contact with service personnel and facilities (Lovelock & Yip, 1996). Therefore, there is a necessity for segmentation to adapt these services to local cultures. On the contrary, possession-processing and information-based services have the potential to be much lower contact in nature (Lovelock & Yip, 1996), so they can be standardized at the global level. In conclusion, when services involve a high degree of interaction between customers and service personnel that cultural factors have the greatest influence (Furrer et al., 2000). Therefore, the guideline developed in this study is oriented toward service activities with a high degree of customer interaction and thus need to be adapted to cultural preferences.

After confirming what types of services have a stronger connection with cultural elements, the next step should look into the historical literature to have a knowledge of what cultural variables have been proven to have relationships with service quality or results. Once the variables and factors are learned, the important points and disciplines need attention so that the service process design phase can be clearer for designers.

Based on the reading of the literature, it is found that strong-weak tangible cues and frequent-infrequent service situations might indeed influence the relationships between culture and the relative importance of the service. Mattila (1999) examined the impact of culture on customer evaluation of complex services. Mattila set up the goal as understanding the tradeoffs that Western and Asian customers are willing to make between personalized service and pleasant physical environment in the context of luxury hotels. The

samples are separated into three categories: Westerners, Asian Chinese, and Asian Indian. Three groups of customers are related to a set of service dimensions (physical environment, personal service component, and hedonic dimension). The findings suggest that customers with a Western cultural background are more likely to rely on tangible cues from physical environment than would their Asian counterparts. The findings also show that hedonic dimensions of the consumption experience might be more important for Western consumers than for Asians.

The consumer behavior differentiates between different buying situations on the basis of frequency of action (Assael, 1987; Howard & Sheth, 1969). In frequent service situations, customers know the service process and their role in it. The situations change in infrequent service situations. Therefore, the risks and uncertainties associated with frequent and infrequent service situations also vary. In infrequent service situations, uncertainty and ambiguity from the unknown situations has to be reduced. On the contrary, in frequent service situations, because reliability is likely to be an important factor, it is the uncertainty associated with possible service failure that has to be reduced (Furrer et al., 2000).

2.4.2 High- and Low-Context Culture

In Beyond Culture, Hall (1976) developed a theoretical model related to culture context. Culture, he notes, "designates what we pay attention to and what we ignore" (Hall, 1976, p.85). Context is described as the connection of social and cultural conditions that surround and influence the life of an individual, an organization, or a community

(Halverson & Tirmizi, 2008).

Hall (1976) classified a variety of countries by the degree of importance of context for cultural mores. They complement each other and provide a broad framework for looking at culture (Pacific University, n.d). High- and low-context culture are used to describe cultures based on how explicit the messages exchanged are, and how important the context is in communication. Gudykunst et al. (1996) identified high-context communication to be indirect, ambiguous, maintaining of harmony, reserved and understated. In contrast, low-context communication was identified as direct, precise, dramatic, open, and based on feelings or true intentions. The Chinese, Korean, and Japanese cultures are classified as high-context cultures, while German, Swiss, Scandinavian, and North American cultures are defined as low-context cultures (Waner & Winter, 1992). However, few cultures, and the people in them, are totally at one end of the spectrum or the other. They usually fall somewhere in between and may have a combination of high and low context characteristics.

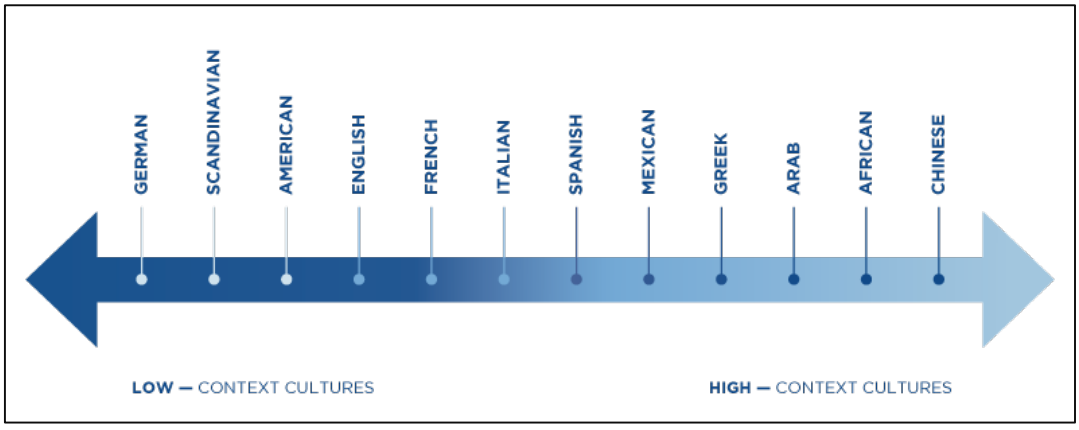


Figure 2.15 *High/Low Context by Culture* (Hall & Hall, 1976)

The analysis of cultural dimensions has been developed in several stages. A the first beginning, in *The Silent Language*, Hall (1959) identified ten separate dimensions of human activity that can be used as the aspects to learn a certain culture, which he has labeled Primary Message Systems: association (relationships), interaction (verbal and nonverbal communication), subsistence (work), bisexuality (gender roles), territoriality (use of space), temporality (time, orientation), learning (what and how knowledge and skills are developed and transmitted), play (importance of and approach to diversion), defense (what, when, and how protection occurs), and exploitation (relationship to others and to environment). This is the first foundation of the cultural values to help scholars to have directions to learn a country or a group of people. Twenty years later, Hall developed the theory of high and low context culture as mentioned before. This finding becomes as the most popular topic for sociologists to discuss from different cultural values that they set up. Here are some of the learning of the famous cultural dimensions.

Hofstede's Value Dimensions

An extremely important cultural framework was advanced by Geert Hofstede in 1980, in his book Culture's Consequences, based on extensive multinational survey data comprising 1,660,000 responses from 40 nations. This work has profoundly impacted the fields of cross-cultural psychology, organizational behavior, and management. Hofstede conceptualized a four-dimension framework for understanding culture across nations. These dimensions are: Individualism- Collectivism (I/C), Power Distance (PD),

Masculinity-Femininity (M/F), and Uncertainty Avoidance (UA) (Hofstede, 1980).

Individualism- Collectivism: This dimension is the extent to which needs and aspirations of individuals get priority and importance compared to needs of others and of collectivities. In individualistic cultures, personal autonomy, freedom, individual achievement, and right to privacy are valued. Collectivist cultures emphasized "we" awareness, loyalty to groups and clans, security and order from organizations, and group decisions.

Power Distance: this is the extent to which differences in status, hierarchy, class, etc., are accepted and preserved. In LC culture which has low power distance, attempts are made to minimize inequality, people in subordinate positions find it easy to access people in superior positions, and equal rights are emphasized. In HC culture which has high power distance, power holders are entitled to privileges and power is considered a basic fact of society.

Masculinity-Femininity: this is the extent to which assertiveness, performance, independence, and role differentiation (by gender, or sex) are valued by societies. In Masculine societies, sex roles are clearly differentiated, individual performance and independence are valued, and visible manliness is acceptable. In Feminine cultures, interdependence and relationships are important, roles are not clearly defined according to sex differences, and quality of life is important.

Uncertainty Avoidance: this is the extent to which uncertainty and ambiguity are

perceived as a threat in a society. In LC societies with low uncertainty avoidance, there is less emphasis on rules, the younger generation is considered more trusting, emotions are expressed rarely, and deviation is easily tolerated. In HC societies with high uncertainty avoidance, experts are valued, hard work is considered important, and a strong need for consensus is felt (Halverson & Tirmizi, 2008;).

Halverson's Cultural-Context Inventory

Halverson argued that the dimensions of association (how people relate to each other), interaction (how they communicate with each other), territoriality (how they treat space), temporality (how they treat time) and learning (how they learn) are most relevant to interactions in multicultural environments. It is pointed out that some concrete ways in which High- and Low- Context cultures vary across these dimensions in Table 2.5 (Halverson & Tirmizi, 2008; Halverson, 1993).

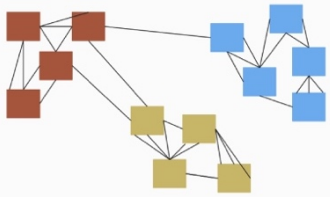
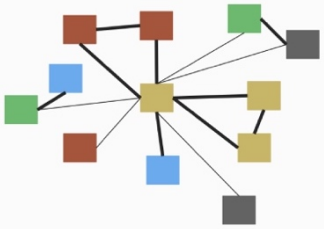
	High Context (HC) Culture	Low Context (LC) Culture
		
Association	Relationships depend on trust, build up slowly, and are stable. One distinguishes between people inside and people outside one's circle. How things get done depends on relationships with people and attention to group process. One's identity is rooted in groups (family, culture, work). Social structure and authority are centralized; responsibility is at the top. Person at the top works for good of the group.	Relationships begin and end quickly. Many people can be inside one's circle; circle's boundary is not clear. Things get done by following procedures and paying attention to goal. One's identity is rooted in oneself and one's accomplishments. Social structure is decentralized; responsibility goes further down (is not concentrated at the top).
Interaction	High use of nonverbal elements; voice tone, facial expression, gestures, eye movement carry significant parts of the conversation. Verbal message is implicit; context (situation, people, nonverbal elements) is more important than words. Verbal message is indirect; one talks around the point and embellishes it. Communication is seen as art form—a way of engaging someone. Disagreement is personalized. One is sensitive to conflict expressed in another's nonverbal communication. Conflict either must be solved before work can progress or must be avoided because it is personally threatening.	Low use of nonverbal elements. Messages is carried more by words than by nonverbal means. Verbal message is explicit. Context is less important than words. Verbal message is direct; one spells things out exactly. Communication is seen as a way of exchanging information, ideas, and opinions. Disagreement is depersonalized. One withdraws from conflict with another and gets on with the task. Focus is on rational solutions, not personal ones. One can be explicit about another's bothersome behavior.
Territoriality	Space is communal, people stand close to each other, share the same space. Because it is personally threatening.	Space is compartmentalized and privately owned, privacy is important, so people are father apart.
Temporality	Everything has its own time. Time is not easily scheduled; needs of people interfere with keeping to a set time. What is important is that activity gets done. Change is slow. Things are rooted in the past, slow to change, and stable. Time is a process; it belongs to others and to nature.	Things are scheduled to be done at particular times, one thing at a time. What is important is that activity is done efficiently. Change is fast. One can make change and see immediate results. Time is a commodity to be spent or saved. One's time is one's own.
Learning	Knowledge is embedded in the situations; things are connected, synthesized, and global. Multiple sources of information are used. Thinking is deductive, proceeds from general to specific. Learning occurs by first observing others as they model or demonstrate and then practicing. Groups are preferred for leaning and problem solving. Accuracy is valued. How well something is learned is important.	Reality is fragmented and compartmentalized. One source of information is used to develop knowledge. Thinking is inductive, proceeds from specific to general. Focus is on detail. Learning occurs by following explicit directions and explanations of others. An individual orientation is preferred for leaning and problem solving. An individual orientation is preferred for leaning and problem solving. Speed is valued. How efficiently something is learned is important.

Table 2.5 *High and Low Cultural Context Characteristics (Halverson, 1993)*

Summary

High-Context Culture: relies on implicit communication and nonverbal cues. A message cannot be understood without a great deal of background information, which means during the interactions, people rely on the surrounding circumstances or context of an event. It is not necessary to provide explicit information since people already know it through continuous interaction. A high-context communication requires more time, since trust, friendships and family relationships, personal needs and difficulties, weather, holidays, and other factors must be considered (Neese, 2016; Halverson & Tirmizi, 2008).

Besides, the social values and traditional social customs play a greater part in communication situations and business dealings than do the written and spoken word. The strength of the trust relationship that develops in a high-context society affects how the services and business are conducted and what the result is (Waner & Winter, 1992). For example, when we take a taxi in China, the profession and courtesy shown from drivers in communication are vital for the user's experience. Such variables such as greetings, timing, and even age convey a stronger message than do the information in the agreement. Showing proper respect, maintaining communication, and being old can indicate professionality in giving the service as a driver. There is a phrase in Chinese called "Lao Shi Fu", which means "old master". People use it frequently to describe the older experienced drivers. "Lao Shi Fu" can be distinguished from the first view and they give passengers a sense of safety and trust. Even though passengers just judge the driver as a "Lao Shi Fu" from his

appearance, apparently both passengers and taxi companies have a tendency to hire "old" drivers because that seems to be significant to give emotional comfort to their passengers.

Figure 2.16 *Taxi Driver as "Lao Shi Fu"*

Low-Context Culture: In contrary, in low-context communications, people pay attention to the explicit words. Other factors such as tone of voice, gesture, social status, history, and social setting are more individualized, somewhat fragmented, and there is little involvement with people (Halverson & Tirmizi, 2008).

Similarly, from a service delivery point, in low-context cultures such as the US and Canada, simple courtesy is important also; but if the service itself is delivered efficiently, even gross errors of etiquette will be ignored in favor of the deal. During the service process, service is handled as directly and efficiently as possible. Youth is often considered to be an advantage, indicating vitality rather than the lack of experience, as it is seen to be in high-context cultures.

2.4.3 Case Study: Culture Analysis of Website Design from High- and Low- Context Culture

Although many studies have proven that culture factors have a close connection with service results, quality, and user's evaluation towards to it, to have a deeper understanding of the design strategy when applying these cultural factor analysis, it is efficient to learn a mature and professional service design that is adapted to local culture globally in the market. McDonald's service design based on different cultures around the world has been perceived and recognized by consumers as effective. In this section, a detailed case study of McDonald's service design that embodies cultural importance will be given. It will analyze the website design of McDonald's based on different national cultures to understand better how to attract different consumers around the world.

Wurtz (2006) gave a good example of McDonalds' website design in different countries varying from high- to low- context culture in the year of 2003. The example was very vivid and logical in explaining the relationship between the McDonald's website design elements and cultural elements. This is very important to help designers clearly and easily understand the potential connection between the cultural context characteristics and the service design. The example can also help me effectively transform the cultural context elements into the service design elements when designing the guideline in Chapter Three, so that the cultural theory in this thesis can be reasonably grounded in service design field.

The findings in Wurtz's analysis are still adaptable for the current McDonalds' website

design, with only a few changes necessary according to the comparison results. The case study in this part is based on Wurtz's experiment. Some of the conclusions are retained, changed or added to match the case study in this thesis. Additionally, some cultural context characteristics could only be found in the design of the website in 2003, which means these characteristics do not exist or are not apparent in current versions of McDonald's website designs. For these cases, only the pictures from 2003 can be provided to restore the conclusion of Wurtz's experiment. Even if those characteristics disappeared already, they can still serve as a factual basis for helping designers understand the impact of cultural context on service design.

According to Wurtz (2006), the reason why McDonalds is a good illustration of the impact of cultural factors to service design or communication design is that McDonalds as a successful global company that researched their target users from different cultural backgrounds to consequently design the most appealing website in each target culture. The underlying premise of the case study is that when customizing a website to attract a different culture, it is not enough to translate the text; the overall communication strategy should be appropriate to the audience at the same time. Website design is not just a collection of text; it is a combination of images, multimedia, interactive features, animated graphics, and sounds. From a marketing-strategic perspective, a cross-cultural company must study the target group of the website. Values and behavior indoctrinated through cultural impact may be reflected in design results (Wurtz, 2006). Based on the previous

discussion of HC and LC cultures, the study is conducted as a cross-cultural, qualitative analysis of website from countries categorized as belonging to either HC or LC cultures. The analysis focuses on visual communication, which refers to the conveying of messages through visual cues. The analysis focuses on visual communication, which refers to the conveying of messages through visual cues. The websites analyzed included ones from Japan, China, Korea, Hong Kong, India and Tai Wan as representatives of HC cultures (Figure 2.17), while USA, Germany, Denmark, Sweden, Finland, and Switzerland (Figure 2.18). All the images from the website are the newest ones. To have a better and a clearer analysis, the websites and analysis results from Wurtz's experiment in the year of 2003 are also listed. The analysis is illustrated from three parameters influenced by culture that are reflected in web design.

