



# Picturing Obesity:

Drawing on Cultural Imagery to Trigger Positive  
Behaviour Change

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2018



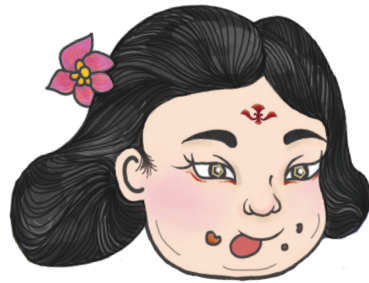


*“ This 90-point Report is Submitted as a Partial Fulfillment of the 180-point Master of Design Degree at Auckland University of Technology.”*





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## Attestation of Authorship

“ I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person (except where explicitly defined in the acknowledgements), nor material which to a substantial extent has been submitted for the award of any other degree or diploma of a university or other institution of higher learning.”

A handwritten signature in black ink, reading "Jingyi Li". The script is cursive and fluid, with the first name "Jingyi" and the last name "Li" clearly distinguishable.

Jingyi Li

May 18, 2018

## Acknowledgements

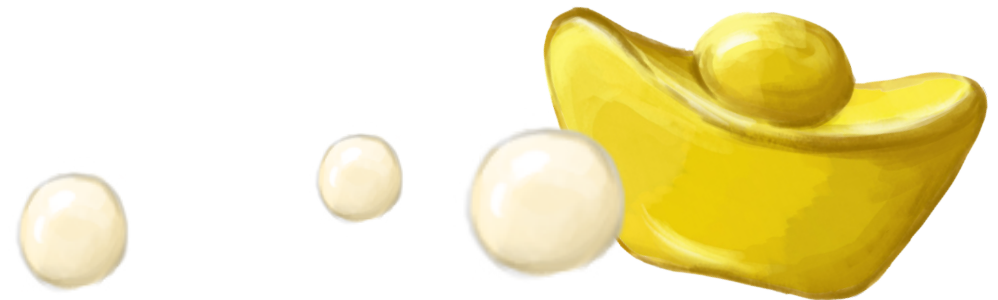
I have worked hard on this project. However, this would be impossible without the goodwill support and assistance of many individuals. I want to express my most profound gratitude to all those who offer me the possibility to complete this report.

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## Abstract

Picturing Obesity is a practice-based research project. The focus is on visual-storytelling informed by the Chinese approach of reducing and potentially eliminating the increasing obesity problems in China. Illustrations are the main graphic medium by which to communicate knowledge and meaning, and preventive measures to the audience. A review of the previous literature highlights that there are already a great number of websites, books and articles on obesity and unhealthy eating. In spite of this, China, as in many other parts of the world, is experiencing an increase in the problem of obesity. This suggests that these sources are not effective in curbing or limiting obesity, especially in China. Therefore, this project takes a different approach, by harnessing Chinese New Year Art, Nian Hua (年画), to communicate with the Chinese audience. Nian Hua is an auspicious art form that has been in existence for thousands of years, possessing culture, history, nostalgia, and celebrating the Chinese belief and auspicious meaning that the Chinese people welcome and desire.

This design project is not just about graphic design or visual communication. It is about understanding and insight into the Chinese psyche and their emotional attachment to the importance and tradition of the New Year Art. However, visual communication alone may be insufficient to resolve the complex problems that contribute to poor eating habits and obesity.

It is essential to rethink our preventive design strategy if we are to minimise the plight of obesity. Therefore, this research project adopts a Human-Centred Design Approach with the purpose of understanding the physical, psychological and behavioural problems that are challenging the affected population. Picturing obesity is more about using a visual narrative as a “change-agent” to trigger a change in bad habits in food consumption,

which has been growing in modern China. The one-child policy, Western fast foods, and an increasing middle-income society is responsible for much of the problems of obesity in China. Information alone is not sufficient to resolve the problem.

A multi-disciplinary approach using the areas of art, science and the humanities should thus be applied to the project to ensure that the knowledge used to inform the design is scientific and correct, therefore supporting an evidence-based design outcome. Some relevant humanities theories and principles, such as Maslow’s Hierarchy of Needs, Fogg’s Behaviour Change Model, and The Four-Pleasure of Design Model will be used in this project to obtain knowledge and insights to inform preventive design strategies.

A mixed methodological approach ensures a robust and reliable outcome. Mixing science and humanities allows for a full understanding of the medical aspects of obesity, the nutritional value of food, and the psychology of people’s behaviour regarding junk food consumption. Art allows for the usage of a trial and error process (or heuristics) to determine the best preventive outcome informed by scientific and humanistic principles. Visual storytelling adapted from the imageries of the centuries-old Nian Hua, informed by the humanities and designed through a heuristic process, constitute the main design approach and practical outcomes of this research study. During the early concept design and development stages of the project, I discussed with my previous undergraduate university professor Zhang Jun. While this comprised a very brief interview during the early stages of my design, she provided some helpful advice. The primary purpose of the project, therefore, was to answer the research question:

## What are the causes of excessive eating and how can a holistic, visual storytelling approach involving art, science and humanities be explored to prevent obesity?

In this project, the emotions and beliefs associated by the Chinese people with the Nian Hua were used to develop an obese child, an obese young lady and an obese young man as the three key iconic characters to be used to communicate with the young population in China. The communication carried out predominantly through visual storytelling is both serious and humorous. It was the author's belief that this would attract attention, be revered and auspicious, and generate good results. Besides, another fearsome character was developed, The Door God, as a very symbolic Nian Hua representation that will have a significant influence on the visual storytelling. All these characters would be useless should they not be continuously applied and seen to remind obese people of the pros and cons of certain foods, nutrition, and healthy eating habits. Therefore, this project created various ideas for applying these seven characters to various products, signage and posters to continuously remind people about the importance of healthy eating. A variety of concepts are presented here. They are applied humorously to drink bottles, hoodies, ribbons, socks, towels, greeting cards, calendars, lunch boxes, teacups, phone cases, bags and some office supplies.



## Introduction

It is a challenge for designers to teach obese people to understand nutrition and healthy diet through design. Finding and implementing a successful prevention strategy for obesity is a very complicated issue involving psychology, nutrition, informatics, imagination, and so forth. The most challenging part of the problem is to change bad dietary habits of those who have become accustomed to the Western fast food diet.

According to research on the history and background of obesity in China, it was found that traditional Chinese folk art, Nian Hua, is an influential factor in Chinese thinking and the awareness of obesity. "Nian Hua derives from an evolution of customs of Spring Festival holidays over a long time and reflects people's spiritual comfort and belief in traditional society." <sup>1</sup> In traditional Chinese Nian Hua with a moral of happiness and health, figures look plump and well nourished, potentially affecting the older generations. They have the belief that if children can be fed to become as plump as the figures in Nian Hua, these children will be happy and healthy. As a result, they feed their children and grandchildren aggressively. Hence, the main reason for the obesity rate of Chinese children is family dotage and parents' poor awareness of a healthy diet and good nutrition. Visual images, such as Nian Hua, can affect people's perception and create a mindset that has a negative influence on health and obesity.