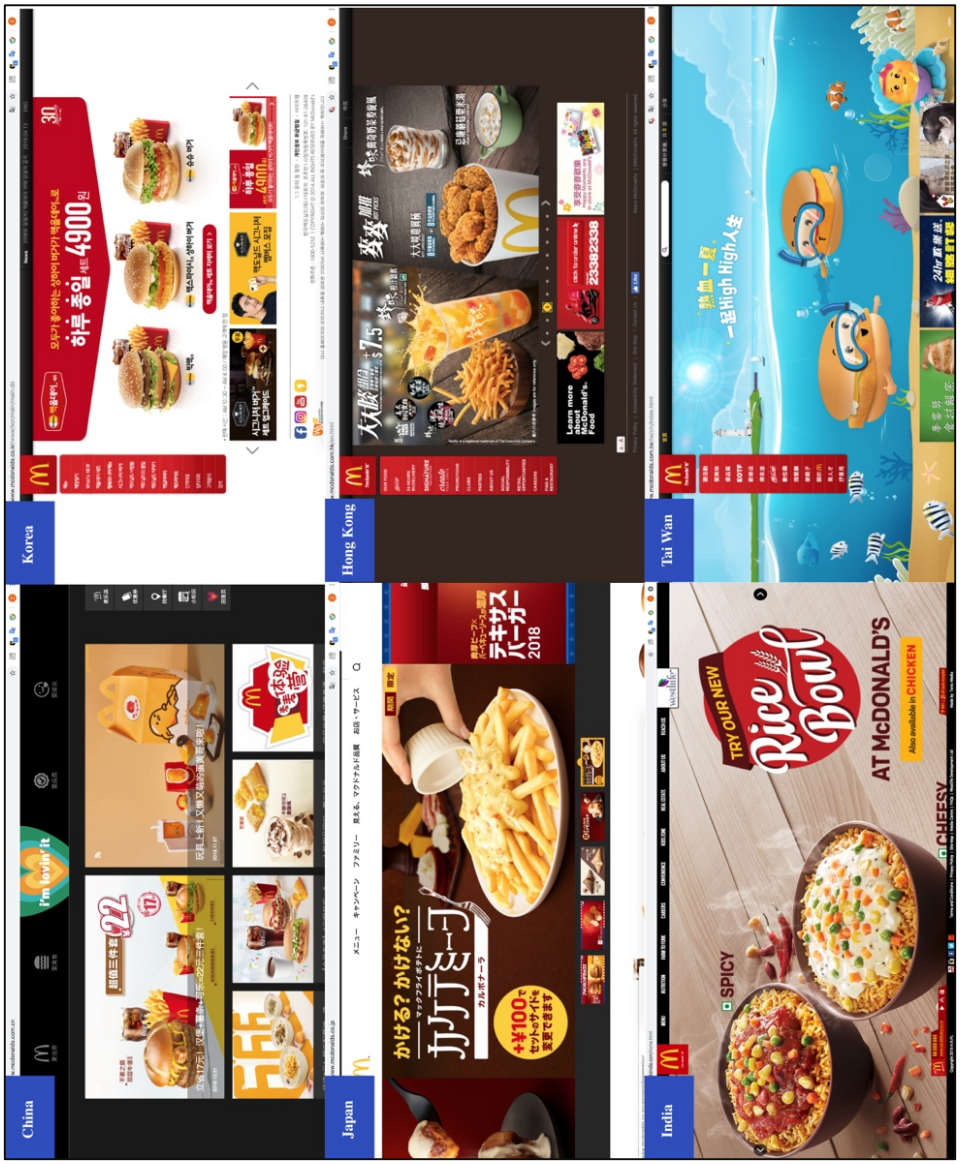


Figure 2.17 *Websites Representatives of HC Cultures*

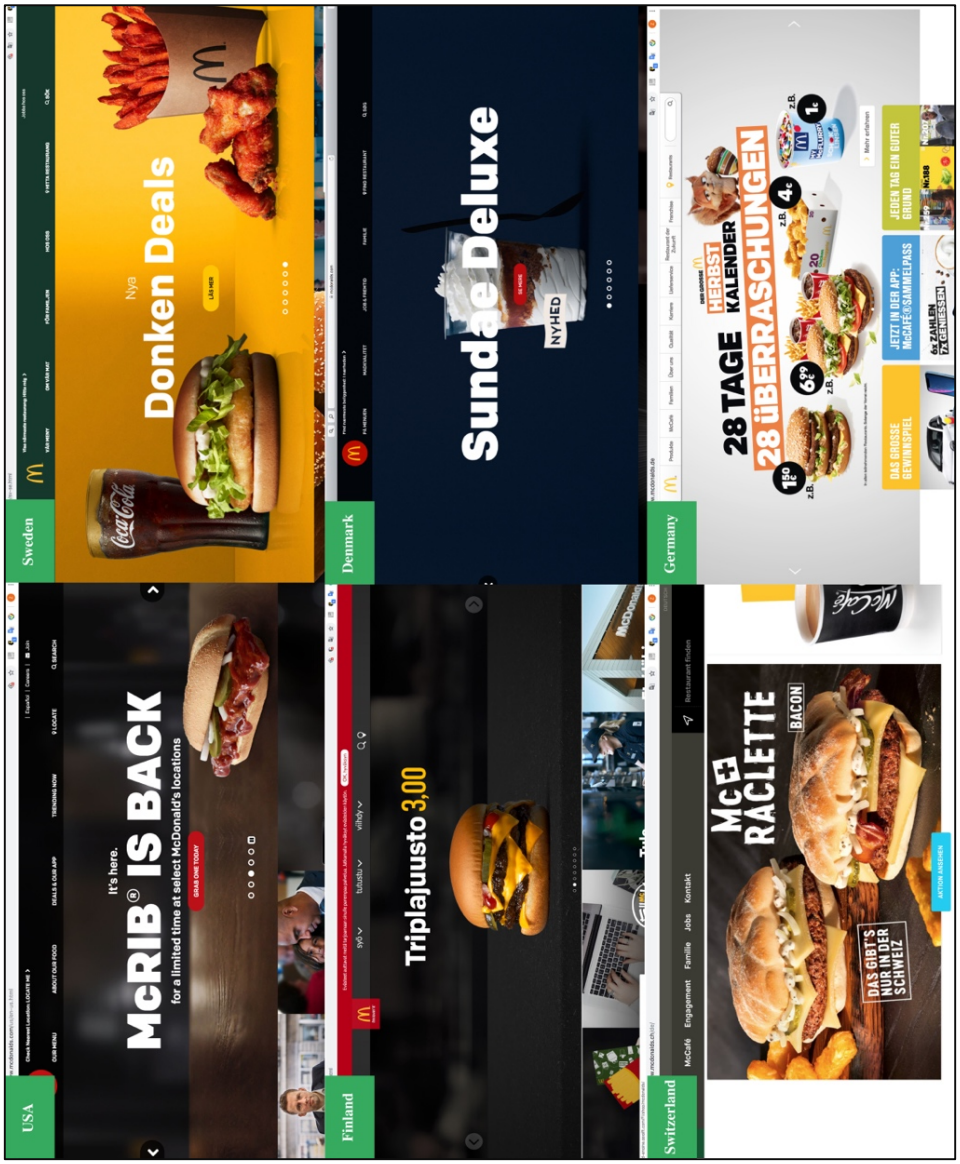


Figure 2.18 *Websites Representatives of LC Cultures*

Images

Having an overall view of all the websites from HC to LC culture websites, HC culture websites are likely to use more images with more combinations of color, formats and special graphic effects and less text than their LC counterparts. They also collect more

information in a single page. This is because in HC cultures, changes and diversity can draw more people's attentions, especially for food services. Diversity plays a more important role than information efficiency in a purchasing activity in HC cultures. In LC cultures, the efficiency of the information is more important that users expect direct and clear messages. This can be connected with the characteristics that Halverson (1993) concluded are used more often in HC cultures: more nonverbal elements and communication as an art form. On the other hand, LC cultures deliver messages more by direct explicit words and a preference of communication as a way of delivering information.

Animation

Animated effects on Web sites tend to be more prominent in HC cultures than in LC Web sites (Wurtz, 2006). Among the representatives of HC cultures, the websites of China, Taiwan and Japan use strong animations to draw people's attention to logos and the whole page. For instance, HC Chinese sites use a changeable animation on the slogan which is located at the top center of the first page (Figure 2.19). Taiwan's website uses a large dynamic background picture with all of the elements in the sea moving around. As for the Japanese website, a series of rolling pictures of items take one third of the space of the website, which is undoubtedly eye-catching (Figure 2.20).

Figure 2.19 *Changeable Animation of Slogan on Chinese Mcdonalds Website*

Figure 2.20 *Rolling Items on Japanese McDonalds' Website*

Compared with the HC culture websites, LC websites use no or minimal animations. In addition to the scrolling animation of banners, there is only one special animation that appears on a German website. This happens one time at the beginning of the opening of the website. After that animation, the Germany website is completely static. To dig more deeply into the cultural principles behind this animation choice, it becomes apparent that one interesting use of animation on HC Web sites is the assimilation of nonverbal, behavioral language, which is characteristic of HC face-to-face communication. An Internet function, animation, is used to communicate in alternative ways from text, by providing high context cues that assimilate or derive from real-life conversations (Wurtz, 2006).

When having a look at the websites used in Wurtz's experiment in the year of 2003, the same results can be found. Animated effects on Web sites tend to be more prominent and elaborate in HC cultures than in LC Web sites, where such options are reserved for relatively subtle effects such as emphasizing active links or drawing attention to logos. For

instance, HC Latin American sites such as the Chilean and Brazilian ones use animation in connection with images of young people dancing or jumping. The same tendency can be found on the Chinese site, which displays the moving silhouette of a break-dancer. This form of illustration is not seen in the North American and European countries, and in particular Scandinavia, where the McDonald's sites are completely static, or where animation is minimal and images are of individuals in relaxed situations (Wurtz, 2006). This discovery is totally as same as what has been found in current McDonald's websites in Scandinavia countries.

Transparency

Transparency refers to the extent to which the users are required to make effort in order to find the information they are looking for. The term is borrowed from the usability field, referring to the apparentness and obviousness of the method of use of a website or other user interfaces. The pages making up LC Web sites are expected to be consistent in their layout and color schemes, whereas pages in HC websites are expected to be diverse (Wurtz, 2006). Looking at all the LC culture websites that are chosen, all of them have a uniform horizontal navigation bar on the top of the website, which can be described as clear and transparent sites (Figure 2.21). It makes it possible for the visitors to view the page he or she is interested in immediately. Besides, LC sites also care about more consistency when going into a new category and use fewer sidebars and menus. The McDonald's website from Denmark 2003 (Figure 2.22), a LC culture, can be described as

a very transparent site, as it provides a detailed overview of the rest of the site on the home page. The home page features a large collection of links, and describes clearly what lies behind them through the use of headings, subheadings, and illustrations. This makes it possible for the visitor to find what he or she is interested in immediately.

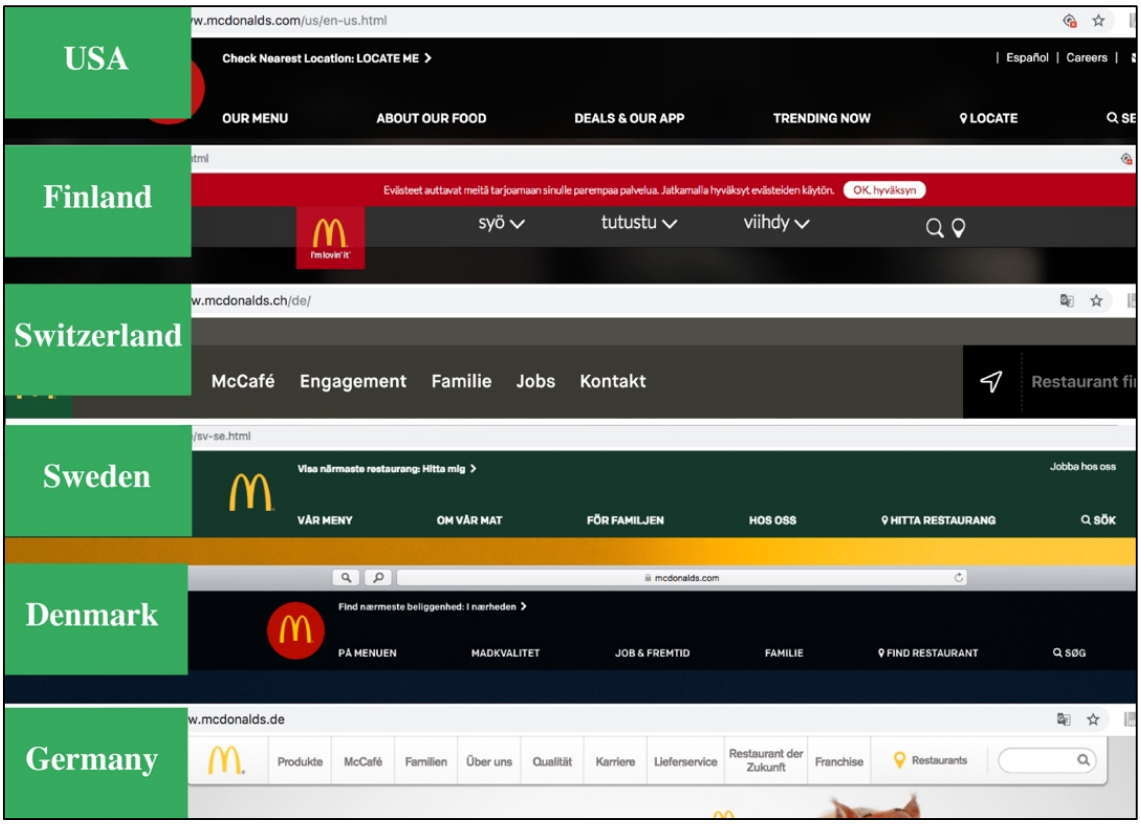


Figure 2.21 *Horizontal Navigation Bars from All LC Websites*

Figure 2.22 *Danish Home Page 2003 (Wurtz, 2006)*

Most HC sites, in contrast, depend on links and information described by a limited amount of text, and sometimes with a metaphor like the sidebar on Taiwan's website (Figure 2.23). They use many sidebars and menus, and change the format of website for under different categories to draw attention to the fact that users are on different pages. This gives a less transparent overview of the content in the Web site compared to LC sites, and often requires that the user ‘‘chase’’ the information through exploration of the site. This tendency coincides neatly with the idea that, in LC cultures, it is the sender who does all the work in clarifying information to make it efficient, while in HC cultures, it is the receiver who has to work to retrieve and learn the information.

Figure 2.23 *Navigation Bar on HC Culture Websites*

Even fifteen years ago, Wurtz found the example of a site that relies on the exploration of the user is the Japanese McDonald's website. Here, a menu filling half of the interface serves to direct the user to news releases and new features. As a starting point, this menu consists of nine squares in different shades of gray, one of which is larger than the rest and featuring an image of the latest addition to the McDonald's restaurant menu (Figure 2.24). When resting the cursor on one of the other squares, the image disappears, while the square touched by the cursor grows into a new image (Figure 2.25). When the cursor is moved away, the entire menu morphs back to a set of gray squares. The attentive observer will notice that the graphic and its link, seen in the top left-hand square out of the nine, changes every five seconds or so between new menu items and a promotion for World Children's

Day. The menu therefore relies on the patience of the user and willingness to explore the site to find what he or she is looking for (Wurtz, 2006).

Figure 2.24 *Japanese Website; The Cursor is Placed Nowhere on The Area of Gray Squares (Wurtz, 2006)*

Figure 2.25 *Japanese Website; The Cursor is Placed on One of The Gray Squares, and An Image Appears (Wurtz, 2006)*

Promotion of Collectivistic and Individualistic Values

This comparison could not be found in the websites of HC and LC countries' websites. However, this variable is quite distinct among the websites in Wurtz's experiment in 2003. Here, the comparison is only from the websites in 2003. Values prevailing in HC cultures are generally tied to collectivism and those in LC cultures to individualism. Collectivist cultures tend to emphasize being in good physical shape and time spent with family and friends as their dominant values, whereas the notion of freedom and personal time valued in individualist societies implies relaxation and time spent by oneself. As noted above, images of individuals dancing or doing sports are more prominent on HC Web sites than LC Websites, whereas in LC countries individuals tend to be portrayed in more relaxed situations or situations connoting holiday activities, such as a trip to the lake or listening to music (Wurtz, 2006).

The Swiss-German site displays images of individuals enjoying themselves with music and relaxation (Figure 2.26), and offers an in-depth explanation of the philosophy behind the new slogan: ''You're immediately at the center of attention—your individuality, your everyday life, situations in which you recognize yourself and where you would like to see yourself.'' This definition is absent in sites such as the Indian one (Figure 2.27), where an image of a man running with a boy in a shopping cart is placed next to the slogan, creating a visual connection between the two texts. Both the man and the boy, with a Happy Meal on his lap, are laughing wholeheartedly as they speed down the supermarket aisle.

The slogan seems to reflect the thought of both of the participants, and seems to reflect the fun of being together as a father and a son, uncle and nephew, or some other close relationship (Wurtz, 2006).

Figure 2.26 *Swiss Website, Featuring A Girl Listening to Music on Her Own (Wurtz, 2006)*

Figure 2.27 *Indian Website (Wurtz, 2006)*

Summary

After all the analysis of the websites, the next step should be draw parallels between the cultural factors outset of the article and the findings outlined above. Since many of the cultural dimensions and characteristics are strongly correlated, each variable may induce more than one tendency.

- The collectivism/individualism variable (Hofstede, 1980) is reflected in the imagery of the Web site, such as images of individuals versus images of groups, products placed together with individuals, the situations in which the individuals are placed, and the extent to which emphasis is placed on community work. This finding is confirmed by the study of the McDonalds websites in the year of 2003 (Wurtz, 2006).
- The power distance dimension (Hall, 1976) is apparent in the hierarchical structure of the website. High power distance is reflected in tall hierarchical website structures, either through the implementation of many pages with unstructured layout, or the opening of new browser windows for new pages, instead of in the same browser window. Low power distance is reflected in flat or shallow hierarchical structures, either through the implementation of few pages with coherent layout or the opening of pages within the same browser window (Wurtz, 2006).
- The polychromic versus monochronic time perception variable (Hall, 1976),

which is tightly bound with thought patterns, is apparent in the navigation of the site. It is also apparent in the transparency of the site, and whether the designer relies on the user's willingness and cost of learning the site to seek information (Wurtz, 2006).

- The message speed dimension (Hall & Hall, 1990) is apparent in the transparency and image of the site, implying the amount of effort expected from the visitor to understand navigational clues. (Wurtz, 2006).

2.5 Conclusion

In summary, there are strong links between service design and cultural context, which can be effective support for using cultural context factors to improve the research phase of the service design and consequently improve the integrated result and quality of final service design and the user experience of all stakeholders involved in the service. Almost all of the diameters of cultural context that have been developed over time have strong affinities with humans' lives. And those performances are integrated into charts with different classifications to act as a checklist for designers or other scholars to better understand culturally determined behavior from different cultural backgrounds. These original findings have a great value to be secondarily organized and utilized as cultural analysis methodology to understand users of service design processes, especially those with strong cross-cultural backgrounds.

To utilize the knowledge of cultural context theory and high- and low- context characteristics, a reasonable way to attach the cultural context analysis into service design process is required. The coming chapter will discuss cultural context analysis process in detail.

CHAPTER 3 DESIGN GUIDELINES

This chapter will expand a Cultural Context Analysis (CCA) process to complement the service design process so that service design can better serve users in certain countries or region. One key point is that the CCA process is an attachment of service design, so it is applied based on the general service design process. Apart from the guideline design of Cultural Context Analysis process, the guideline also redesigns the main service design process to be more enterprise-oriented and to be helpful for companies to fit better in the market, since the original attribute of service design is about the designing for business.

The improved service design process can be divided into five phases: Fuzzy Front End-identifying, primary excavation, transformation, solution exploration and implementation. At the same time as the service design process advances, the designer conducts the three rounds of progressive Cultural Context Analysis, respectively collecting, learning and transforming.

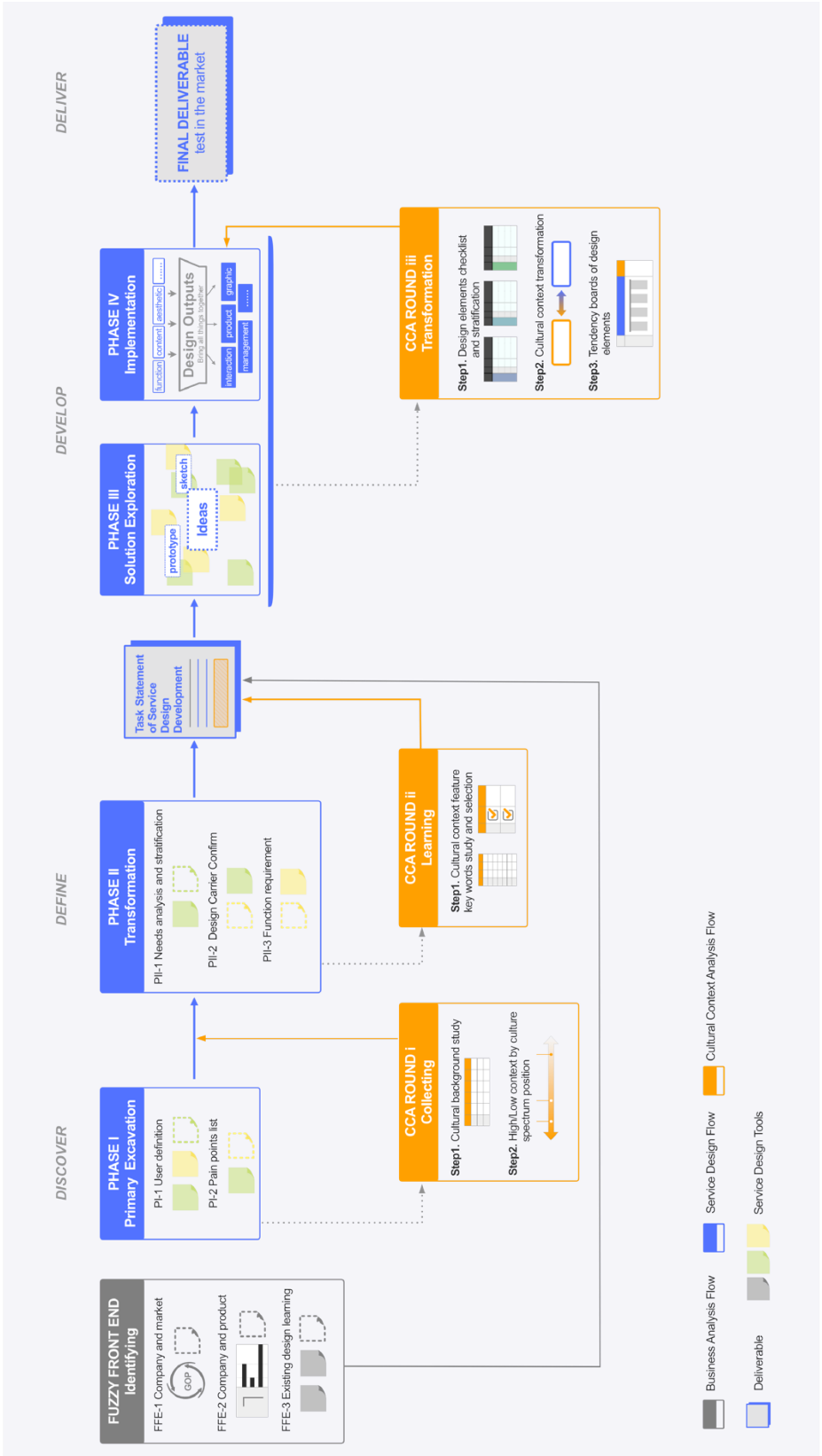


Figure 3.1 *Flow Chart of Design Guideline*

3.1 Fuzzy Front End- Identifying

3.1.1 Company and Market

Having an understanding of the company and market at the beginning can help the company understand the current state of the business in the market. Whether a company or service can win is related to its own products, but also related to the time and place and the opportunities of the service. The macroscopic review can help the company or designer clearly understand the conditions, resources, restrictions, etc., and jump out of the specific services that are too limited to avoid the criticism from the beginning of the design.

The goal of this step is on the identification of, and selection of, company's opportunities in certain market. For companies seeking new service opportunities, this step is a crucial. For those who have already identified a service opportunity, or for those involved in the modification of an existing service, this part can still lead to insights into directions to take to refine and specifically define the opportunity. Opportunity for the service or product may be that of the competition, or the upper management of the company. SET (social trends, economic forces and technological advances) analysis is one of the bests tool in this step to identify POGs (Product Opportunity Gaps). Scanning SET factors (Figure 3.2) helps in generating as many opportunities as possible in a short amount of time, to filter the ideas down to a few of more serious interest, and then to investigate each at a cursory level to enable the generation of an initial scenario (Cagan & Vogel, 2002).

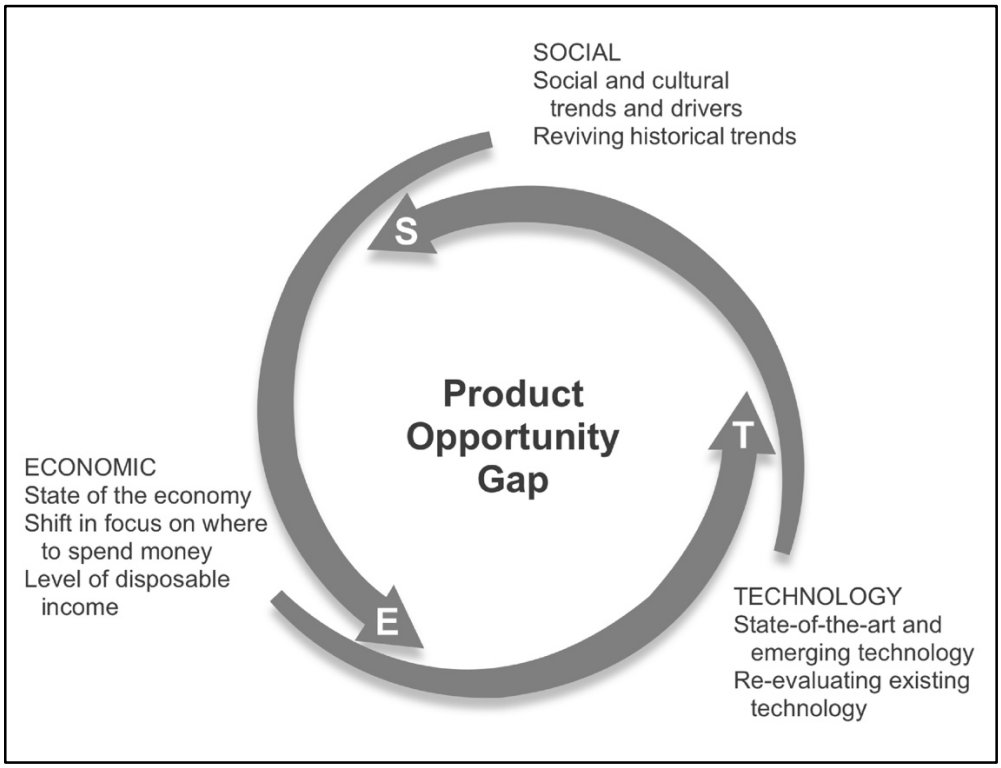


Figure 3.2 *Scanning SET Factors Leads to POGs (Cagan & Vogel, 2002)*

Social factors include family and work patterns, health issues, the use of computers and the internet, political environments, successful products in other fields, sports and recreation, sporting events, the entertainment industries film and television, vacation environments, books, magazines and music.

Economic factors focus on excess income that people perceive they have, or that they expect to have, to give them purchasing power. It is also called *psycheconometrics*, namely the spending power people believe they have to buy the products and services they believe will enhance their lifestyle.

Technology factors focus on direct and imagined results from new scientific discoveries in corporate, military, and university research and the implied capabilities stemming from that research (Cagan & Vogel, 2002).

SET factors help designers understand how designers' views differ from the user's view, which is critical to develop successful services. The results of SET factors help identify POGs for a targeted user group; that target may not be designers themselves.

3.1.2 Company and Product

After analyzing the situation of the company and the target market, it is necessary to further confirm the areas in which the services to be developed can be separated from already-existing competitive products. Value Opportunity Analysis (VOA) is to evaluate how products successfully stand out in the marketplace when being compared with other competitive products (Cagan & Vogel, 2002). The VOA chart lists each value opportunity class and its attributes in a column. The values are measured as low, medium, and high for each attribute (Table 3.1). If a product did not meet any level, no line is drawn.

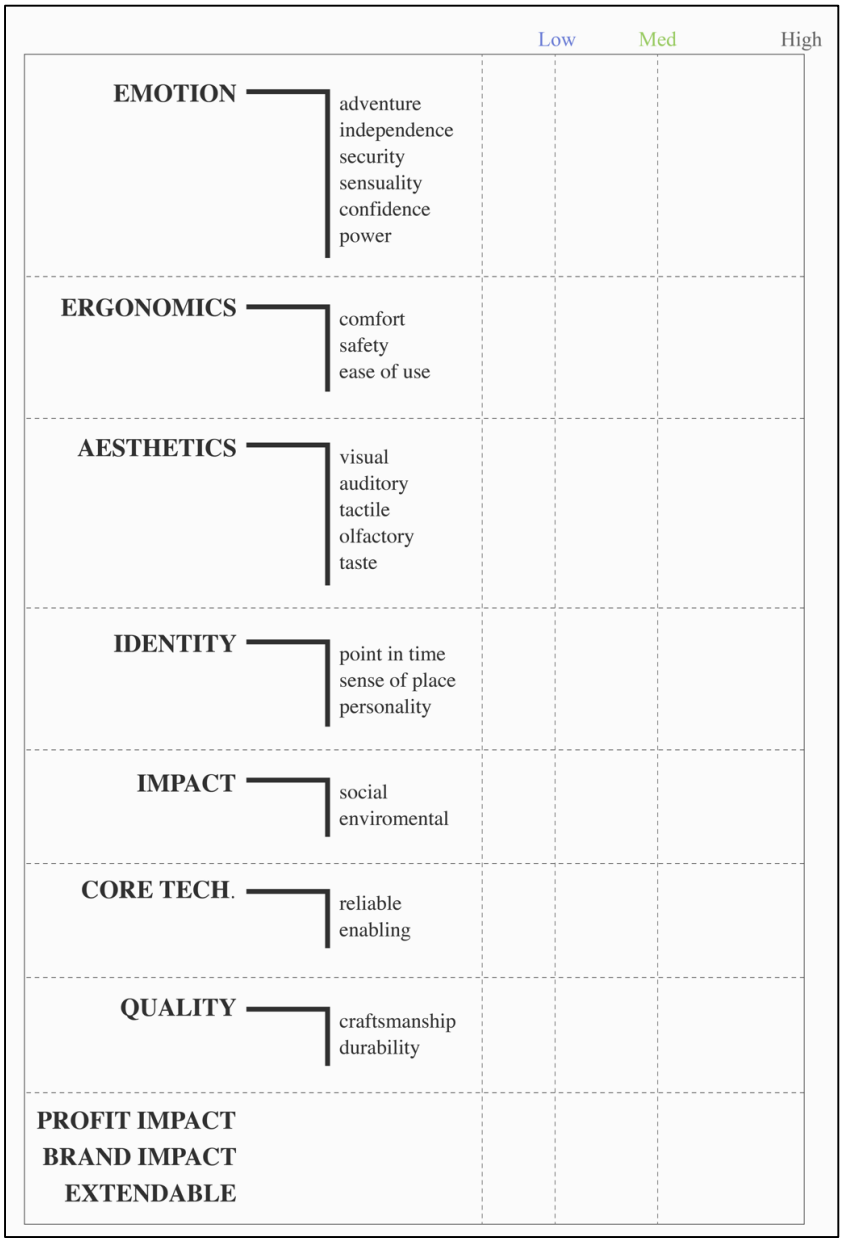


Table 3.1 *Value Opportunity Analysis (VOA) Chart (Cagan & Vogel, 2002)*

3.1.3 Existing Design Learning (Optional)

This step is for companies that have already launched other products or services in the market. Developing a new service design is a good opportunity to review past products.

Reviewing the process and style of the products and services that the company has developed helps to better define new products. For a company without a previous case, this step can be omitted and the company or designer can go directly to the next stage.

3.2 Primary Excavation

3.2.1 User Definition

The user definition first locks the target user based on the enterprise goal. Second, the designer should use a sentence to explain the target user group. It can include the age, gender, characteristics, and attributes of the target user group. The goal is to give the designer a concrete idea of the target user. It should be noted that the explanation of a sentence here is short and effective. It describes a specific user group, not a member of the group. In this initial stage of defining the user, the service design tool that can be used includes a typical user persona or a research summary of the user.

3.2.2 Pain Points List

Through contact with users, interviews, user surveys, etc., to understand the pain points of users under the current service experience, all the pain points are summarized and listed. After the pain points are confirmed, they are ranked from high to low. If the pain points are more painful, the ranking is higher. During this period, secondary surveys with users can be conducted to confirm if the assigned order of pain points is reasonable. In this

round, the designer may find that, when listing the pain points, many are very problematic and not solvable through design. These situations can be ignored in this round. These conditions will be resolved one by one by focusing on the back phases.

3.3 CCA Round I-Collecting

The first round of CCA is launched after the establishment of the business objectives of the enterprise and the identification of user groups and the pain points of users. The main focus of this round of CCA is research and understanding, that is collecting basic information about the cultural background of the target user group. This round is the collection of basic information and facts, without specific information processing and analysis to help designers have an understanding of the basic cultural context of the different groups of users and notice the cultural context differences between these groups. Two steps are involved in this round.

3.3.1 Step1-Cultural Background Study

	Country/ Region	High/ Low Context Culture	Language	Behavioral Performance	Psychological Expectation
User Group 1					
User Group 2					
User Group X (Optional)					

Table 3.2 *Cultural Background Study Table*

The first step is to complete the Cultural Background Study Table. This table accesses the target users from five dimensions. First, designers need to divide the users of the service into different groups according to the nationality/region in terms of the results of the first phase of service design. At least one group of users should be filled in the columns. For an existing service trying to transform the business cross-regionally, it is recommended to include users of the main location where the services are currently or were previously served. As explained in Chapter Two, the behaviors and emotional reactions of different user groups in different situations are deeply influenced by cultural factors. Thus, in this round of collecting information, cultural facts consist of two aspects.

Region/Country: A user group can only correspond to one country or region. Countries and regions filled in by different user groups must belong to the same level. For example, user group 1 belongs to the United States and user group 2 belongs to China, which is a correct. If user group 1 belongs to North America, user group 2 belongs to China, then it is wrong, since North America contains three countries, corresponding to an area, and China is a national level. The designer should assign region/country for each user group.

High/Low Context Culture: According to the original High and Low Context Culture Spectrum, the designer should judge the high/low context culture of users.

Language: Designers should record the common language used by users in the region. Multiple languages can be filled out.

Behavioral Performance: The specific common behavior performance of the user ins the current service situation.

Psychological Expectation: The psychological feedback and expectation of the user of the current service situation.

3.3.2 Step2-High/ Low Context by Culture Spectrum Position

According to the original High and Low Context Culture Spectrum (Figure 2.19) which is created by Hall and Hall (1976), the attribute of the user's high/low context culture is marked according to the area of the different groups of users. This spectrum has been expanded to further countries by Copeland and Griggs (1985).

Higher-context culture: Afghans, African, Arabic, Brazilian, Chinese, Filipinos, French Canadian, French, Greek, Hawaiian, Hungarian, Indian, Indonesian, Italian, Irish, Japanese, Korean, Latin Americans, Nepali, Pakistani, Persian, Portuguese, Russian, Southern United States, Spanish, Thai, Turkish, Vietnamese, South Slavic, West Slavic.

Lower-context culture: Australian, Dutch, English Canadian, English, Finnish, German, Israeli, New Zealand, Scandinavia, Switzerland, United States.

Designers mark all the user groups listed in the previous step on the spectrum, then group all the user groups located on the left side of spectrum into low context culture user group, and group all the user groups located on the right side of spectrum into high context

culture user group. For groups of users located in the middle of the spectrum, there is no categorization. The user group located in the middle position has the cultural characteristics of high context culture in some aspects, and the low context culture in some aspects. For these user groups, they will be analyzed independently in the second round of CCA.