Therefore, I felt that it would be of benefit to instil new ideas into the consciousness of the people via these similar visual storytelling approaches. Thus, this project sets out to design culturally relevant illustrations by using Nian Hua as a reference, in order to help people change their awareness of obesity. One of the key outcomes of this dissertation is the design of a picture

<sup>1</sup> Wu Zukun. Traditional New Year pictures and value of folk faith. Journal of Renmin University of China 21, no. 6 (2007): 115-22.

book. The purpose of the picture book is to change people's lifestyle.

It is about health and well-being. It is to convey understanding and to improve the mind-sets of loving parents who unwittingly harm their children's health by feeding them too much. Personally, I have had this agonising experience myself. My parents and grandparents are like most Chinese parents. They loved me, fed me, and I became obese. As a teenager, I recognised that obesity was unhealthy, thus making me very unhappy. I avoided going anywhere which was too crowded. I became afraid and avoided social events as a result of my obesity.

I felt I could not go on like this, so I started to lose weight, exercise, and eat a healthy diet. I quit high-calorie snacks and corrected my eating habits, and consequently became healthy and confident. This period helped me to understand the physical and psychological pain caused by obesity. I, therefore, want to use my strengths in design and storytelling to help those people affected by obesity. As more and more Chinese suffer from obesity, I wish to create something to help solve this problem. I want to use visual storytelling in a fun and humorous way to help them understand food, nutrition and exercise in order to transform people's poor lifestyles and gain a healthy body and mindset. These people should be able to achieve self-actualisation and a positive self-image. To self-actualise means that a person likes themselves, is proud of themselves, and wants to do the right things for themselves. All the designs and visual stories developed in this project are aimed at helping people remove the influence of obesity, and become healthier and happier human beings.



<sup>2</sup> *Fat China*



<sup>3</sup> *Fat Baby*

<sup>2</sup> *Fat China*. 2010. Image. <http://adage.com/china/article/viewpoint/welcome-to-fat-chinaa-literally-expanding-market/145320/>

<sup>3</sup> *Fat Baby*. 2015. Image. <http://es.enfanyi.com/xuexi/show-1457.html>.

In ancient China, Nian Hua was the most popular and educational reading material and played a role in popularising historical knowledge and moral education.<sup>4</sup> Therefore, due to the educational and instructional significance, and high popularity and circulation, Nian Hua is the ideal carrier for auspicious information for designers to spread knowledge about a healthy diet and nutrition in China. New meanings can be attached to Nian Hua by redesigning Nian Hua in combination with modern art and science, and by publishing picture books which comprise these related pictures and texts. These pictures are historically, culturally, and socially significant to the Chinese audience.

The demands of consumers can be scientifically addressed using a combination of Fogg's Behaviour Model and Maslow's Hierarchy of Needs. An appropriate behavioural model is created to transform poor dietary habits into good dietary habits. Current graphic designs about knowledge of food nutrition are simplistic. Moreover, as the majority of them are only available online, they can only be viewed via electronic devices and will not be remembered, as the messages do not connect with the reader emotionally. However, books can meet the visual needs of people, and strengthen their memories through touch. Moreover, other functions can be added to picture books through design; for example, picture books can be both educational and entertaining with the addition of a game function. A simple card game can be designed using a scientific behaviour model, where a colour system can be used to strengthen users' knowledge of food nutrition, diet planning, and exercise. Readers can strengthen their understanding of information in the picture book through an interactive game while reading so that they can understand they

are poor dietary and lifestyle habits, and consequently fundamentally change them.

## **THE DESIGNS CREATED IN THIS PROJECT:**

- 1. A PICTURE BOOK**
- 2. A CARD GAME**
- 3. A NUTRITION GUIDE**
- 4. APPLIED IMAGES OF THE 3 CHARACTERS ON TEE SHIRTS, LUNCH BOXES, ETC.**
- 5. POSTERS**
- 6. SIGNAGE ON BUS STOPS, ETC.**

## **1. Literature Review**

Given that the design project intends to change people's attitudes and thinking regarding poor nutritional habits, reliable information is required from a variety of data sources, including culture, science and the humanities to inform the design so that the outcomes are reliable and effective.

### **1.1 Existing Information and Design about Chinese Obesity**

According to the latest data issued by "The Lancet" and the World Health Organisation, China has surpassed the USA, in possessing the most obese population in the world.<sup>5</sup> This phenomenon is not only due to the existence of foreign food culture but also because of a lack of awareness of nutritional knowledge.

<sup>4</sup> Gao Xiaoli. The cultural value of traditional Chinese folk New Year pictures. Journal of Tangshan Teachers College. 31, no. 6 (2009): 156-58

<sup>5</sup> "According To A New Study, China Is Now Home To The Greatest Number Of Obese People On Earth – What That Means For Its Present And Future - Global Times". 2016. Globaltimes.Cn. [http:// www.globaltimes.cn/content/977264.shtml](http://www.globaltimes.cn/content/977264.shtml).



With the development of economic globalisation and the communication of a foreign culture, in an era of fast-moving consumption, people in China enjoy efficiency, which can come in the form of fast fashion and fast food. For example, the introduction of Western fast food brands, such as KFC, McDonald's and Burger King, meet the demands of busy people to some extent. Hence, Chinese dietary habits have changed greatly, leading to an increase in the obesity rate. This explains China's rising obesity rates, and there are many more children with obesity now than there were a decade ago.<sup>6</sup>

Heart disease and diabetes are common health consequences of obesity. A survey by the WPRO shows that nearly 10% of adults in China, about 110 million people, are suffering from diabetes. Also, according to the official data, in 2015, almost 230 million residents had been diagnosed with cardiovascular disease.<sup>7</sup> These are inextricably linked to unhealthy diet habits and a lack of physical activity. All of this has shown that people require knowledge about healthy eating and nutrition.

Fortunately, the Chinese government has realised that obesity has severely impacted Chinese health. Thus it formulated a national nutrition program, "Healthy China 2030". The program aims to defuse nutrition knowledge via an intelligent application called "Internet + Nutrition and Health".<sup>8</sup> However, despite its informative website, people are not attracted to it nor motivated to use it. Most websites use simple pictures and texts to explain complex knowledge about food, nutrition and health, leading to aesthetic fatigue. The current project comes at an opportune time for China, because China is currently experiencing significant concern about the problem of obesity, and the formulation of "Healthy China 2030" is only ten years

away. This project is in harmony with the Chinese strategy, and should add value to "Healthy China 2030".



<sup>9</sup> *Obesity In China - Market Opportunities*



<sup>10</sup> *Tipping the Scale: Beijing Leads To Obesity Rate*

<sup>6</sup> "China's Growing Obesity Problem". 2017. Forbes.Com. <https://www.forbes.com/sites/benjaminshobert/2017/01/22/chinas-growing-obesity-problem/#fb2cd6b6ecfa>.

<sup>7</sup> "Obesity And Overweight". 2017. World Health Organisation. [http://www.who.int/mediacentre/factsheets/fs\\_311/en/](http://www.who.int/mediacentre/factsheets/fs_311/en/).

<sup>8</sup> "China Eyes Life Expectancy Of 79 In 2030 Health Plan". 2016. English.Gov.Cn. [http://english.gov.cn/policies/latest\\_releases/2016/10/25/content\\_281475475062678.htm](http://english.gov.cn/policies/latest_releases/2016/10/25/content_281475475062678.htm).

<sup>9</sup> *Obesity In China - Market Opportunities*. 2013. Image. <http://chairmanmigo.com/wp-content/uploads/2013/08/Obesity-in-china.png>.

<sup>10</sup> *Tipping the Scale: Beijing Leads To Obesity Rate*. 2017. Image. <http://www.chinadaily.com.cn/china/images/attachement/jpg/site1/20170628/b083fe955fd61abd937019.jpg>

In order to be effective, reference to the human sciences is required, such as Maslow's Hierarchy of Needs, Fogg's Behaviour Change Model and the Four-Pleasure Model. This will be more effective than simply relying on art and technology alone. Human principles will allow relevant human factors to be included in the design, thus becoming more culturally, socially and psychologically meaningful to the audience. The visual stories will be rendered more effective in motivating and triggering long-term changes to healthy eating.

The majority of Chinese people in today's society are in the top 3 levels of Maslow's Hierarchy of Needs. When people are poor, they do not care about health or safety but are solely concerned with securing enough food to eat. Once they have met their basic physiological needs, safety can become a concern. When people have enough food and are in a safe environment, then they can work towards meeting their needs for love and belonging. This is where they feel people care about them, and they wish to achieve recognition in the family and value in the collective. This is followed by self-esteem needs: they want to gain the recognition and respect of others. Finally, the last need is for self-actualisation, where people reach their potential and self-realisation.

Chinese society, especially the big middle class, are in the stages of seeking love and belonging, esteem, and self-actualisation. People, or parents at the level of belonging, want the best for themselves or their children, and either spoil them by giving them lots of pocket money to buy junk food, or want them to eat healthily and have good nutrition. However, the older generation is confused about nutrients and nutrient balance. Also, those who need relevant guidance are in the first three levels of Maslow's Hierarchy of Needs. As their

physiological needs, safety needs and belonging social needs have been satisfied; they require esteem and self-actualisation. However, the information on food nutrition and a healthy diet available online cannot satisfy them. So, the present picture book design integrates social sciences, traditional Chinese elements and beliefs, and the professional originality of the designer; it can help people to meet their needs relating to esteem and self-actualisation, and subsequently change their lifestyles.



## 1.2 Importance of Nian Hua to Development my Characters

Nian Hua is a key part of Chinese traditional culture. In ancient times, people used to create images and post them on doors and windows during New Year. Nian Hua is vibrant and colourful, and creates a festive atmosphere for Chinese's festivals. It is New Year Folk Art commonly known as "happy painting". Ancient history describes Nian Hua as being pasted in the interior, and the Door God pictures pasted on front doors to attract good wishes for the New Year. They usher in good luck and prosperity, have the power to get rid of evil and bring good fortune.<sup>11</sup> Nian Hua is one of the most popular works of art in China.

The ideological connotation and aesthetic value of Nian Hua are conducive to the warm, joyful and harmonious atmosphere of the traditional Spring Festival. Nian Hua establishes the atmosphere and encourages the masses to look forward to happiness. The unique aesthetics of Nian Hua were developed over time, and as well as being unique, Nian Hua also promotes spiritual, conceptual and aesthetic ideals, and it is different from other types of Chinese paintings. Moreover, the unique beauty of Nian Hua is manifested through their external form, and colours. Nian Hua is an auspicious carrier of folk beliefs, education and entertainment. This project aims to both educate and entertain its audience. Therefore, while the New Year art is serious and auspicious, there has been an attempt to introduce humour into the present project, because both education and

entertainment should work together in what is called "edutainment" and consequently achieve a better result.



<sup>12</sup>Chinese traditional Nian Hua

<sup>11</sup> Song Rui. "The Use of Intangible Cultural Heritage for Tourism—A Case Study of Wuqiang New Year Pictures." *Tourism Times*, no. 4 (2007).

<sup>12</sup> Chinese traditional Nian Hua. 2014. Image. <http://www.nipic.com/zhuanli/1473005.html>.





<sup>13</sup> Chinese traditional Nian Hua-“Every Year Have Enough Things To Spend” & “Live Long”

<sup>13</sup> Chen Ming. 2012. “Every Year Have Enough Things To Spend” & “Live Long”. Image. [http://blog.sina.com.cn/s/blog\\_9cad4c6f0100yxm5.html](http://blog.sina.com.cn/s/blog_9cad4c6f0100yxm5.html).



“Unlike object-plane manifestation of Western character modelling or traditional Chinese figure painting, Nian Hua belongs to subjective imagism”.<sup>14</sup> As people are familiar with Nian Hua, it is difficult to change people’s understanding of the implied meaning and belief in Nian Hua using images with the same painting style. Hence, I decided to redesign Nian Hua using an electronic painting technique, but retain the body proportion of figures in Nian Hua, without normal character shape.

Exaggerated heads and facial features, plane modelling, auspicious, harmonious and joyous patterns, and bright and warm colour effects are used to highlight a warm and joyous, auspicious atmosphere using techniques of purity and sharp contrast. In this way, the characteristics and recognition of Nian Hua can be preserved. These are some of the artistic challenges and opportunities in maintaining the authentic features of the thousand-year-old Nain Hua. Nian Hua redesigned by a modern drawing technique is consistent with the style of modern junk food and fast-food culture, which unifies visual effects of illustrations, strengthens their influence and conveys their implied meanings more effectively.

### 1.3 Efficacy of Picture Books

Although tactile sensation is not the primary sense of beauty appreciation, it is closely related to visual aesthetics. Arnheim, a famous aesthetician, spoke of four physical sensations and

stated, “art starts with the refection of tactile experience anytime anywhere”. He also said, “tactile sensation plays an important role in forming visual image characteristics, and artistic expression and tactile experience helps us confirm the shape of objects we see”.<sup>15</sup> Touch offered by books can strengthen people’s visual perceptions. This was the reason for selecting a picture book as the primary carrier of the design. Also, as a carrier, a book can help the design develop more functions so that its practicability is strengthened.

Although modern media, such as TV and the internet, can convey information more quickly and conveniently, it lacks the unique interaction of picture books. Picture books combine visual and oral descriptions in the form of books. Since their debut in the 18th century, picture books have become a highly developed and widely used art form for children and families. They have developed from simple entertainment and a medium for imparting knowledge into a complex interactive art form complete with the author’s requirements and structure.<sup>16</sup>

Despite the fact that most picture books in modern Chinese markets contain beautiful images, their pictures are just the result of solidification of animation plots. They do not have the charm of animation in form. Fragmentary pictures cannot express original content and are only symbols to refresh people’s memory of animation. Therefore, the images in these books do not have the function of pictorial language. Also, their

<sup>14</sup> Feng Jicai. The value of Chinese woodcut New Year Pictures and the significance of general survey (general preface). Democracy, no. 3 (2007): 3-7.

<sup>15</sup> David Brett. Rethinking Decoration: Pleasure and Ideology in the Visual Arts. Jiangsu Fine Art Press, 2006, Page 80 [6]

<sup>16</sup> Tare, M, C Chiong, P Ganea, and J Deloache. “Less Is More: How Manipulative Features Affect Children’s Learning from Picture Books.” Journal of Applied Developmental Psychology 31, no. 5 (2010):395-400.