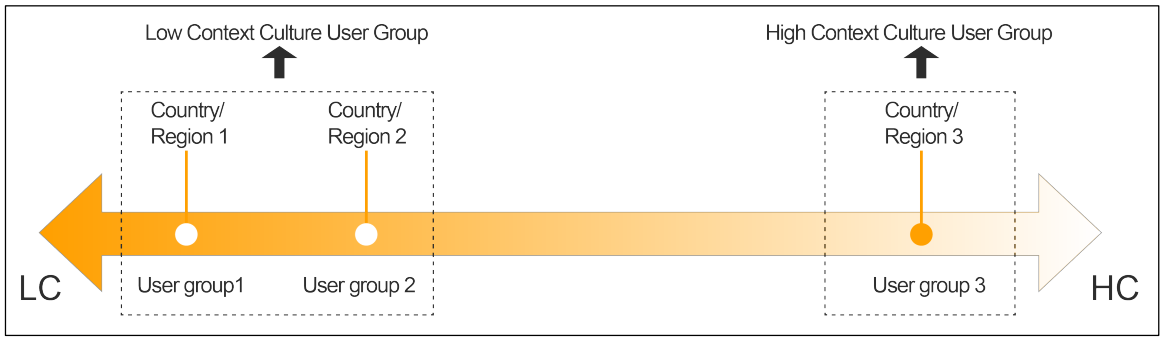


Figure 3.3 *Locate Users on High/ Low Context Culture Spectrum*

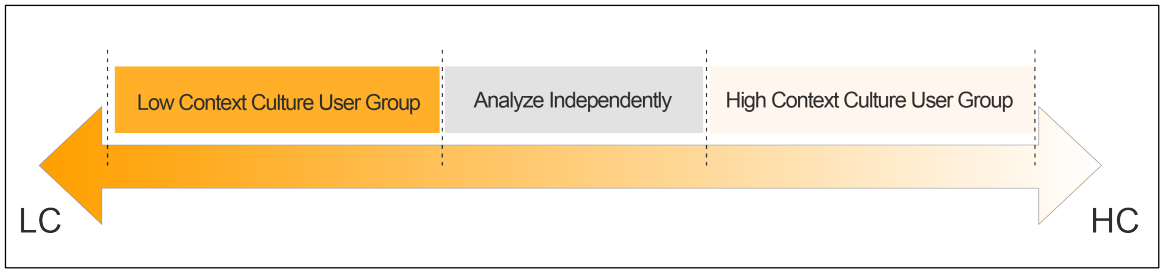


Figure 3.4 *High/ Low Context by Culture Spectrum*

3.4 Transformation

3.4.1 Needs Analysis and Stratification

The designer should list all the needs that correspond to each of the pain point. The difference between the pain point and the need is that the description of the pain point is

problematic, describing the problem encountered by the user, and the needs describe what the user wants. A problem can reflect many of the user's needs, and the needs reflected by different problems may be similar. A summary of this round of demands may summarize dozens of requirement descriptions. The next step is to organize the needs into categories and generalize the needs of the same category. After summarizing, the classified needs are then fed back to the user, and then the needs are sorted again. Use of focus groups is one of the tools to bring users together to confirm the needs accurately.

3.4.2 Confirm Carriers

Before going into the function statements, what kinds of service design carriers to use should be confirmed. According to Buchanan (1992), design can be explored in four broad areas, *symbolic and visual communications, material objects, activities and organized services,* and *complex systems or environments*. This thesis focuses on the main areas as explained by Buchanan, the first three, calling them *System/ Interaction Design, Object Design, Communication Design* (Figure 3.5). In service design, these design areas can be regarded as design carriers of service design.

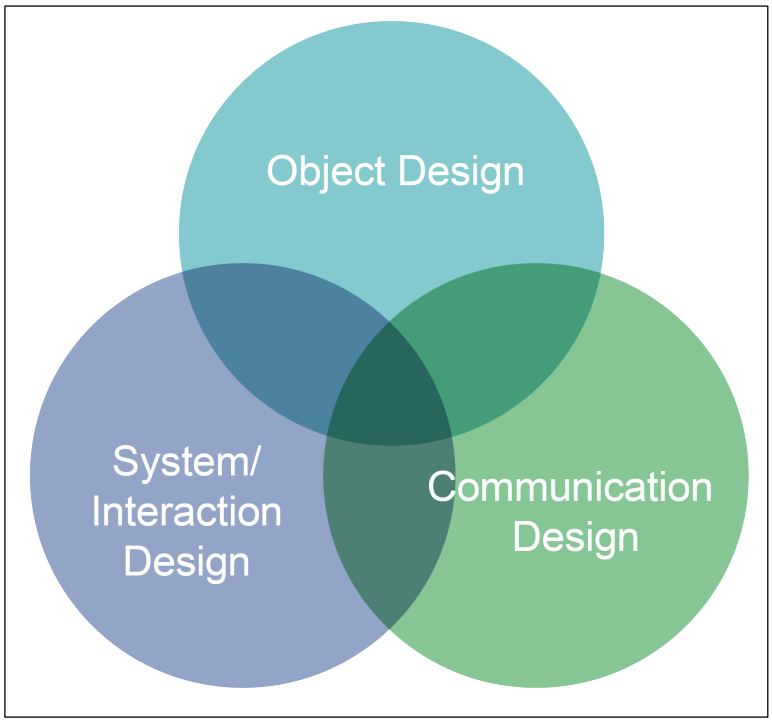


Figure 3.5 *Relationship of Three Carriers in Service Design*

3.4.3 Function Requirement

Once the carrier is confirmed, the final step can start. As the final step is the most important phase of product development, this step translates the focused user needs into specific service or product functions. Product functions include main functions, special functions and so on. In this step, the designer has to determine the functions that each carrier has to carry. The determination of the function requires repeated grinding. The needs and function transformation table in this step can help the designer determine functionality. Every function is guaranteed to solve the user's needs, not out of nothing.

3.5 CCA Round II-Learning

The second round of CCA focuses on learning the characteristics of high and low cultural context. The theoretical knowledge of high and low context culture involves many aspects. This round of table learning can help designers quickly understand the cultural context attributes of users. The generalization of these features can help designers to have a more comprehensive understanding of their target users from a cultural perspective.

3.5.1 Cultural Context Feature Key Words Study and Selection

Based on the original High and Low Cultural Context Characteristics (Halverson, 1993), the chart is reorganized and designed (Table 3.3). A second level dimension classification is performed based on the first level dimension classification. Under the classification of each level of cultural dimension, according to the different context culture, the corresponding adjectives or descriptive descriptions are given. Designers have a preliminary understanding of the cultural contextual characteristics of countries with high and low context culture through the cultural context features key words table. At the same time, these sorted adjectives and descriptions can be used both as a cultural context and as guiding vocabulary in service design.

		HC	LC
1st Dimension	2nd Dimension	Feature Key Words	Feature Key Words
Association	1. Relationship	trust-base slowly and stable clear cycle	develops quickly unclear cycle
	2. Task progress	people matters group progress	procedure matters final goal
	3. Personal identity	rooted in group	self accomplishments
	4. Social structure	centralized responsibility at top work for group	decentralized responsibility at bottom
Interaction	1. Nonverbal language	high frequency voice tone facial expression gesture eye movement	low frequency words messages
	2. Verbal message	indirect implicit context is important	direct explicit words are important
	3. Communication	engaging people	exchanging information
	4. Disagreement	personalized sensitive to conflict	depersonalized tolerant to conflict
Territoriality	1. Space	communal close share space	compartmentalized privacy matters be apart
Temporality	1. Schedule	has own time hardly scheduled get activity done	scheduled timely efficiency matters
	2. Change	slow and stable history matters	fast make change by anyone immediate results
	3. Time	processive natural belongings	commodity personal belongings
Learning	1. Knowledge	embedded connective synthesized global multiple sources deductive thinking general ⟶ specific	fragmented compartmentalized single source inductive thinking specific ⟶ general detail matters
	2. Learning activity	by observing others model→demonstrate→practice	by explicit directions learning and problem-solving
	3. Group/ Individual	group	individual
	4. Accuracy/ speed	accuracy matters how to learn	speed matters learning efficiency

Table 3.3 *Cultural Context Feature Key Words*

As Table 3.4 shows, the cultural implication and service design implication of each second level dimension have been given to help designers understand the meaning of second level dimensions from cultural context and service design aspects respectively. Service design implication could help designers understand to what the meaning of cultural dimensions refers in designing a service. By using two charts at the same time, designers can better understand which key words that need to be selected are instructive for the service design that is going to be carried out.

1st Dimension	2nd Dimension	Cultural Implication	Service Design Implication
Association	**1. Relationship**	Connection between people	Users and service providers
	2. Task progress	The process of completing a task	Users and services or goods
	3. Personal Identity	How people recognize themselves	Design of the sense of accomplishment in which the user achieves the goal in service design
	4. Social structure	Distribution of powers and responsibilities in an organization or group	Responsibility distribution in service
Interaction	**1. Nonverbal language**	The diversity of expressions in people's communication process	Expressions that service providers should pay attention to when communicating with users
	2. Verbal message	Attributes in the information transfer process	Deliver information or results to users through designs such as websites or Apps
	3. Communication	Communication between people in daily activities	Handling of complex problems involved in after-sales service processes
	4. Disagreement	Disputes between people	Disputes that may result from misunderstanding of service commitments
Territoriality	**1. Space**	The location and distance of people in certain space	The space given to the user in the place during the service; The space of design elements in service design
Temporality	**1. Schedule**	Time plan for the event	Time points distribution and design in online and offline scenario of the service
	2. Change	Chronic long-term changes	When the input of users in different countries brings the output result, pay attention to fore and after change
	3. Time	Understand time as belonging	The time cost that people of all countries are willing to pay for different services
Learning	**1. Knowledge**	How people understand knowledge	Users enter the pre-service design experience and need to understand and follow the guidelines for service design. Learning costs for users.
	2. Learning activity	Ways and means of how people learn	User needs for learning method in learning services
	3. Group/ Individual	People's requirements for learning atmosphere	User needs for learning atmosphere in learning services
	4. Accuracy/ speed	People's requirements for learning outcomes	User needs for learning outcomes in learning services

Table 3.4 *Cultural and Service Design Implication*

The second step is to integrate user groups into high or low context culture group in terms of the result of the first round CCA, and then conduct guiding vocabulary selection for the service design goals to be carried out by the target users. The cultural key words of selection are relevant to the design of the service to be carried out or are of critical importance in this service. The order of the check is to first select the second dimension and then select the vocabulary. For the target user marked in the middle of the spectrum in the second step of the first round, the tendency expressed by different cultural dimensions is directly selected according to the table results of the first step of the first round. For example, the country to which a target user belongs has a tendency of HC culture in the dimension of the Interaction, and the tendency of the LC culture in the Territoriality dimension, the designer selects the key words related to the service design corresponding to the HC culture in the Interaction dimension and selects the words under LC culture in Territoriality dimension. Therefore, each target user corresponds to a version of the service design and a checklist. If a service has two main target user groups in the area to be developed, and the two target user groups correspond to clear HC and LC culture respectively, then the service design should be split into two directions as much as possible. In the case of limited resources, it is possible to first design for one group of users, and then, on a second basis, adjust the results of the service design required by the user group of another cultural context to achieve the goal of the service design being culturally reasonable.

1st Dimension	2nd Dimension	HC Feature Key Words	LC Feature Key Words
Association	1. Relationship	○ trust-base ○ slowly and stable ○ clear cycle	○ develops quickly ○ unclear cycle
	2. Task progress	○ people matters ○ group progress	○ procedure matters ○ final goal
	3. Personal identity	○ rooted in group	○ self accomplishments
	4. Social structure	○ centralized ○ responsibility at top ○ work for group	○ decentralized ○ responsibility at bottom
Interaction	1. Nonverbal language	○ high frequency ○ voice tone ○ facial expression ○ gesture ○ eye movement	○ low frequency ○ words messages
	2. Verbal message	○ indirect ○ implicit ○ context is important	○ direct ○ explicit ○ words are important
	3. Communication	○ engaging people	○ exchanging information
	4. Disagreement	○ personalized ○ sensitive to conflict	○ depersonalized ○ tolerant to conflict
Territoriality	1. Space	○ communal ○ close ○ share space	○ compartmentalized ○ privacy matters ○ be apart
Temporality	1. Schedule	○ has own time ○ hardly scheduled ○ get activity done	○ scheduled timely ○ efficiency matters
	2. Change	○ slow and stable ○ history matters	○ fast ○ make change by anyone ○ immediate results
	3. Time	○ processive ○ natural belongings	○ commodity ○ personal belongings
Learning	1. Knowledge	○ embedded ○ connective ○ synthesized ○ global ○ multiple sources ○ deductive thinking ○ general ⟶ specific	○ fragmented ○ compartmentalized ○ single source ○ inductive thinking ○ specific ⟶ general ○ detail matters
	2. Learning activity	○ by observing others ○ model→demonstrate→practice	○ by explicit directions ○ learning and problem-solving
	3. Group/ Individual	○ group	○ individual
	4. Accuracy/ Speed	○ accuracy matters ○ how to learn	○ speed matters ○ learning efficiency

Table 3.5 *Cultural Context Feature Key Words Checklist*

3.6 Solution Exploration and Implementation

Solution Exploration represents the generative stage. It is about generating and testing and retesting ideas and concepts. Designers can explore as many as possible. The task is to generate and develop solutions based on the identified problems and in-depth insights generated in the exploratory stage: the identification of users' needs, motivations, expectations, the service providers' processes and constraints, and the illustration of the customer journey, consisting of a sequence of touch-points. A/B testing and other prototypes can be used as tools for this phase (Stickdorn & Schneider, 2011*)*.

After the creation and multi-round test session, the process comes to the implementation. The core of this round is integration, bringing all things together. A complete service design may end up with multiple forms of output. In this round, the various vectors are each produced to carry different functions in the service design. Designers should pay attention to whether the final presentation of the design of each carrier is uniform as well as the emotional connection between the design and the user. The designer's self-examination work plays an important role before testing the product or service in the market. From the perspective of design management, it is important for the enterprise to reasonably arrange the coordination of time, personnel and resources allocated by each design to maximize the input-output ratio as much as possible.

3.7 Transformation

The purpose of the last round of CCA is to transform and land. All of the information about cultural context that was previously collected and analyzed is intended to guide service design. Therefore, the integration of cultural information must be able to have realistic value and be reflected in the design that users can perceive. Since the process has entered the specific design stage, this round of CCA begins with the extraction of specific design elements. Design elements are recorded in real life and successful market design prototypes. The specific performance of design element is a reflection of cultural tendency. There may be the same cultural tendency behind multiple design elements. On the basis of the information of the second round of CCA, the designer should summarize the service design tendency and the existing outstanding cases reflecting this trend to specifically instruct the design process for each design element.

3.7.1 Design Elements Checklist and Stratification

The first step in the third round of CCA is to find out the association between specific design elements and the cultural context from. Different design carriers have different design elements. According to the design elements of the three carriers given below (Table 3.6), cultural tendencies are investigated and summarized. This process is to help designers find the connections between design and cultural elements. At the same time, it helps designers to check their chosen design elements and implement specific design solutions. As the last round of CCA, the cultural tendency-related research is more concrete and

meticulous, and even a detailed example can be given as a good reference. Cultural tendency includes the cultural environment in the present and in history. It is a relatively stable long-term and is related to design elements.

Carrier	NO.	Elements	Cultural Tendency
Interaction Design	1	animation	
	2	color	
	3	content	
	4	continuity	
	5	controls	
	6	font	
	7	gestures	
	8	icon	
	9	image	
	10	layout	
	11	logicality	
	12	pattern	
	13	style	
	14	sound	
	15	text	
	16	video	

Carrier	NO.	Element	Cultural Tendency
Object Design	1	brand language	
	2	color	
	3	decoration	
	4	finishing	
	5	form	
	6	function	
	7	manufacture	
	8	material	
	9	pattern	
	10	shape	
	11	structure	
	12	style	
	13	technics	
	14	texture	
	15	usability	

Carrier	NO.	Element	Cultural Tendency
Communication Design	1	color	
	2	communication	
	3	expression	
	4	font	
	5	format	
	6	image	
	7	information	
	8	layout	
	9	logo	
	10	pattern	
	11	print	
	12	readability	
	13	style	
	14	symbol	
	15	text	
	16	visualization	

Table 3.6 *Design Elements Checklist*

When completing this form, there may be many design elements with the same or similar cultural tendencies. The designer should use such results to classify design elements; design elements that have the same or similar cultural inclinations are grouped together (Table 3.7).

Carrier	Group NO.	Element	Cultural Tendency
	1		
	2		

Table 3.7 *Design Elements Group*

3.7.2 Cultural Context Transformation

The second step is to summarize cultural tendencies into instructional service design tendencies. The transformation between cultural tendency and service design tendency requires designers to summarize according to their own projects. How to implement it will be given in the next chapter. When filling out this form, it is still necessary to follow the tables in the second round of CCA. Even though this round is a more concrete study, it is

still necessary to fill in the content on the basis of the attributes and characteristics of the high and low context cultures.

NO.	Elements	Cultural Tendency		Service Design Tendency
1				
2				
3				
4				
5				

Table 3.8 *Cultural Tendency and Service Design Tendency Transformation*

3.7.3 Tendency Boards of Design Elements

The existing designs are listed as examples based on the elements of the different carriers and the service design tendency described. The illustration can be a partial photo of the product, a screenshot of the application, or a photo of the living scene. The design example should be detailed to correspond to elements. The illustration is to help designers further learn the application of service design tendency under specific elements. Design enumerations should be useful for the service design phase of solution exploration and implementation as well as the examples of success in the marketplace.

NO.	Elements	Service Design Tendency	Design Examples
1			

Table 3.9 *Tendency Boards of Design Elements*

3.8 Final Deliverable

The designer should integrate the previous research results with the later design and put the product or service into the market for testing. Even for a small range of tests, there are bound to be many problems in the testing process. Fast iteration is a way to help the service designer quickly solve the problems encountered in the test after the service design is put on the market. The designer should make changes quickly after encountering problems, and put the service into the market again to continue testing. Lastly, the designer should ensure that the services offered to users in the market are always the latest version.

CHAPTER 4 DESIGN APPLICATION

In this chapter, a service design example for a company called MEITUAN will be given to demonstrate the design guideline created in the last chapter. MEITUAN is the first e-commerce site in China to compete in the form of group purchases like Groupon. MEITUAN brings together service products that focus on user life, such as eating, drinking, and entertainment. In terms of dining, MEITUAN has opened online and offline services in China. It combines reviews of restaurant cuisine, take-out, group purchases and related services. MEITUAN is transforming how Chinese people eat and how local merchants operate their daily business. As the world's largest on-demand food delivery service provider, MEITUAN has built and currently operates the world's largest on-demand delivery network in terms of the number of deliveries. MEITUAN is committed to expanding the life services of users in China, and better connecting businesses and users through online and offline services. This chapter will use the CCA generated in Chapter Two to help the MEITUAN team develop a service product for foreigners living in China and to explain the use of CCA that can help produce a service design more in accordance with cultural context (MEITUAN, 2019).