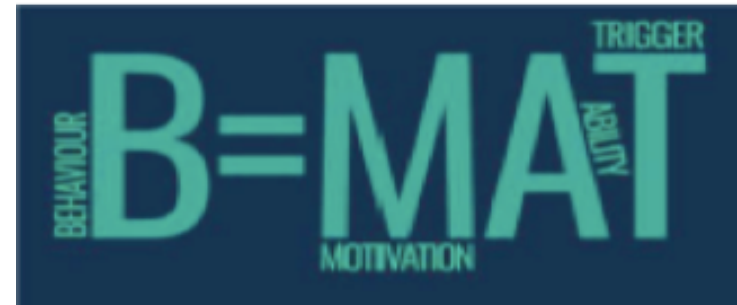
texts are short and straightforward. Most of these books aim to teach the material, which should be changed simply.

In the opinion of the present author, a picture book should be a carrier of harmonious pictures and texts and engage in the art of storytelling through the interaction between images and text. Visual communication has a wide scope regarding its effects, for people gradually develop their ability of pattern recognition from a very young age.<sup>17</sup> Besides, images alongside text in a book makes the book more comprehensive. Readers' understanding of texts can be strengthened through meaningful pictures and vice versa. Hence, pictures and documents supplement each other and not one of them can be dispensed with.

According to Fogg's Behaviour Model theory, to achieve transformed user behaviour, three elements are required: motivation, ability and a trigger, and these three elements must be satisfied at the same time so that conversion is effective. This is because the audiences for this particular picture book are people who are in the top three levels of Maslow's Hierarchy of Needs. They already possess the necessary motivation and abilities, and all they need is a factor to trigger their transformation. As aforementioned, they are motivated but lack the knowledge of how to act. Thus, they need assistance.

The hardest thing in the world is to do the right thing at the right time. So, in promoting conversation, it is necessary to persuade

users at the right time and with proper motives to do what they can.<sup>18</sup> Thus in the designed picture book for this project, information and entertainment have been combined according to the method of edutainment.



<sup>19</sup> BJ Fogg's Behaviour Mode

First, readers place themselves in illustrations in the style of Nian Hua. Readers place themselves within humorous illustrations which comment on the poor dietary habits of fat people in China.

Moreover, illustrations can attract readers to read the book's text for them to become aware of their poor dietary habits. In this way, it encourages them to learn good food nutrition and how to have a healthy diet.

<sup>17</sup> Diamantiknteis, Yvet, and Zsofia Takacs. "Children's Looking Behavior at Different Visual Elements in Detailed Illustrations of Storybooks." (2015).

<sup>18</sup> A Behavior Model For Persuasive Design. 2007. Ebook. Persuasive Technology Lab Stanford University. [http://www.mebook.se/images/page\\_file/38/Fogg%20Behavior%20Model.pdf](http://www.mebook.se/images/page_file/38/Fogg%20Behavior%20Model.pdf).

<sup>19</sup> Persuasive Technology Lab Stanford University. 2007. BJ Fogg's Behaviour Model. Image. [http://www.growthengineering.co.uk/bj\\_foggs-behavior-model/](http://www.growthengineering.co.uk/bj_foggs-behavior-model/) Persuasive Technology Lab Stanford University. 2007. BJ Fogg's Behaviour Model. Image. [http://www.growthengineering.co.uk/bj\\_foggs-behavior-model/](http://www.growthengineering.co.uk/bj_foggs-behavior-model/)

As a result, they will take the book seriously, and knowledge given by the book can influence them effectively so that they can correct their dietary habits.



Figure I-2 How do I trigger users © Jingji Li

## 2. Significant Findings

### 2.1 Traditional Chinese Art Elements

According to the above review of the literature, it is evident that lots of traditional Chinese elements, such as facial makeup in the Beijing Opera and lady portraits during the Tang Dynasty painting “Group portrait of Noblewomen”, could be applied to the design, because adding more traditional Chinese elements can deepen the sense of identity for the Chinese people, and make my visualisation more relevant. To satisfy consumers of different ages and sexes, it is essential to create more than one figure. In character design, graphs in Nian Hua are combined with these two elements: Beijing Opera masks and the Tang noblewomen. Different facial masks are used to express different expressions of the figures. Various meanings of different facial masks can enrich characters and the features of the figures. Noblewomen portraits can be used to enrich female characteristics.

### 2.2 Traditional Iconography

Another finding is traditional Chinese iconography which indicates different meanings. These iconographies are similar to Nian Hua and their unique beauty of forms and decorations, encouraging patriotism and emotion. By applying pattern elements of iconography to costume design, the characteristics of figures can be enriched, and people’s association is strengthened. Furthermore, as a famous traditional art in China, iconography is an intangible element of national cultural heritage and a form of artistic presentation recognised by Chinese. People’s sense of identity of Chinese culture and spirit is

aroused by applying fascinating Chinese culture to the design, enhancing their desire to buy the book.<sup>20</sup>



<sup>21</sup> Peking Opera



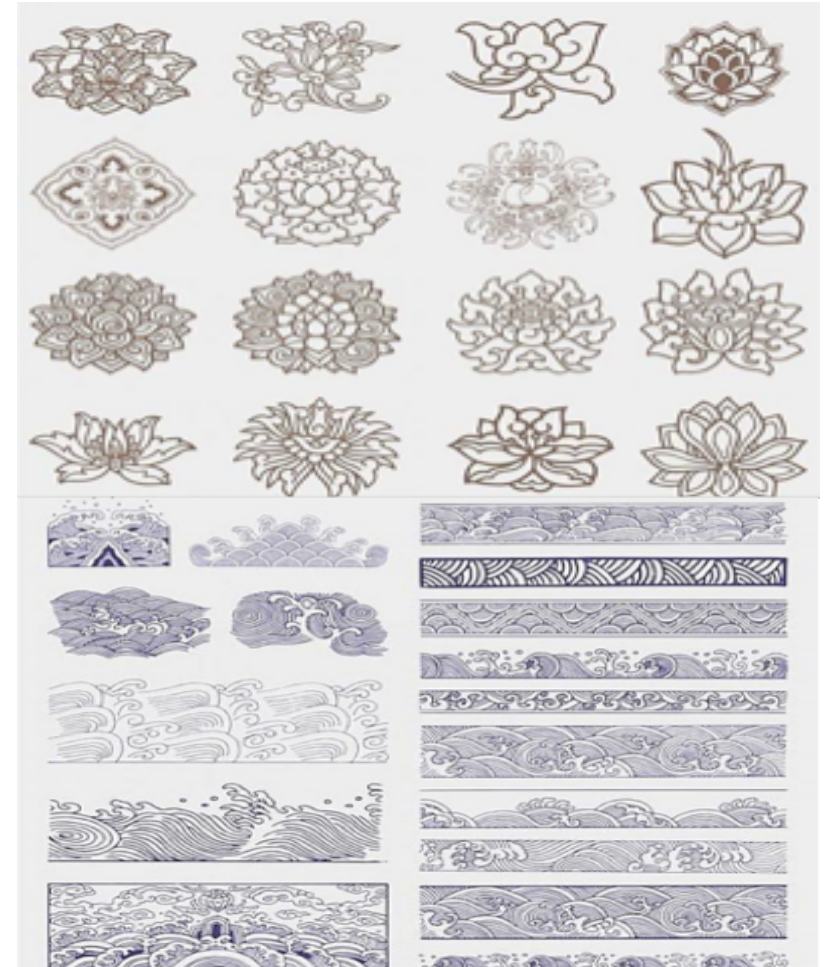
<sup>22</sup> Group Portrait Of Noblewomen

<sup>20</sup> Jack Trout. What is strategy [M]. Beijing: Chinese Financial & Economic Publishing House, 2005.

<sup>21</sup> Peking Opera. 2010. Image. <http://www.nipic.com/zhuanli/692760.html>.

<sup>22</sup> Zhou Fang. Group Portrait Of Noblewomen. Image. [http://blog.sina.com.cn/s/blog\\_d9e4fd770101nqqq.html](http://blog.sina.com.cn/s/blog_d9e4fd770101nqqq.html).

<sup>23</sup> Chinese Traditional Iconography. 2018. Image. Accessed April 12. [http://www.cxtuku.com/pic\\_843964.html](http://www.cxtuku.com/pic_843964.html)



<sup>23</sup> Chinese Traditional Iconography



## 2.3 Designing a Card Game

A picture book is an effective carrier as it offers both a visual and tactile experience. Besides, as a physical artefact, a picture book is portable and can have more functions added to it. Therefore, a card game was included to encourage direct interaction with users. The literature research has indicated that game interaction is a useful interactive mode for changing behaviour because games can prompt users to be actively involved, and through practice, game activities can change behaviour and habits.<sup>24</sup> Also, players have a right of initiative selection in this game. When people change their bad dietary habits through their behaviour, they not only change their habits and become healthy but also become more confident with a new routine of doing things. Readers can choose healthy diets by adhering to the rules and standards in the book. They can also plan their dinner the next day by using these cards. In the course of interacting with the game, they can change their habits, acquire knowledge about food nutrition as well as how to select healthy food.



<sup>24</sup> Filippou, Justin, Christopher Cheong, and France Cheong. "Improving Study Habits Using a Behaviour Change Framework Incorporating Social Motivation and Gamification." Paper presented at the Pacific Asia Conference on Information Systems, Pacis, 2014

## 3. Methodology Framework

A methodology is what can be used to help to capture useful information and insights to inform the storytelling and visual communication design in this book. There are fundamental rules and ideas for combining science, humanities and art to create the understanding of solving problems through visual storytelling. The design and development of my picture book adhere to a multi-methodological framework aimed at capturing evidence-based insights to inform the design and development of the picture book and the associated game and artefacts. These three disciplines: art, science and humanism, must be well integrated and triangulated to ensure balanced thinking and effective design practice. The author is of the opinion that this holistic methodological framework will make the design original, useful, functional and be able to produce great outcomes informed by relevant and reliable human factors.

### 3.1 Methodological Framework

To create a reliable design for solving the obesity problem in China, I have focused the study on the following "Science-Humanism-Art" methodological framework:

1. Science: social sciences involve characteristics and traditional Chinese beliefs, psychology and Chinese parenting. For example, the tendency to spoil children by providing an excessive allowance can cause obesity in children. Understanding these two subjects is the key to this study. The design attempted to integrate knowledge into visual storytelling.

2. Humanities: humanities can aid understanding of culture and information relating to health, behaviour, needs and wants, philosophy, and so forth. Also, to solve obesity problems in this study.

3. Art: The heuristic approach allows for framing the design and story through a trial and error process. The creative process involves constant modifications, alterations and experimentation. “A designer could obtain a satisfactory solution through the usage of a heuristic method. Although the solution is not perfect, it can help the designer to achieve the goal.”<sup>25</sup>

Using the heuristic method by trial and error comes from a great deal of originality, ideas and useful information about the sketch and narrative patterns, allowing for the implementation of design, creation, and a making-of preliminary sketches and templates. Also, taking humanities into account makes products more people-oriented and easy to use. To take full advantage of knowledge in art, science, and humanism, qualitative research was undertaken with the purpose of ensuring that the collected data is authoritative and reliable. Through the use of the literature review and learning from experts, this method allows for the accumulation of knowledge, opinions, and information.

### 3.2 Research Design

Figure 3-3 introduces the design of the research methods, and Figure 3-4 shows the methods and tools which have been used in this study. With regards to data collection, according to evidence-based design, a health-related design should involve different fields. Hence, a literature review was conducted to collect data from aspects of social support, control, positive



Figure 3-1 Methodology Frameworks © Jingji Li

<sup>25</sup> "Heuristic". 2018. En.Wikipedia.Org. <https://en.wikipedia.org/wiki/Heuristic>.

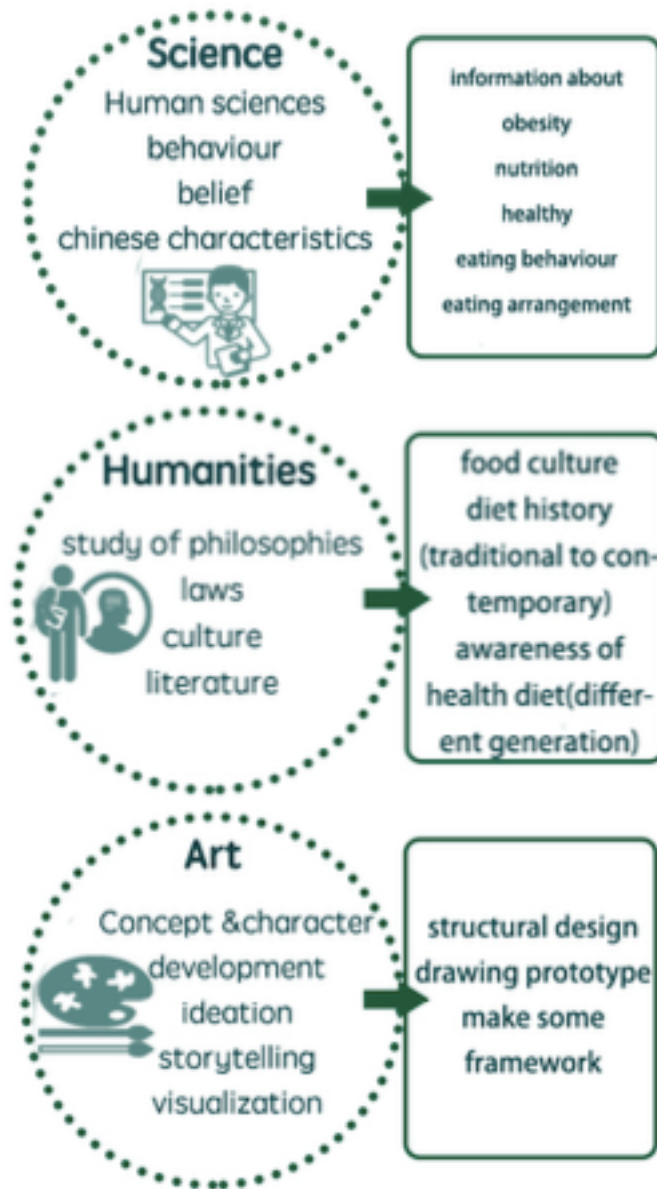


Figure 3-2 Details of Methodology Frameworks © Jingyi Li

distractions, quality and safety, and exercise and satisfaction so as to understand consumers' demands fully.