Figure 4.1 *MEITUAN DIANPING*

4.1 Fuzzy Front End

4.1.1 Company and Market

The very first step is to look into the macro-background of the target marketing to have a basic understanding of what facts are supportive to prove that the project to be carried out is necessary. Some supportive information is listed out and summarized below.

As China's opening up to the outside world increases, the frequency and number of foreign tourists visiting China are increasing year by year. According to the National Bureau of Statistics of China, the total number of inbound tourists in 2017 reached 29.16 million, including 5.9 million inbound tourists from Europe (National Data, 2017). The scenarios of foreign tourists spending in China is increasingly enriched, like dining, shopping, learning Chinese civilization, buying collectibles and so on. But the services that

meet the needs of these scenarios are still lagging. In order to improve the catering-related scenarios of foreigners, promote the economic growth of the society and expand the MEITUAN company business to gain new benefits, it is proposed to help the MEITUAN to open catering-related services for mainstream foreigners in China.

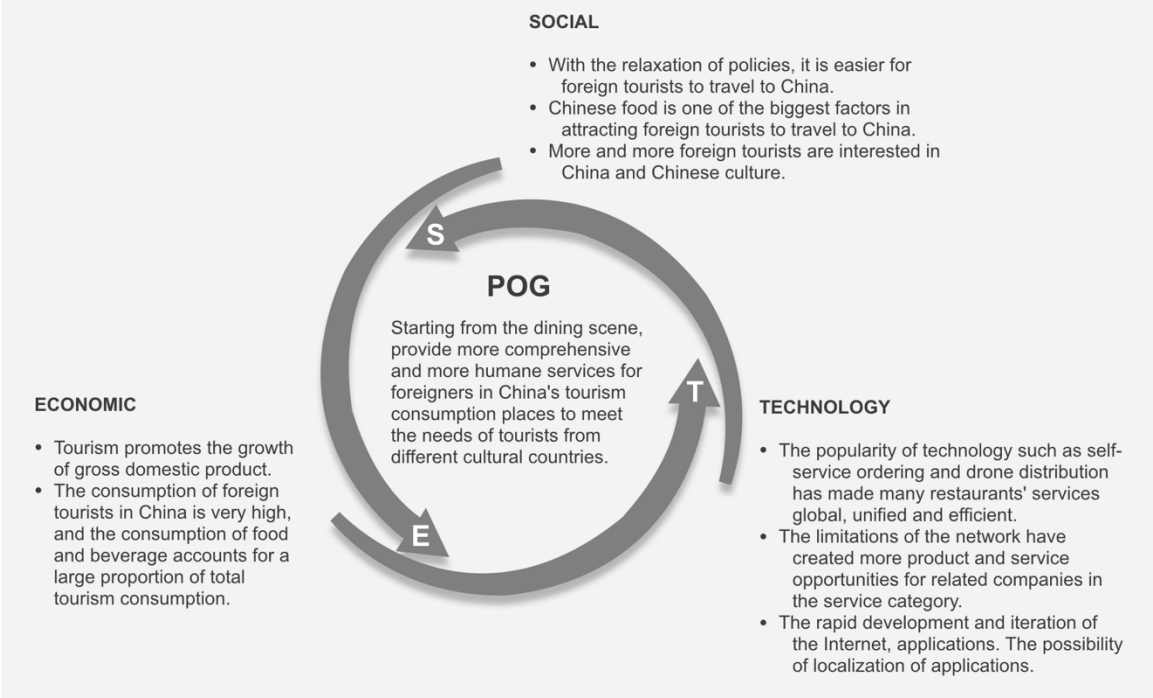


Figure 4.2 *SET Analysis for MEITUAN*

4.1.2 Company and Product

Because of the special circumstances of the current Chinese network, there is currently no clear competing product on the market. VOA form is helpful for designers understand the goals of the product to be designed at an early stage. It is worth mentioning the profit impact and extendable: a dining product for foreigners, the one is to help promote the

consumption of foreigners in the catering industry, and the second is to expand profits through catering in the early stage. In the long run, this product should be extendable to other businesses that are related to tourism. This extendable capability should also be reflected in the final design.

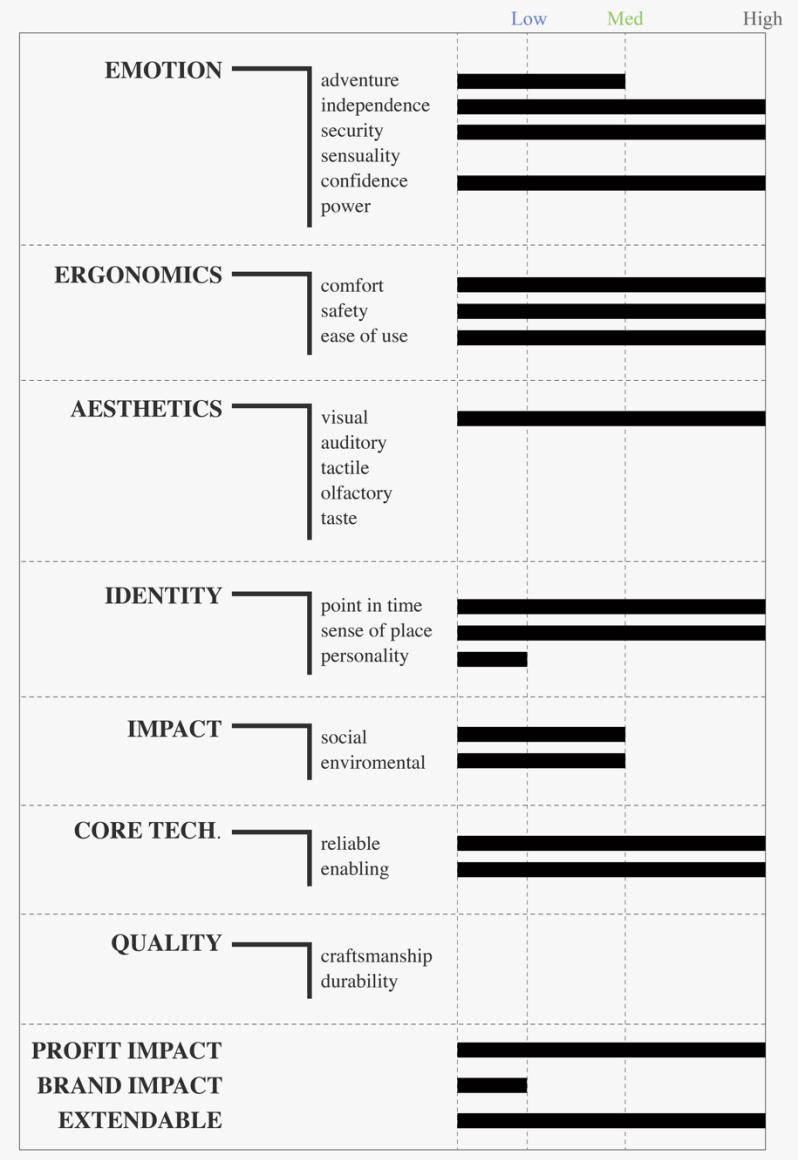


Table 4.1 *VOA Analysis for New Design*

4.1.3 Existing Design Learning (Optional)

Some information analysis on the main three existing products of MEITUAN is listed below. First, this analysis helps with the understanding of the three main directions of the business carried out by Meituan. Secondly, through the familiarity and understanding of the interface, designers can clarify the style tendency of MEITUAN products, thus helping designers to carry out design ideas in the third round. Functionally, all three applications are built around life services. The color is used is a very bright color, and each app has a representative color.

DA ZHONG DIAN PING (Figure 4.3) revolves around exploring city cuisine, recording and sharing food reviews, and buying coupons. It presents not only an application tool that helps users explore food, but a social circle that records life that is relative to food. In terms of cultural context, this is more in line with the cultural attributes that Chinese people love to build long-lasting and deep relationships with others.

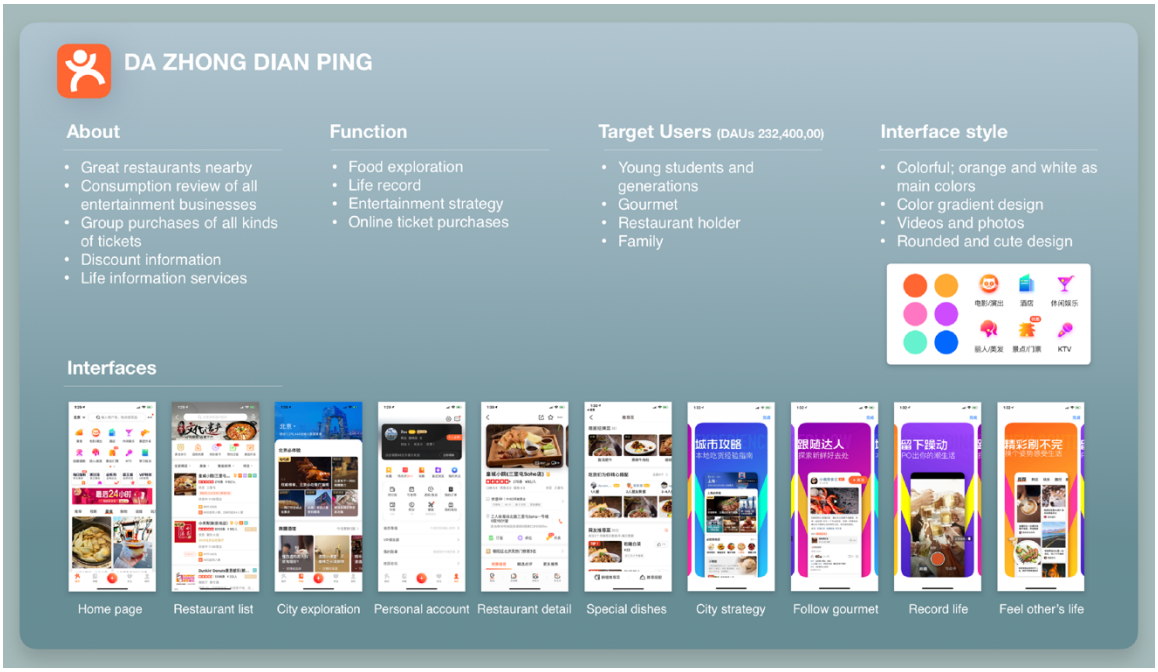


Figure 4.3 *Study of DA ZHONG DIAN PING Application*

MEITUAN delivery (Figure 4.4) is not only a product that helps deliver the meal to the user's location, but also helps the restaurant business to increase profits and the MEITUAN platform to obtain commercial value. The overall function is very simple. Users just need to place an order and wait for food delivery. Through the image of the kangaroo, the site also creates a fast and accurate image of the product.

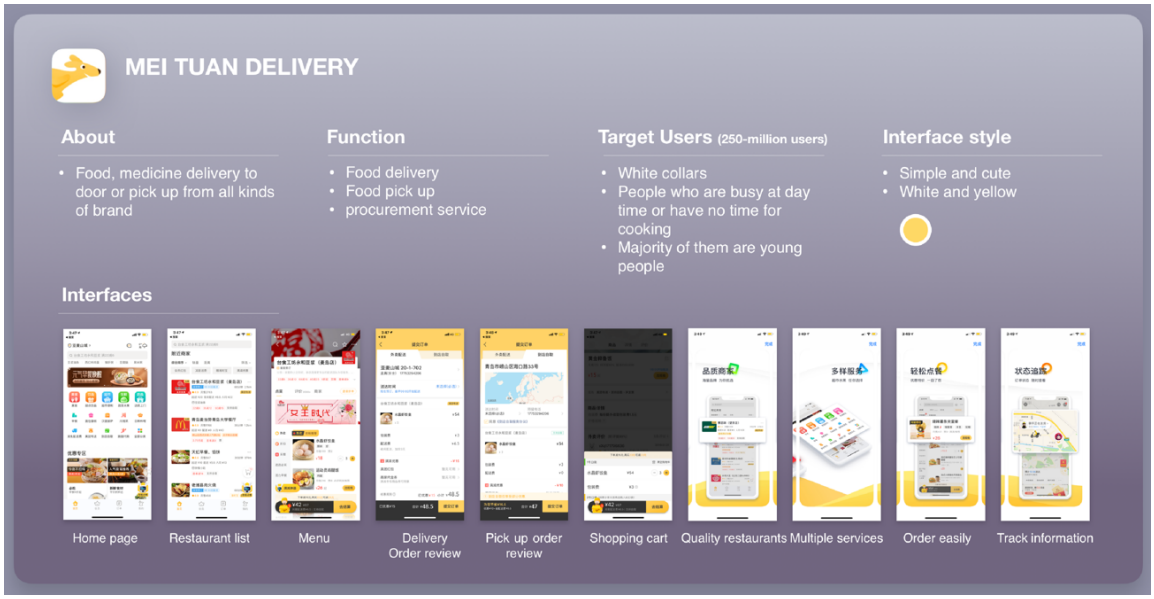


Figure 4.4 *Study of Mei Tuan Delivery Application*

Since the core user groups of all products of the MEITUAN company are concentrated in second- and third-tier cities, the majority users in these areas use cheap Android-system mobile phones that they are unable to install many applications. Therefore, they will choose to download a multi-function software to achieve all of their daily needs., so the MEITUAN company combined all the functions into MEITUAN application (Figure 4.5).

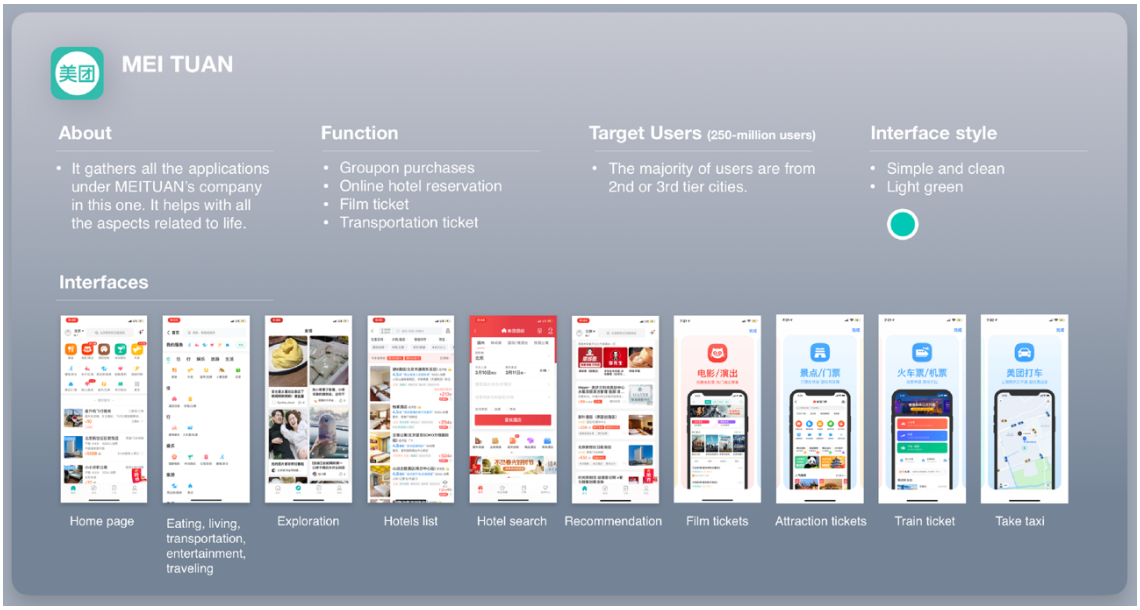


Figure 4.5 *Study of Mei Tuan Application*

4.2 Primary Excavation

4.2.1 User Definition

The main group of this project is American and Canadian tourists who are resident or traveling in China or planning to travel to China. They are well-educated, and enjoy traveling independently and freely. They love to explore Chinese culture and food, and are willing to invest money and energy for their journey. A typical target user persona (Figure 4.6) can help to better understand the characteristics of the target user group and their current situations.

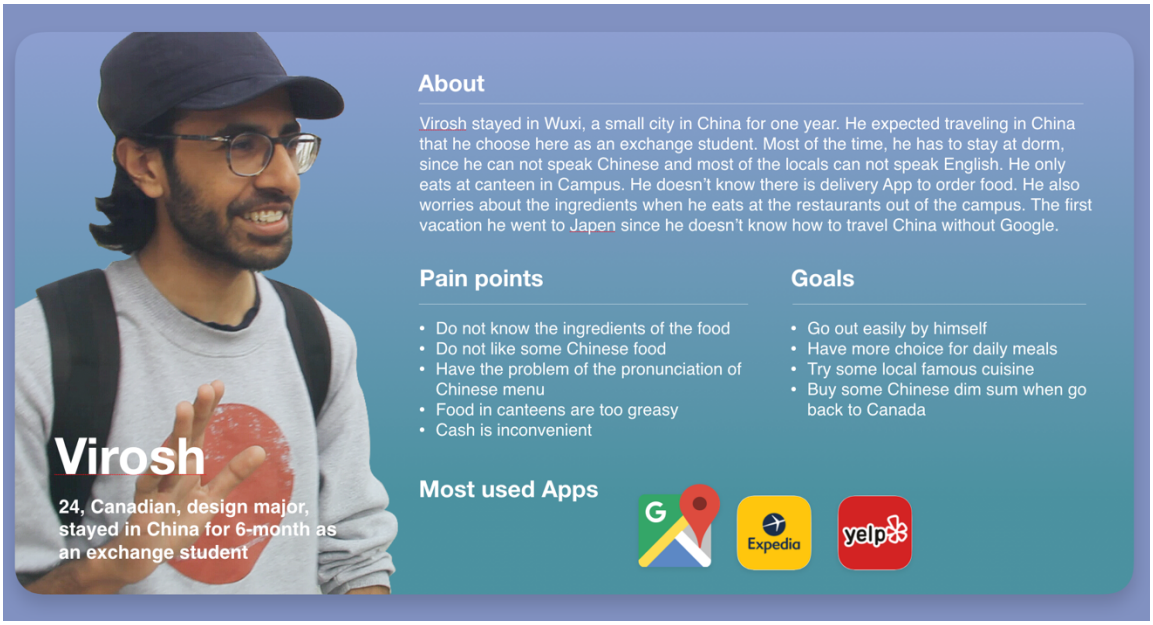


Figure 4.6 *User Persona*

4.2.2 Pain Points List

Through the research of some target users online, as many as possible of the user's existing pain points related to dining are identified and listed. In the second step, the pain points are sorted according to the degree of urgency; the pain points of four stars are the most painful, and one star is the lowest (Table 4.2). Then the pain points are ranked from high to low in terms of urgency. Next, pain points with four stars and three stars are chosen for further focus (Table 4.3).