Figure 3-3 Research Methodology Plan © Jingyi Li

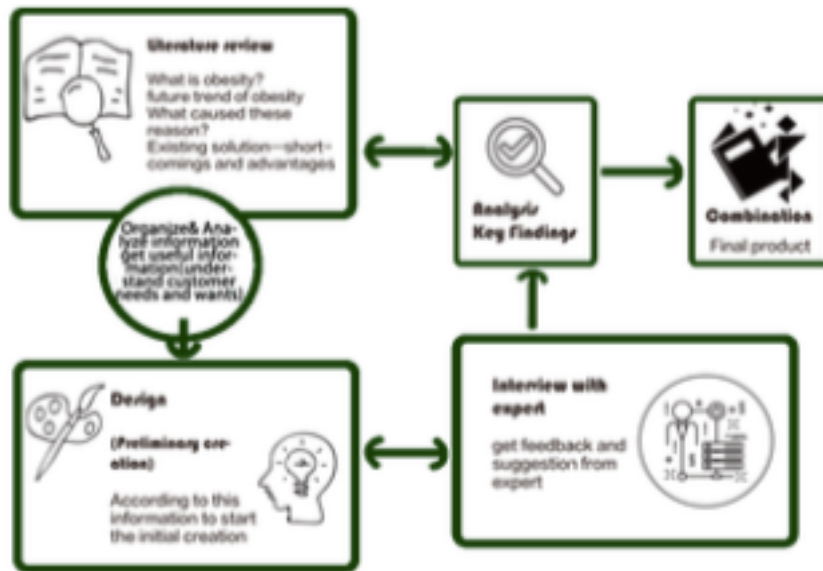


Figure 3-4 Detail of Research Methodology Plan © Jingyi Li



Figure 3-5 Health and Wellbeing Design covered areas in Evidence-based design © Jingyi Li

This method provides more comprehensive data and information, resulting in more useful information in later data analysis and more inspiration during design.

The heuristic method was applied to design. Intuition and aesthetic foundation of artists were employed, and the original design was conducted in combination with the data obtained from the literature review. Also, the information from the literature review informs the heuristic process in this project. Then, a revision was carried out until a satisfactory design was realised. Afterwards, experts were consulted to obtain feedback. and modifications and the perfecting of the design were conducted.

### 3.3 Consultation with the Expert

By consulting professional designers, the latest information about visual communication, the traditional Chinese element, and painting expression techniques can be discussed. The ideas for the picture books and two-dimensional designs can be improved through consultation. The first purpose of the consultation is to identify any potential deficiencies in the design by consulting with a professional and experienced designer. The second purpose is to consult a professional dietician. Her expertise is a necessity to propose more scientific design outcomes and reliable solutions. Also, it can help the designer learn different opinions so that the design can be more comprehensive, purposeful and effective.

I consulted with Professor Zhang Jun, a visual communication designer, during the early stages of design. When shown the earlier sketches of character designs, she provided many helpful suggestions. She said: “To further strengthen the core visual language, you still need to study graphics, text, and information.” Her words provided some useful inspiration and helped me have



a more profound understanding of Nian Hua to improve the characters. I had some new ideas after this conversation: I thought that I needed to investigate the relationship between visual design and living, cultural, humanistic and concern about the humanities, as well as artistic features of the visual design. Therefore, it is necessary to creatively expand the application of visual design to reflect and enhance the new value of visual design. Using the characters on a variety of daily artefacts and peripheral products, enabled the message to become a reminder for my audience/customers to engage effectively in behaviour change.

## 4. Concept Development

### 4.1 Character Development

#### 4.1.1 Development of Three Main Characters

To meet the needs of consumers of all ages and genders, the figures of a child, a female adult, and a male adult were designed to communicate bad dietary habits. With regards to facial design, the facial features with a style of Nian Hua were created by using masks from the Beijing Opera and the Noblewomen's portraits of the Tang Dynasty for reference. The following figures show the evolution of facial features and preliminary overall characters. Other minor characters, were designed similarly.

The boy's and male character's face evolved from the Beijing Opera. By combining Beijing Opera's exaggerated facial features and the head proportions of the traditional Nian Hua characters,

it makes character expressions unique. It also retains the exclusive festive atmosphere of the Nian Hua, rendering them more interesting and humorous.



Figure 4-1 Evolution of the Character's Face Setting © Jingyi Li

For the face of the female character, the unique makeup of Tang women in the famous Chinese painting from the Tang Dynasty was selected, named “Group Portrait Of Noblewomen”. After combining it with the features of the Nian Hua style character, the character is rendered with a sense of humour, and also possessing a trace of classical beauty. The Beijing Opera, Tang lady figures, and Nian Hua are the most familiar traditional art elements to the Chinese people; the author has great confidence that these characters will be well received and respected.

The reason for combining these three elements is to arouse the national and cultural feelings of the Chinese audience, as well as enhancing the attractiveness of the characters.

For the boy character, the hairstyles and clothing retain the style of Nian Hua. The ancient Chinese traditional hairstyle and clothes for children are in place to render authenticity to the Nian Hua. A set of modern Chinese school uniforms for him were also used so that the character can appear in different scenes without creating offence. Regarding the detail, modern Chinese youth’s favourite junk food and high-calorie snacks were added for him to express how fast food culture has impacted on the Chinese traditional culture.

In the overall setting of the female character, the clothing mimics the ancient traditional costumes that follow the Nian Hua style. However, the hairstyle has evolved from the figure of the Tang Dynasty woman to emphasise the facial characteristics. The details are that many high-calorie desserts and snacks, which are very popular with modern Chinese women, have been added for this character. Many contemporary Chinese women consume unhealthy snacks instead of healthy meals. These snacks result in obesity. The traditional fan and hairpin were therefore replaced

with crepes and chocolate bars, and the bag was replaced with potato chips. Humour was used to comment on this bad habit.

For the male character, the hairstyle is based on patterns of the Beijing Opera where the men’s hairstyles date back to the period of the Republic of China. The clothing style reflects the traditional Chinese Nian Hua. In the details, because of the hectic modern life, greasy fast food and some unhealthy street food snacks that contemporary Chinese men consume a lot of in their lifetime were included for this character. These graphical settings aim to arouse people’s attention to their daily intake of junk food.



Figure 4-2 Preliminary Drawings of Boy Character © Jingyi Li



Figure 4-3 Preliminary Drawings of Female Role © Jingyi Li



Figure 4-4 Preliminary Drawings of Male Character © Jingyi Li



Figure 4-5 Implication of the Patterns © Jingyi Li

After completing the characters' first draft, the costume design of the figures was altered, and Chinese patterns were applied to all the costumes, rendering them culturally more significant. For instance, the swastika, an auspicious pattern in traditional Chinese culture, and the longevity pattern indicating long life were applied to the clothes of the children. The female clothes were adorned with key patterns symbolising endless riches, honour and purity, to reflect traditional Chinese culture. The male costumes used the Fu pattern, which stands for happiness, and the cloud pattern symbolising promotion and good luck.





Figure 4-6 Final Draft of Three Main Characters © Jingyi Li

#### 4.1.2 Development of the Gate God

There are also four settings for the Gate God (门神). This character is the traditional guardian god of folk belief, used for exorcising evil spirits, guarding the family, protecting peace, improving utilitarianism, and giving auspiciousness. Gate Gods are popular patron Saints in China.

The Gate Gods designed in this project can be divided into two groups: the military commander, and the civil servant. Because in ancient times, the military commander Gate Gods brought morality by exorcising the townhouses; and the civil servant Gate Gods possessed the power to bring in wealth and treasure, the felicitous wish of making money, and promotion to knighthood.



<sup>26</sup> Chinese Traditional Gate God

Therefore, the figure of the military commander regarding the general design should be more majestic and with angry facial features. In the design of the civil servants, the facial expressions and facial elements should be kind and sympathetic. All characters should boast the exaggerated facial features of the Nian Hua paintings and bright colours. The overall style of the Chinese Nian Hua will be adopted, preserving the whole atmosphere of New Year art, bringing a sense of joy and auspiciousness. In the overall setting of the military commanders, the traditional styles were inherited from the military, for example, the use of armour and hand-held weapons. Only their facial expressions and body proportions have been modified. The intention was not only to retain their dignity but

<sup>26</sup> Chinese Traditional Gate God. 2018. Image. Accessed April 12. <http://www.quanjing.com/imgbuy/PC230-01.html0>.



also to add a touch of humour. For the clothing, a silk ribbon was added, because in ancient Chinese legends, these are for the sole use of the gods, and this inclusion can help to strengthen the mystery and deterrent effect of the character.

With regards to the civil servants, not only were their expressions changed to be kinder and more festive but also to further distinguish them from the military commanders. What they hold in their hands are the ancient official hats. In the ancient Chinese Nian Hua, people like to use images with homophones to express and convey good meaning and blessings. Thus a deer was added to the side of one civil servant because the pronunciations of deer (鹿) and 禄 (meaning the ancient official's salary) in Chinese is the same. They are both pronounced as "Lu". So the deer and the civil servant are combined to express the meaning of promotion in the official post and an increase in salary. This could strengthen their connection to auspiciousness.

A cool blue and dark green were selected for the military commanders in the final colouring. It was hoped to strengthen the sense of harshness as well as giving a "cool" feeling to attract younger audiences. For the civil servants, warm colours such as yellow, orange, red, and gentle greenery were picked to deepen the sense of graciousness and gentleness, and allow people to feel a closer and warmer relationship with these characters.



Figure 4-7 Character Setting of Military Commander © Jingji Li



Figure 4-8 Character Setting of Civil Servants © Jingji Li



Figure 4-9 Final Draft of Military Commanders © Jingyi Li



Figure 4-10 Final Draft of Civil Servants © Jingyi Li



## 4.2 Creating the Story Plots

To help readers understand the book, and form an emotional attachment with it, scenes were designed which relate to the nutritional and lifestyle habits of each character in order to illustrate their poor habits, explain the harm of junk food, and provide health advice.

This scenario mainly describes the modern Chinese teenager who likes to stock up on many high-calorie snacks in the drawers of their desks so that they can eat them during breaks between lessons, sometimes even during the class itself. Such eating habits can cause them to ingest too many calories and lead to obesity. There was also an illustration of the amount of time to exercise needed to burn off this high-calorie food.

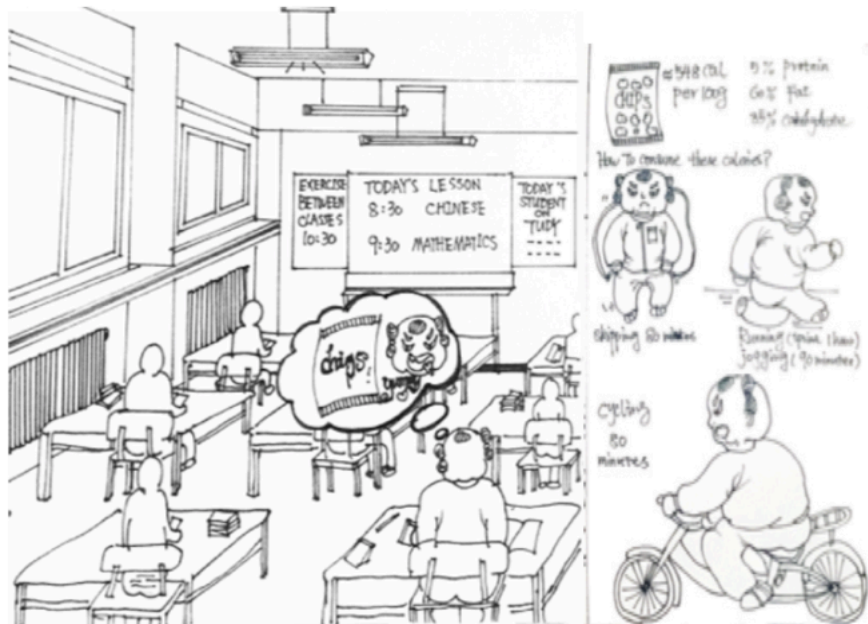


Figure 4-11 Morning Scene of the Boy Who Wants to Eat in Class © Jingyi Li

This scene is the continuation of the previous scene because he only eats snacks in the morning, which are not filling and lead to him eat an oversized pizza alone during his lunch break. This dietary habit will impose a specific burden on the stomach, and it will lead to obesity.



Figure 4-12 Afternoon Scene of the Boy - Lunchtime (big unshared pizza) © Jingyi Li

This scene describes the way the boy goes home after school. He always goes to the canteen to buy high-calorie desserts like chocolates and cones. This behaviour will not only lead to excessive calorie intake but also disrupt his evening meal. Eating too late can cause indigestion, and consequently fat accumulation, eventually leading to obesity.



Figure 4-13 Night Scene of the Boy- Dessert time after school © Jingyi Li

The following scene comments on the habits of most contemporary Chinese working women. If they rise late, they fear to be late for work, so they skip breakfast. This behaviour is the same as the boy's habits, as demonstrated before, and because there is no feeling of satiety, it will lead to excessive levels of hunger at lunchtime and thus overeating at lunch. Also, it stretches the stomach, making people more likely to feel hungry, and encouraging further overeating.



Figure 4-14 Morning Scene of the Woman-Skip Breakfast © Jingyi Li



This scenario shows that the woman's office is often filled with high-sugar snacks and dessert, such as cakes and candies. Excessive intake of sugar will not only lead to obesity but also oxidation of the skin and accelerate skin ageing. Therefore, one should only consume a moderate amount of sugar.



Figure 4-15 Afternoon Scene of the Woman- Office Full of Snacks © Jingyi Li

This scene portrays the habits of many of the younger generation of Chinese women. They often stay up late to watch TV shows and consume junk food throughout the evening. Besides causing indigestion, overeating is the primary cause of obesity and other diseases.