NO.	Paint points	Rank
1	No English menu that cannot order independently	★★★★
2	Network restrictions	★★★★
3	Can only choose some Western restaurants to eat for most of the time	★★
4	Do not know the ingredients of the restaurant food	★★★
5	Do not know how to order delivery or takeout. Can't not speak Chinese	★★
6	Use chopsticks poorly or not using them at all	★
7	Restaurant must be accompanied by Chinese or local friends	★★★★
8	Many local payments support Alipay WeChat which they do not have	★★★
9	No cash for dining or take-out	★
10	It is difficult to know the authentic local food and snacks	★★★
11	Can not tell the food. Just dare to order the Chinese food I have eaten before	★★
12	It is difficult to understand Chinese food culture	★
13	Servants do not speak English	★★★★
14	Ask for help from a nearby diners to order	★★
15	Wait a long time when arriving at a restaurant	★★★★
16	Do not know about Chinese dining customs	★★
17	The restaurants recommended by the public comment are not in line with their own tastes	★★★★
18	Travel brochures purchased bought in the country are not comprehensive	★★★
19	It is difficult to find a restaurant and cannot use the map	★★★★
20	English translation of the menu is incorrect	★★

Table 4.2 *Pain Points List*

NO.	Paint points	Rank
1	No English menu that cannot order independently	★★★★
2	Network restrictions	★★★★
3	Servants do not speak English	★★★★
4	Wait a long time when arriving at a restaurant	★★★★
5	It is difficult to find a restaurant and cannot use the map	★★★★
6	The restaurants recommended by the public comment are not in line with their own tastes	★★★★
7	Restaurant must be accompanied by Chinese or local friends	★★★★
8	Many local payments support Alipay WeChat which they do not have	★★★
9	Do not know the ingredients of the restaurant food	★★★
10	It is difficult to know the authentic local food and snacks	★★★
11	Travel brochures purchased bought in the country are not comprehensive	★★★
12	Ask for help from a nearby diners to order	★★
13	Can not tell the food. Just dare to order the Chinese food I have eaten before	★★
14	Can only choose some Western restaurants to eat for most of the time	★★
15	Do not know how to order delivery or takeout. Can't not speak Chinese	★★
16	Do not know about Chinese dining customs	★★
17	English translation of the menu is incorrect	★★
18	Use chopsticks poorly or not using them at all	★
19	It is difficult to understand Chinese food culture	★
20	No cash for dining or take-out	★

Table 4.3 *Pain Points Rank*

4.3 CCA Round I-Collecting

4.3.1 Step1-Cultural Background Study

The target users selected for this project are from the United States and Canada, two North American English-speaking countries. These two countries belong to low-context culture and have more similar aspects in terms of culture and living habits. In the same service scenario, some current service-related behaviors of users in China and in their own countries are listed separately. The behavioral performance in China can help designer identify some of the problems users have in a given scenario. The current behavioral performance in their own country (the USA and Canada) can restore the smooth and familiar scenes of the user's operation, helping the designer to establish the goal after the design is completed. As for the adjectives under the psychological expectation, that is, the user's expectation of the service experience in the current scenario, these words can also be used as a criterion for later user feedback.

	Country/ Region	High/ Low Context Culture	Language	Behavioral Performance		Psychological Expectation
				In Context (China)	In their own country	In China
User Group 1	The USA	Low	English	1. Order with Chinese friends 2. Use images on menu to order 3. Like to use self services 4. Use room service to order food when staying inside	1. Drive in to buy fast food 2. Call to make reservation/ delivery/ take out 3. Yelp/ UberEats/ Door Dash/ Grubhub/ Seamless 4. Use restaurants' official websites/ apps to order meal. Like Domino, Panera	1. Confident 2. Convenient 3. Friendly 4. Cultural ambience 5. Independently 6. Satisfactory 7. Easily 8. Kindly 9. Efficient
User Group 2	Canada	Low	English/ French			

Table 4.4 *Cultural Background Study*

4.3.2 Step2-High/ Low Context by Culture Spectrum Position

According to the high and low context culture spectrum, Americans and Canadians are located on the left side, so in the second step, the users of these two countries are combined into one user group for user analysis. This helps the designer to think more about the aggregation, so that the analysis of the user is not too detailed and scattered.

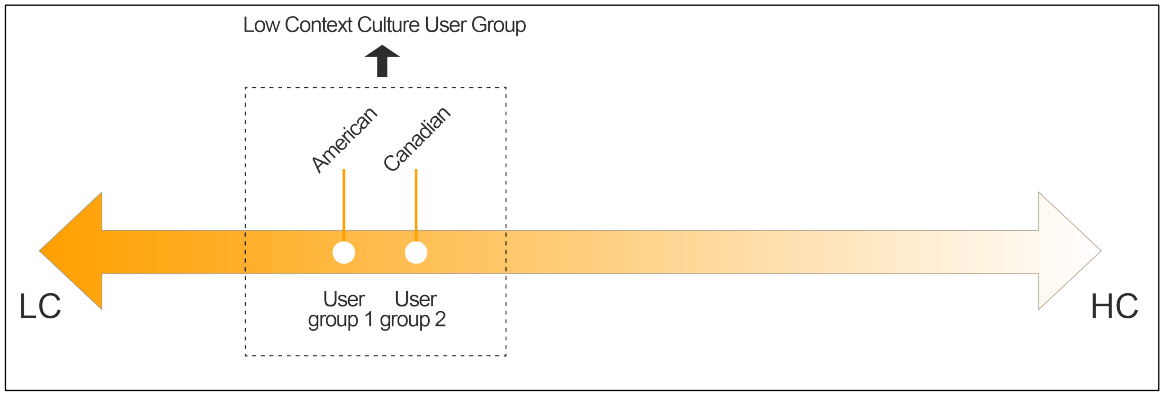


Figure 4.7 *Locate Users on High/ Low Context Culture Spectrum*

4.4 Transformation

4.4.1 Needs Analysis and Stratification

Based on the collation and sorting of user pain points, the user's needs are further derived. In this service scenario, the user's needs mainly focus on how to conveniently eat when traveling in China. After the needs are listed, the designer can subjectively classify or sort the requirements. The purpose is to help the designer understand and classify the user's needs. Better packaging of these needs can help to better categorize the product’s

functions. Card sorting tool is used in this phase to help the designer group the similar need descriptions into a higher level category.

Category	Need
Language	Can reserve a location in advance, order in advance, queue in advance, and take out
	Have the same dining experience as their own country on the dining service
	Ability to travel independently without any obstacles
	More ways to pay
	Can convey some special needs to the waiter
Convenience	Bilingual menu
	Can use overseas websites and software normally
	English proficient waiter
Experience	Able to eat in a clean
	Be able to share dining experience in China
	Be able to see food or restaurants recommended by their own country companions
Learning	Learn about authentic local specialties
	Can understand which type of Chinese food
	Learn about Chinese food culture
	Understand food’s ingredients
	Learn how to eat different Chinese foods
	Understand food’s ingredients

Table 4.5 *Needs Analysis and Stratification*

4.4.2 Design Carrier Confirm

In this service design, system and interaction design will serve as the main carrier. A redesign of the international application of DA ZHONG DIANPING will be developed.

4.4.3 Function Requirement

Once the needs and opportunities have been identified, the product features should be identified and described to solve the user's problem. The functions that the product can

cover are summarized as follows. When moving into the phase of the solution exploration, designers can flexibly increase or decrease the function, and the ultimate goal is to enhance the user's dining service experience. At the same time, designers should also consider the current applications from MEITUAN and also the cost of technology and human resources.

The four categories of functions are listed here (Table 4.6). According to the theory mentioned in Chapter Two, services involving people processing require a greater degree of consideration of cultural factors. Therefore, the two functions "special function" and "delivery" belong to people processing. When doing CCA, it is necessary to consider the cultural elements related to these two functions more rigorously. Functional classification, which can also regarded as initial application hierarchy, is developed with the tool of card sorting to make organize function requirements into categories that make sense.

SEARCH	SPECIAL FUNCTION
Search for nearby food, English name of Chinese restaurant Search for the name of the restaurant Search for restaurants or dishes according to Chinese food classification	See the nationality of the reviewer and help find comments from fellow people Choose your own nationality and give priority to recommending Chinese food that is more suitable for the user's taste Learn about local specialties and restaurants associated with this speciality Provide a certain translation function and translate directly into the language of your choice (English)
DELIVERY	**RESTAURANT**
Support PayPal, credit card payment Can be customized to tip Choose the number of people to eat and the type of tableware like the knife and fork Customize the size, sweetness, etc. of the product Clear the details of the meal delivery, meal delivery, estimated time, etc. Go to the store to take a meal	Restaurant basic information Text, image comments Collect restaurant Custom upload related information

Table 4.6 *Function Statement*

4.5 CCA Round II-Learning

4.5.1 Cultural Context Feature Key Words Study and Selection

Because the project has only one user group from a low context culture, designer only needs to select the LC feature key words. The first step is to choose the vocabulary from the 2nd dimension. Eighteen 2nd dimension vocabulary words were selected based on the category of service that is going to be designed. Then select the LC feature key words for each of the secondary vocabulary words are selected to help reviewing the service design from a cultural context perspective. Next, combined with the *Cultural and Service Design Implication* table, the meaning of each selected vocabulary is dismantled to determine, that is, what kind of guiding significance the vocabulary has in the upcoming service design.

1st Dimension	2nd Dimension	HC Feature Key Words	LC Feature Key Words
Association	1. Relationship	○ trust-base ○ slowly and stable ○ clear cycle	○ develops quickly ○ unclear cycle
	2. Task progress	○ people matters ○ group progress	● **procedure matters** ● **final goal**
	3. Personal identity	○ rooted in group	○ self accomplishments
	4. Social structure	○ centralized ○ responsibility at top ○ work for group	○ decentralized ○ responsibility at bottom
Interaction	**1. Nonverbal language**	○ high frequency ○ voice tone ○ facial expression ○ gesture ○ eye movement	● **low frequency** ● **words messages**
	2. Verbal message	○ indirect ○ implicit ○ context is important	● **direct** ● **explicit** ● **words are important**
	3. Communication	○ engaging people	● **exchanging information**
	4. Disagreement	○ personalized ○ sensitive to conflict	○ depersonalized ● **tolerant to conflict**
Territoriality	**1. Space**	○ communal ○ close ○ share space	○ compartmentalized **privacy matters** ○ **be apart**
Temporality	**1. Schedule**	○ has own time ○ hardly scheduled ○ get activity done	● **scheduled timely** ● **efficiency matters**
	2. Change	○ slow and stable ○ history matters	● Fast ○ make change by anyone ● **immediate results**
	3. Time	○ processive ○ natural belongings	○ commodity ● personal belongings
Learning	**1. Knowledge**	○ embedded ○ connective ○ synthesized ○ global ○ multiple sources ○ deductive thinking ○ general ⟶ specific	○ fragmented ○ compartmentalized ○ single source ○ inductive thinking ○ specific ⟶ general ● **detail matters**
	2. Learning activity	○ by observing others ○ model→demonstrate→practice	○ by explicit directions ○ learning and problem-solving
	3. Group/ Individual	○ group	● **individual**
	4. Accuracy/ Speed	○ accuracy matters ○ how to learn	● **speed matters** ● **learning efficiency**

Table 4.7 *LC Feature Key Words Selection*

Procedure matters: The process of guiding users to find food, ordering meals, etc. should be clear and simple, and guide users to complete tasks in a linear procedure.

Final goal: Try to complete the ordering and other tasks as soon as possible with the fewest steps.

Low frequency: Try to avoid too many complex contents such as voice, video, animation, etc. The design of the logo is straightforward.

Word messages: Use text language to convey information reasonably.

Direct: The transmission of information and rules is straightforward, avoiding excessive grievances and metaphors. For example, in interface design, the name of different section names should be straightforward.

Explicit: The transmission of information and rules is straightforward, avoiding excessive grievances and metaphors. The transmission of information and rules is straightforward, avoiding excessive grievances and metaphors. For example, in interface design, the name of different section names.

Words are important: The expression of the text is mainly accurate, and the text is the carrier of information, there is no need to consider the context too much.

Exchanging information: Pay attention to timely feedback of important information during online or offline interaction with service personnel or products.

Tolerant to conflict: Flexible resolution of conflicts, first to complete user goals.

Privacy matters: When communicating with the service personnel, pay attention to the spatial location of the user.

Be apart: Pay attention to the white space in the design.

Scheduled timely: Timely notification of accurate takeaway delivery, time to queue, etc. Avoid ambiguous time vocabulary as much as possible.

Efficiency matters: Give information at key time nodes, such as the delivery to the store, has been sent, is about to reach the destination, for the users' benefit.

Immediate results: The information in important changes gives timely feedback. If the restaurant is about to close, the goods are about to be sold out.

Detail matters: In the meal delivery and platform specifications, the rules are clearly stated in words.

Individual: In a low-context culture, individuals are more responsible for themselves, and it is not necessary to consider ordering for others when ordering or selling.

Speed matters: The use of the process is in line with user's habitual operation and quick to get started.

Leaning efficiency: The functions carried by the design can solve the problem efficiently to a certain extent.

4.6 Solution Exploration

The design solution is the carrier that carries the functions summarized in the previous stage. According to the task statement conclusion, the solution should make efforts towards to design goals in this phase. Figure 4.8 shows the sketches of DA ZHONG DIAN PING INTERNATIONAL (North America Version).

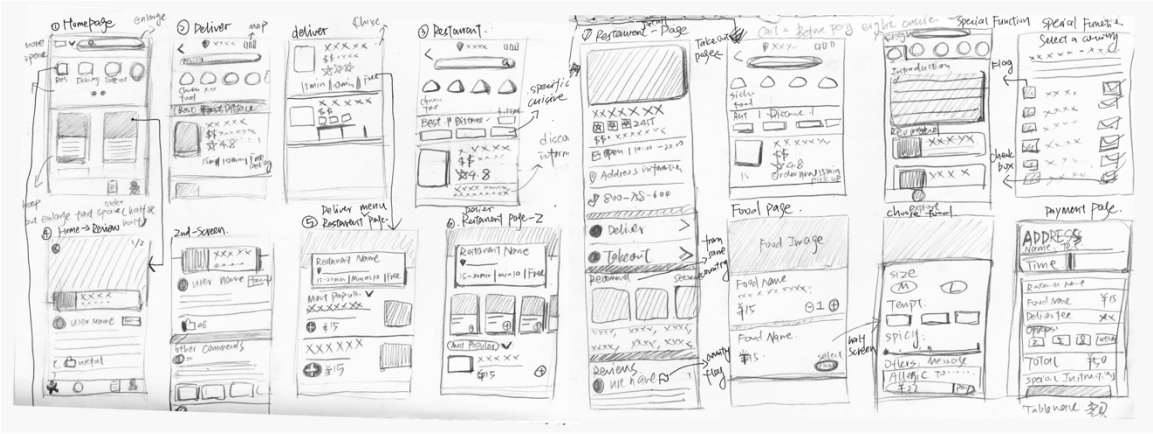


Figure 4.8 *Sketches of DA ZHONG DIAN PING International*

4.7 Transformation

4.7.1 Design Elements Checklist and Stratification

The main carrier of this service design is interaction and system design, so the third round of CCA is performed on the interaction and system design element table. The first step is to fill in the cultural tendency of all the elements one by one (Table 4.8). In view of the previously selected LC feature key words, the designer should fill in these cultural trends based on these selected words and Tables 3.3 and Table 3.4. The second step is to

group elements with the same or similar cultural inclinations. Sixteen elements are divided into six groups as below (Table 4.9).

Carrier	NO.	Elements	Cultural Tendency
System/ Interaction Design	1	animation	• Low use of nonverbal languages.
	2	color	• Fast message speed. • Low power gap.
	3	content	• LC culture has fast message speed and creates quick contacts. • Verbal languages is explicit and direct.
	4	continuity	• Low power gap that reflected in flat or shallow hierarchical structures. • Things should be scheduled timely.
	5	controls	• Communication is a way of exchanging information.
	6	font	• Learning speed and efficiency is important.
	7	gestures	• Fast message speed and quick contacts. • Low use of nonverbal languages.
	8	icon	• Learning speed and efficiency is important.
	9	image	• Low use of nonverbal languages.
	10	layout	• Space and privacy is important. Be apart.
	11	logicality	• Low power gap that reflected in flat or shallow hierarchical structures. • Fast message speed. Less efforts for users find the information. • Change is fast. Immediate results.
	12	pattern	• Learning speed and efficiency is important.
	13	style	• Low power gap.
	14	sound	• Low use of nonverbal languages.
	15	text	• Messages is carried more by words that other elements. • Verbal languages is explicit and direct.
	16	video	• Low use of nonverbal languages.

Table 4.8 *System/ Interaction Design Elements' Culture Tendency*

Carrier	Group NO.	Element	Cultural Tendency
System/ Interaction Design	1	color	• Fast message speed. • Low power gap. • Low use of nonverbal languages.
		style	
	2	icon	• Communication is a way of exchanging information. • Learning speed and efficiency is important.
		pattern	
		controls	
		font	
	3	content	• fast message speed and creates quick contacts. • Verbal languages is explicit and direct. • fast message speed and creates quick contacts.
		text	
	4	layout	• Space and privacy is important. Be apart.
	5	animation	• Low use of nonverbal languages. • Fast message speed and quick contacts.
		gestures	
		image	
		sound	
		video	
	6	continuity	• Low power gap that reflected in flat or shallow hierarchical structures. • Fast message speed. Less efforts for users find the information. • Change is fast. Immediate results.
		logicality	

Table 4.9 *System/ Interaction Design Elements' Culture Tendency Stratification*

4.7.2 Cultural Context Transformation

This step is the conversion. Following the macro service design implication in the Table 3.4, the designer further describes the specific service design tendency of each design element (Table 4.10). The service design tendencies here are determined by their cultural context. These service design tendencies can be clearly and practically guide designers to carry out feasible design in the fourth phase of design implementation.

Carrier	Group NO.	Element	Service Tendency
System/ Interaction Design	1	color	• Color style should be meaningful, not design for beauty. • Consistent in MEITUAN color / style scheme.
		style	
	2	icon	• Patterns / controls / icons are easy for users to understand. • Clean and plain font.
		pattern	
		controls	
		font	
	3	content	• Content / text is meaningful and informative. • Content / text is explicit and direct that deliver the right information.
		text	
	4	layout	• Layout is loose and relaxed.
	5	animation	• Low use of images / animation / sound / video • Less finger gestures. • The ways of interactions should be easy.
		gestures	
		image	
		sound	
		video	
	6	continuity	• Less navigation bars. Few pages with coherent layout. • Time and TO DO should be clear. • Simple reflections. • Immediate feedbacks to users.
		logicality	

Table 4.10 *System/ Interaction Design Service Design Tendency*

4.7.3 Tendency Boards of Design Elements

According to the service design tendency summarized in the previous step, the designer should find a case of the system and interaction design already in the market to help the designer to more intuitively learn the meaning of each service design tendency. A product case that has gained success in the market is also an excellent reference model for designers with design ideation. The examples given below include LinkedIn, Airbnb, Spotify, Yelp and other application designs born in low-context countries.

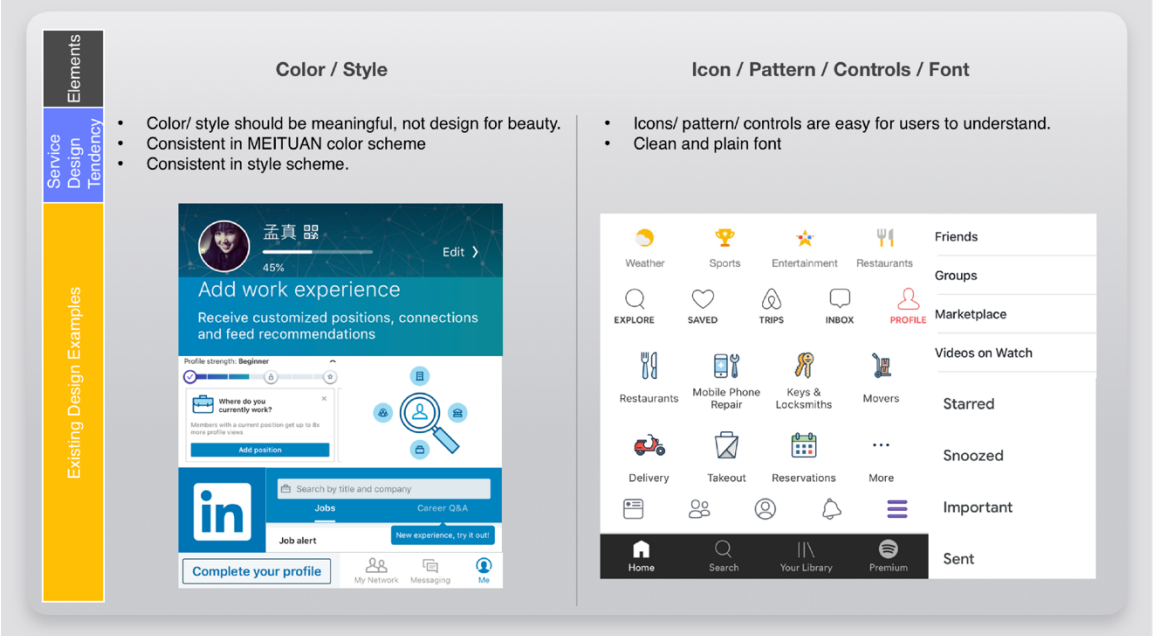


Figure 4.9 *Tendency Boards of Design Elements 1*

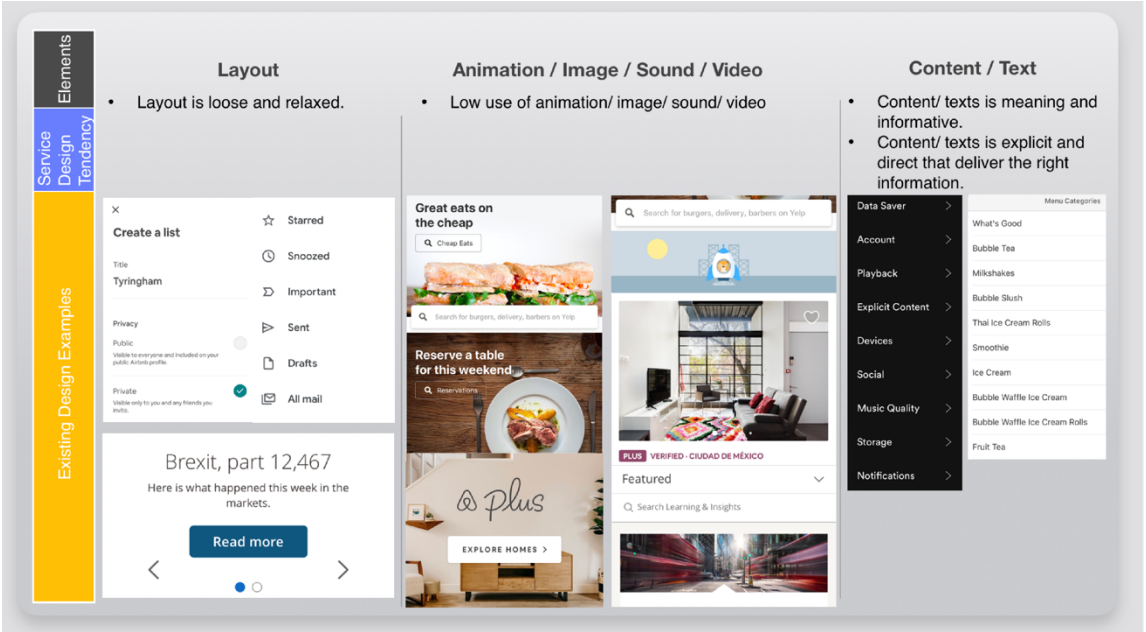


Figure 4.10 *Tendency Boards of Design Elements 2*

4.8 Implementation

4.8.1 Contrast Verification

The following group diagrams illustrates how CCA is guided and embodied in the new design by comparing new design with the design of existing DA ZHONG DIAN PING design. The design elements the round purple box represents the design elements that are redesigned because of the instruction of CCA. The first figure is the home page design (Figure 4.11). The new design removes the video feature, increasing the text area and reducing the image area, as the LC culture prefers text information. At the same time, the new design simplifies the numbers and colors of the icon, leading the meaning of the icon to be more intuitive and straightforward because of the fast message speed and high leaning efficiency as the cultural features of LC culture.

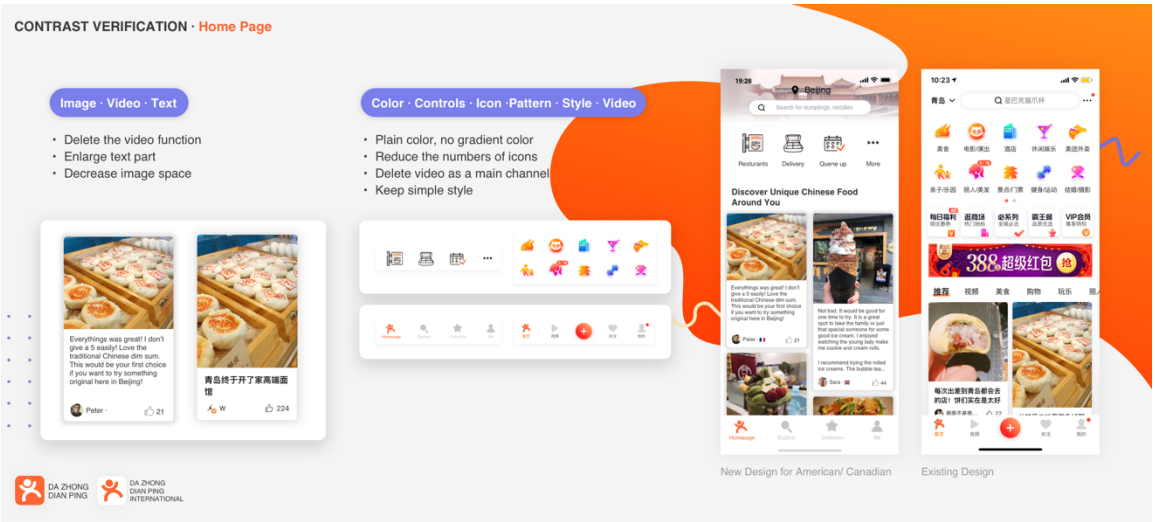


Figure 4.11 *Contrast Verification 1*

The second figure is a comparison of the restaurant details page (Figure 4.12). The basic information of the merchant is presented in the form of a list. The layout is more compact in structure. The gap between the contents is more relaxed, since the reasonable space and continuity is important in low context culture.

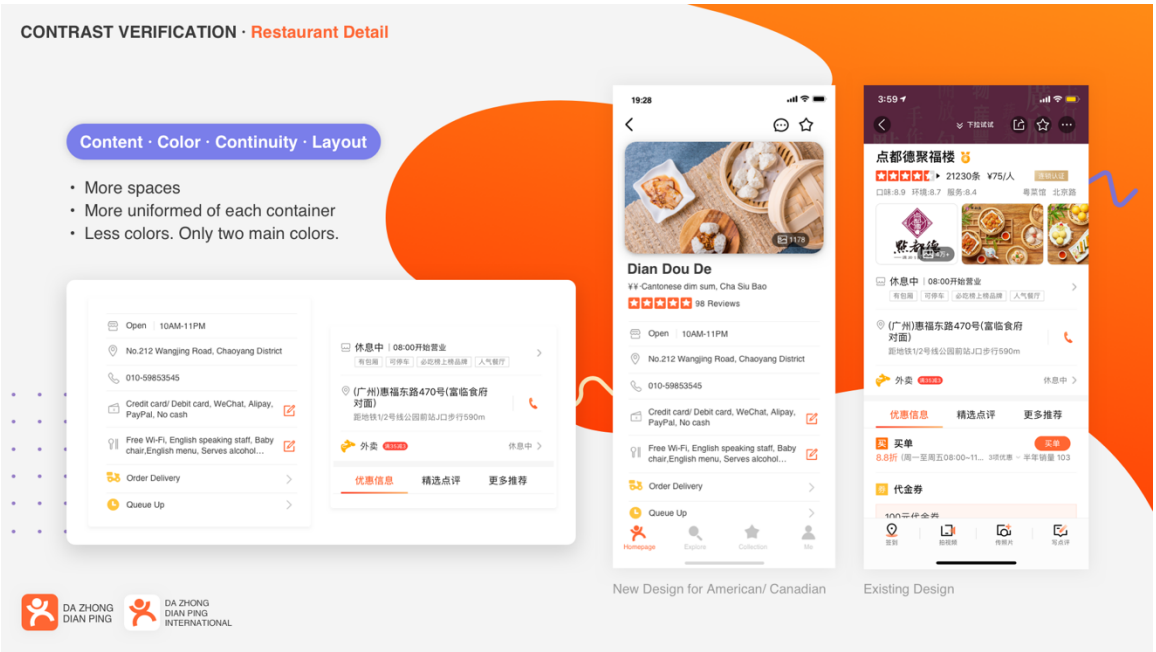


Figure 4.12 *Contrast Verification 2*

The third figure shows the new design of adding products to the cart (Figure 4.13). The LC culture has low power distance that can be reflected in flat or shallow hierarchical structures.

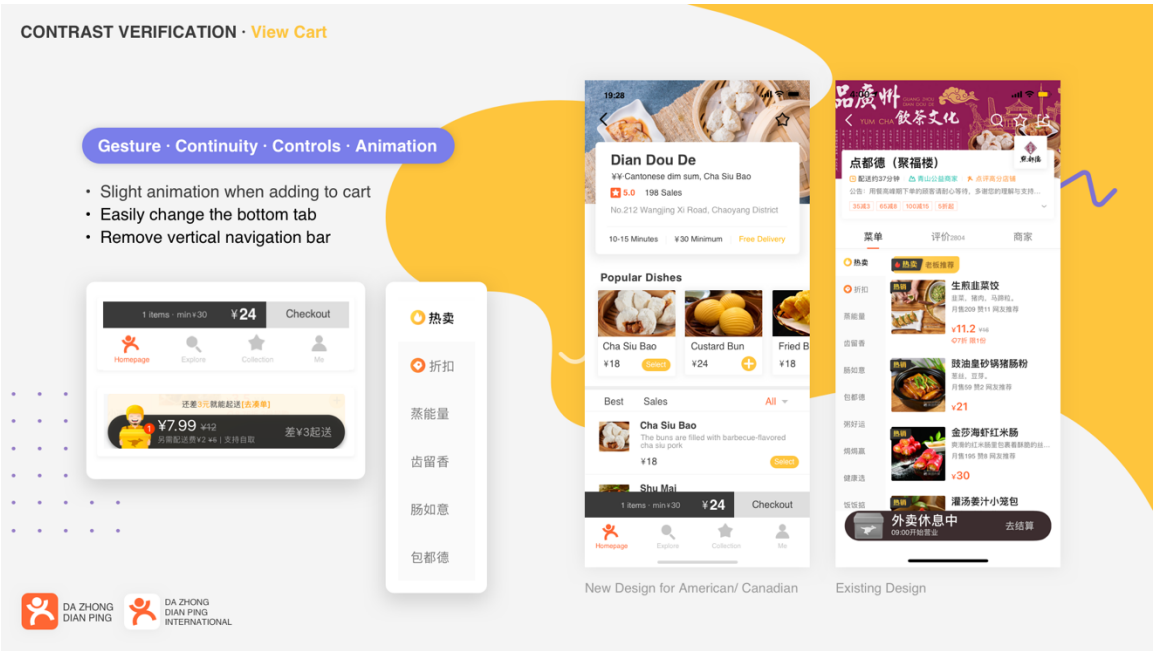


Figure 4.13 *Contrast Verification 3*

Figure 4.14 is the redesign of the pop-up window of selecting an item. A pop-up window embodies the immediate feedbacks to users, because LC culture users expect fast response after the change.

Figure 4.15 is a comparison of the pages of the checkout. The new design emphasizes the address information and delivery time of the delivery; a separate module presents the address and time information, besides magnifying and bolding the font. This change is the result of the LC cultural expectation that verbal message is explicit and direct as a way of exchanging information in terms of the interaction in LC culture.

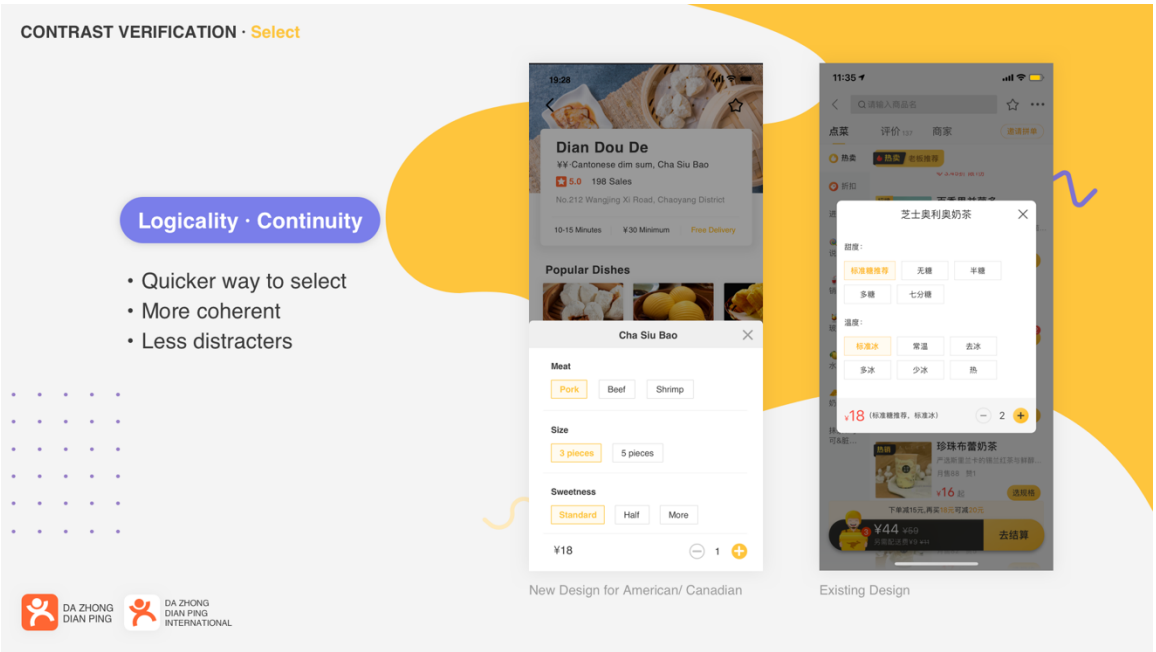


Figure 4.14 *Contrast Verification 4*

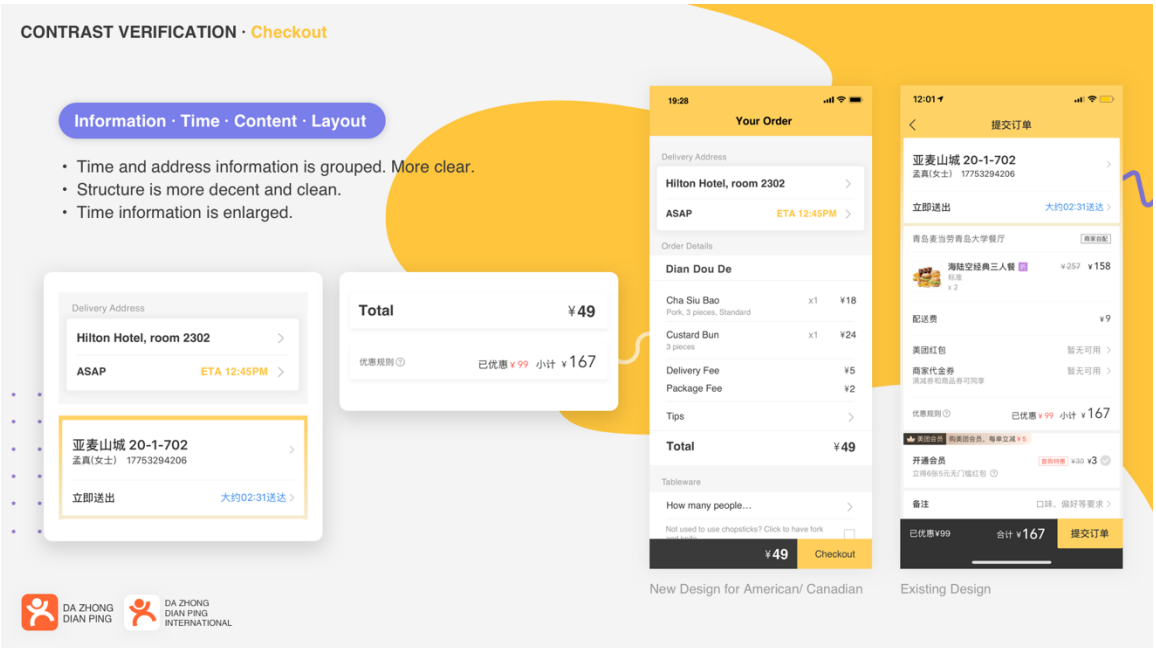


Figure 4.15 *Contrast Verification 5*

4.8.2 Features Illustration

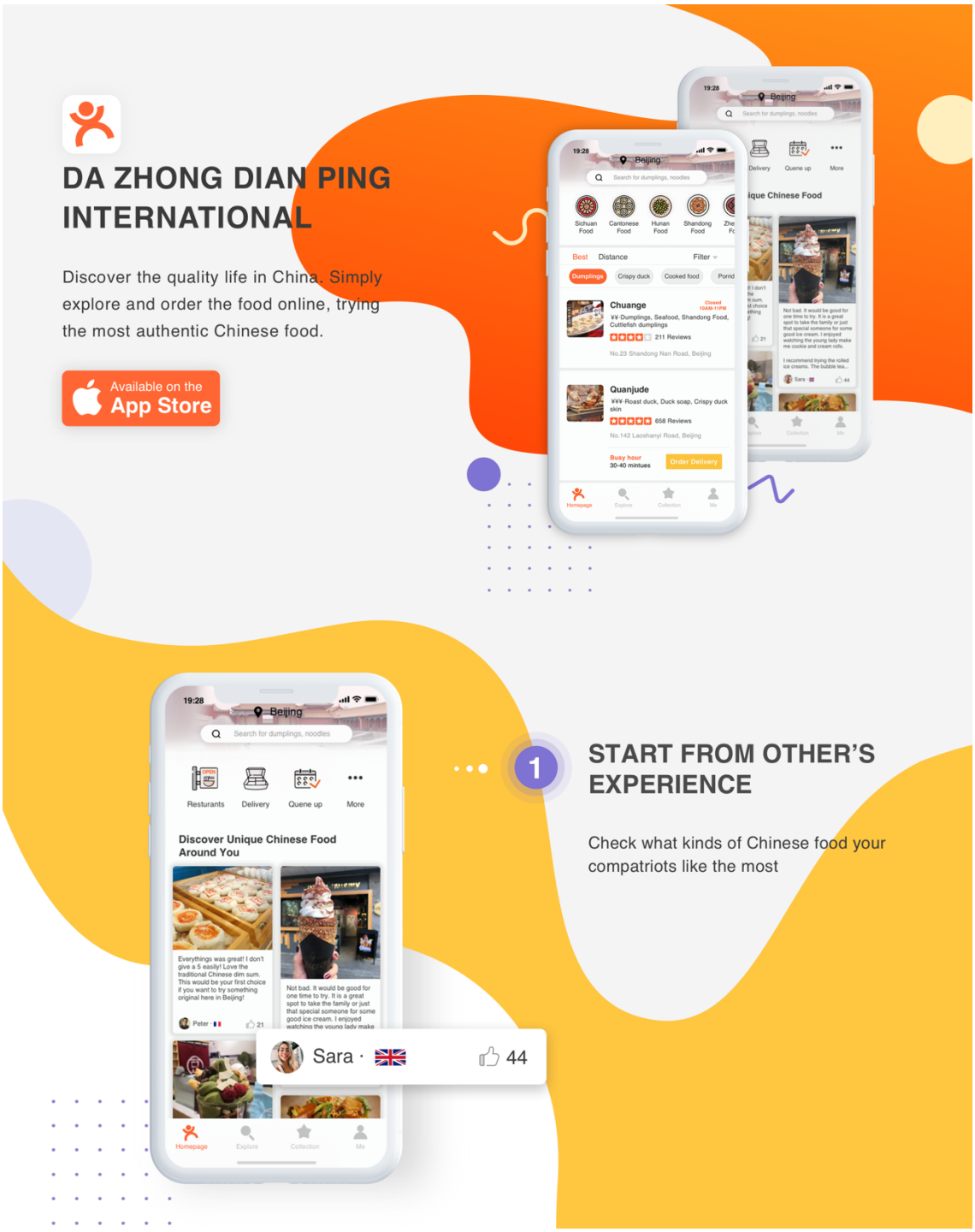


Figure 4.16 *Final Deliverable Poster 1*

Figure 4.17 *Final Deliverable Poster 2*

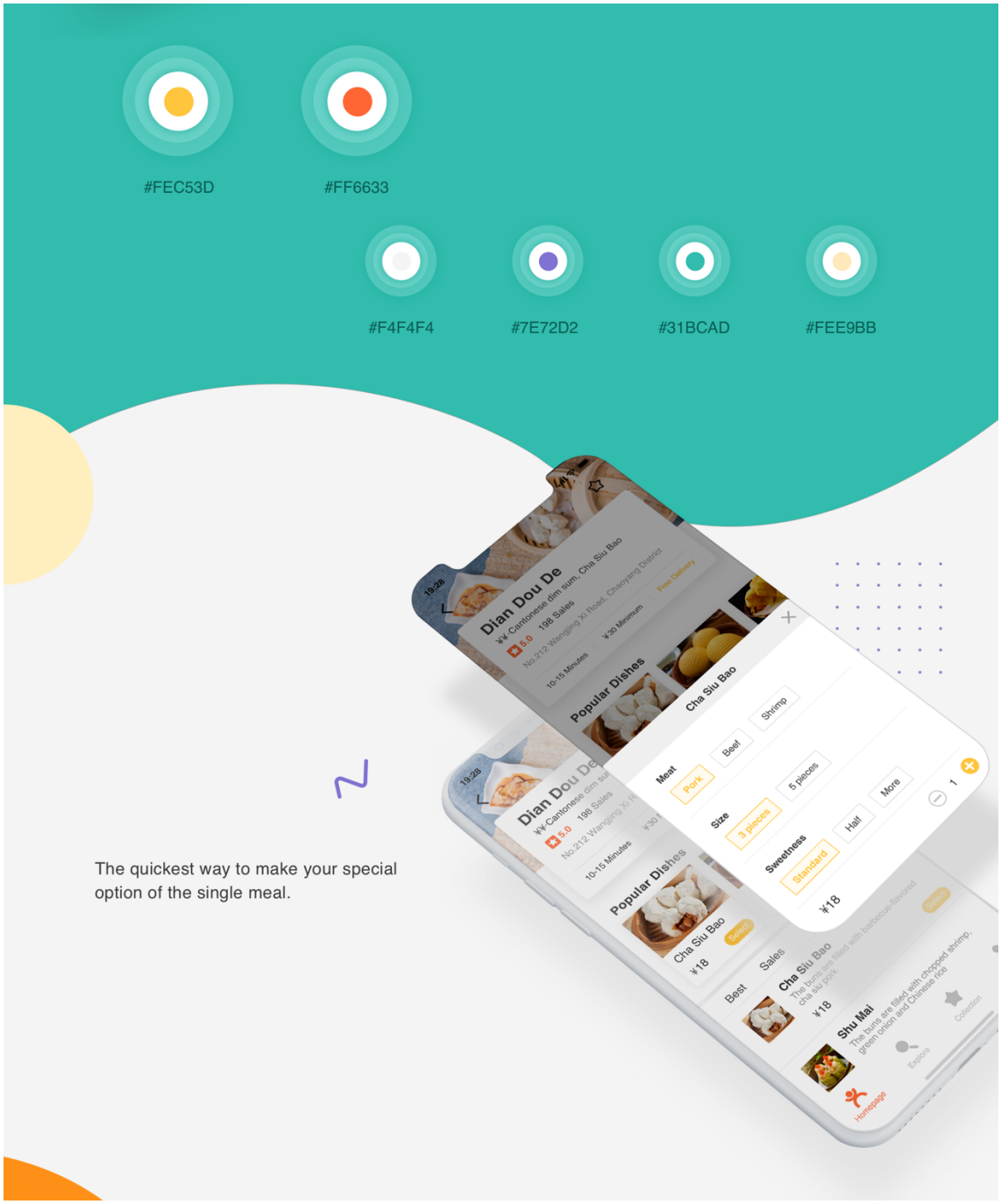


Figure 4.18 *Final Deliverable Poster 3*

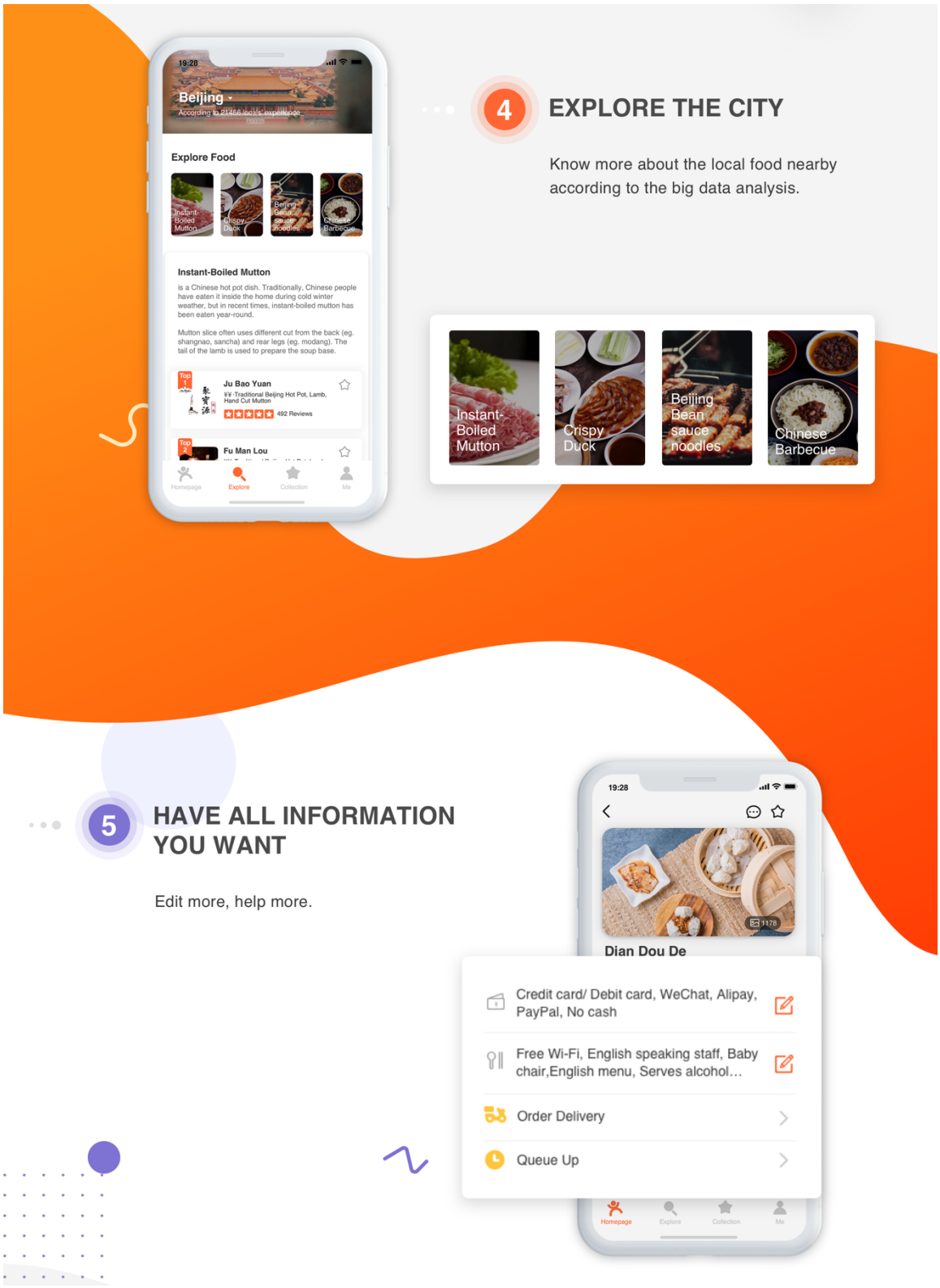


Figure 4.19 *Final Deliverable Poster 4*

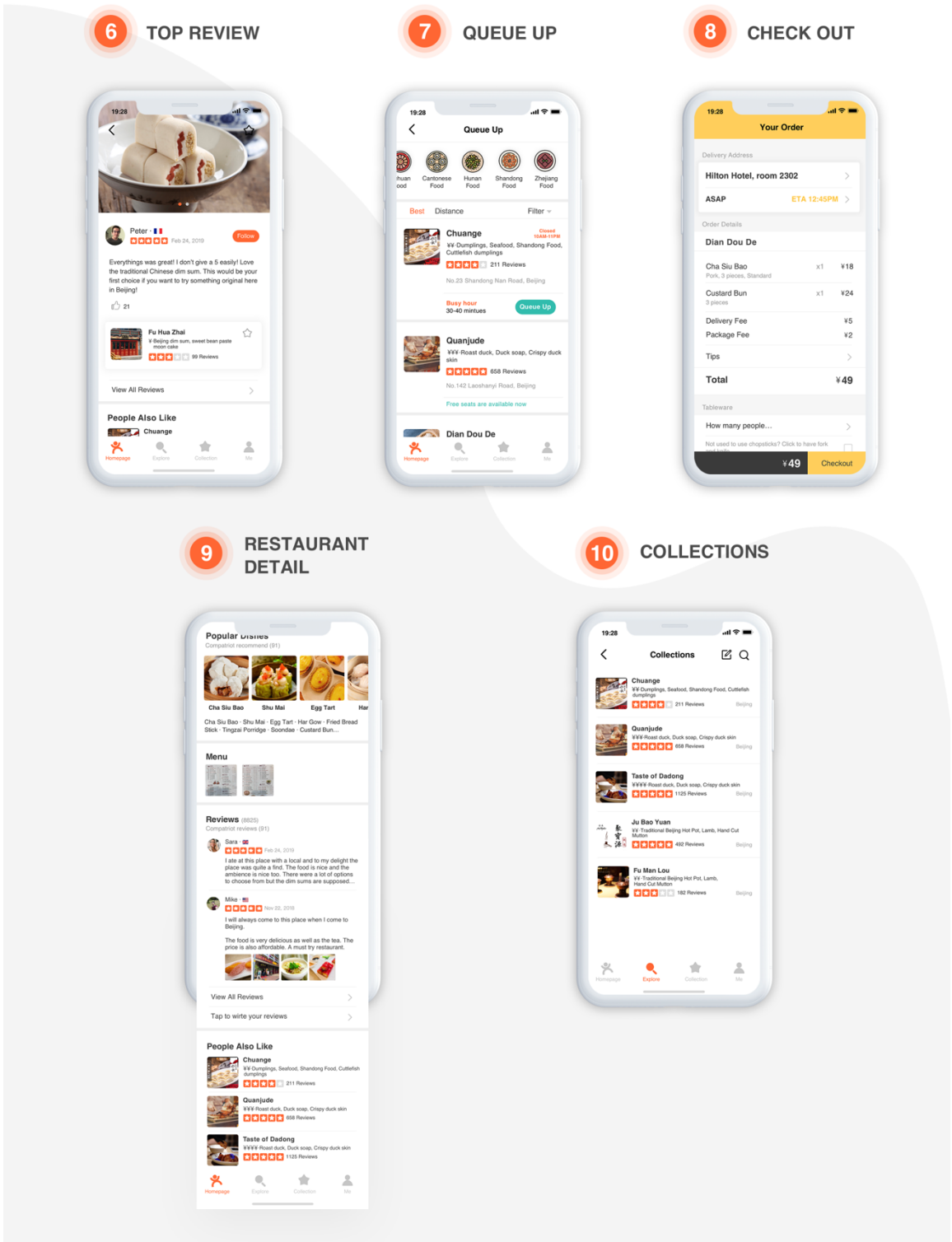


Figure 4.20 *Final Deliverable Poster 5*

CHPATER 5 CONCLUSION

5.1 Conclusion

This thesis generates a design guideline to help designers take cultural context variables into service design when doing a multicultural project. Users from different cultural context have different cultural tendencies which can be reflected in final designs and their decisions while using services. High and low context cultures have significant differences that designers should take into consideration in service design . Besides, service design is an activity that starts from a business or company, so target marketing and the needs of the business should be included. The redesigned service design process and cultural context analysis checklist helps designers to develop a better cultural and business oriented service design.

5.2 Further Development

The relationship between service design and cultural variables can be discussed more to create more reasonable connections between them. There are still more aspects out of this topic, such as multicultural environment, that are not considered in this thesis. Cultural context is a good new start to talk about the relationship between culture and service design.

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