Figure 4-16 Night Scene of the Woman- Staying up late eating and watching dramas © Jingyi Li

The next scene tells the story of contemporary Chinese men who like to drink beer with friends while watching a game late into the night. That is a very common bad habit. Similar to the previous female scenes, staying up late can have many harmful effects on the body. In addition, beer not only breaks down the muscular tissues, but it is also a high-calorie drink. Therefore, drinking in the evening results in the excessive intake of calories and consequently leads to obesity.



Figure 4-17 Scene of the Man-Watching games and drinking beer in the evening with friends  
© Jingyi Li

This scenario depicts the majority of Chinese people's fondness for eating roadside barbecue. Roadside barbecues are very greasy, unhealthy and unsanitary foods.



Figure 4-18 Scene of the Man- Have a barbecue at the roadside after working overtime  
© Jingyi Li

This scene is created to alert the majority of Chinese men who prefer to stay at home on weekends playing computer games and neglecting to leave their homes. Often, they consume an excessive amount of instant noodles and instant rice. These kinds of instant foods can even be eaten three times a day. These foods contain a lot of unnatural seasonings and preservatives that are unhealthy.



Figure 4-19 Scene of the Man- Stay at home on weekends with eating unhealthy fast food  
© Jingyi Li

#### 4.3 Adopting the Traditional Nian Hua Meaning into My Designs

1. “every year have enough things to spend” (年年有余)
2. “everything came satisfactorily” (事事如意)
3. “being well throughout the year” (四季平安)

These three pictures represent positive and morally virtuous situations. The pictures are designed to evoke new emotions and the understanding that obesity can bring in bad influences and omens. Because the traditional Nian Hua is based on homonyms to convey their good wishes, these homophones were translated into visual stories that embody relevant meanings in the prevention of obesity.

“Every year have enough things to spend” (年年有余) represents the homophone of a fish (鱼). The Chinese word “Fish” (鱼) is phonetically similar to 余 (meaning “is enough” in Chinese). So, the original squid was changed into a fish bone to depict excessive eating. Then it means that there is no more left. The author hopes that this picture can trigger people’s thinking, especially the behaviour of doting parents. It is also hoped that the meaning of the image is powerful enough not only to instil awareness in doting parents and grandchildren but also to trigger a behavioural change in the way they feed their children.





Figure 4-20 Preliminary Drawings of Redesigned Nian Hua – “every year have enough things to spend” © Jingyi Li

Also, this: “Everything came satisfactorily” ( 事事如意 ), the homophones are the lion ( 狮 ) and the persimmon ( 柿 ). These are homophones with ( 事 ). These two objects come together as ( 事事 ) (meaning is everything in Chinese). So I painted the persimmon being eaten until the overweight lion is unable to move. This humorous expression is created in order convey the effects of obesity due to over-eating, hopefully triggering positive behavioural change.



Figure 4-21 Preliminary Drawings of Redesigned Nian Hua – “everything came off satisfactorily” © Jingyi Li





Figure 4-22 Preliminary Drawings of Redesigned Nian Hua - "being well throughout the year"  
© Jingyi Li

This is: "being well throughout the year" ( 四季平安 ). The homophones are the Chinese rose ( 月季 ) and vase ( 花瓶 ). In this picture, they are homophones with the four seasons ( 四季 ) and peace ( 平安 ) respectively. So the vase was shown to be a broken vase, and the flowers in the image are withered. This homonym image was used to express the effect of obesity on physical health, to emphasise that obesity can also cause other diseases, and to trigger positive change for a good, healthy body.

#### 4.4 Design and Development of Card Game

In the design and development of the card game, the system of colour cognition was explored. There are red, green, blue and yellow cards. Red and yellow cards indicate high-calorie and high-risk foods, while green and blue cards stand for healthy foods and exercise. Through this classification, users can make a rapid judgment about how good or bad a particular food is. Besides, the use of the green colour is intended to help users to remember the healthy food. To further enhance the fun of the card game, the Four-Pleasure Model was used in the design. This model includes Physio- pleasure, Socio-pleasure, Psycho-pleasure, and Ideo-pleasure. By considering these four aspects, the card games' usability is enhanced along with the user's pleasure when they are playing games.

According to the paper, "energy intake must be less than energy consumption" before one can lose weight successfully<sup>27</sup>; the card decks present useful methods for preventing obesity. Firstly, a formula is provided for calculating the consumers' basal metabolism (intake energy = food intake per day, energy consumption=basal metabolism + physical activity and exercise

<sup>27</sup> Miller-Jones, Edward R., Weight Loss, and Healthy Eating. "Easy Tips to Lose Weight." Fastbook Publishing (2012).

+ food heat effect), and then the customer uses the cards to arrange their diet with their metabolic rate.

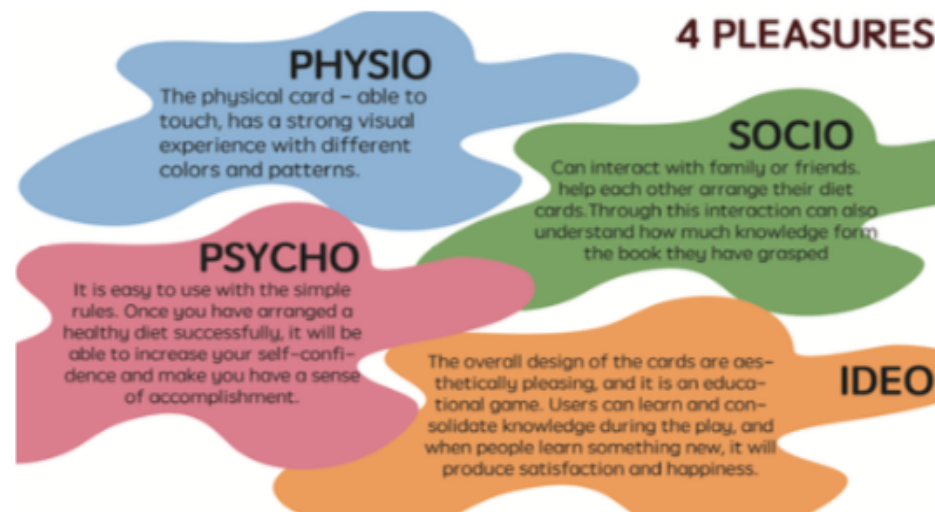


Figure 4-23 Use of 4 Pleasure Model © Jingyi Li

When users use cards to arrange their diet, they need to follow these rules:

1. Each meal must contain a green card.
2. A maximum of one red or two yellow cards can be selected for a three-day meal, but the red and yellow cards cannot be in the same meal at the same time.
3. After choosing a red card, it is necessary to add a blue card for the day.
4. The total calories of the day's card cannot exceed the calorie allowance (it can be calculated according to the formula provided).

In order to meet the needs of customers of different genders, in the packaging of this card game, it is also divided into three designs.



Figure 4-24 Display of Card Design © Jingyi Li



Figure 4-25 Display of Card Design-2 © Jingyi Li





Figure 4-26 Detail of Red Cards © Jingyi Li





Figure 4-27 Detail of Yellow Cards © Jingyi Li

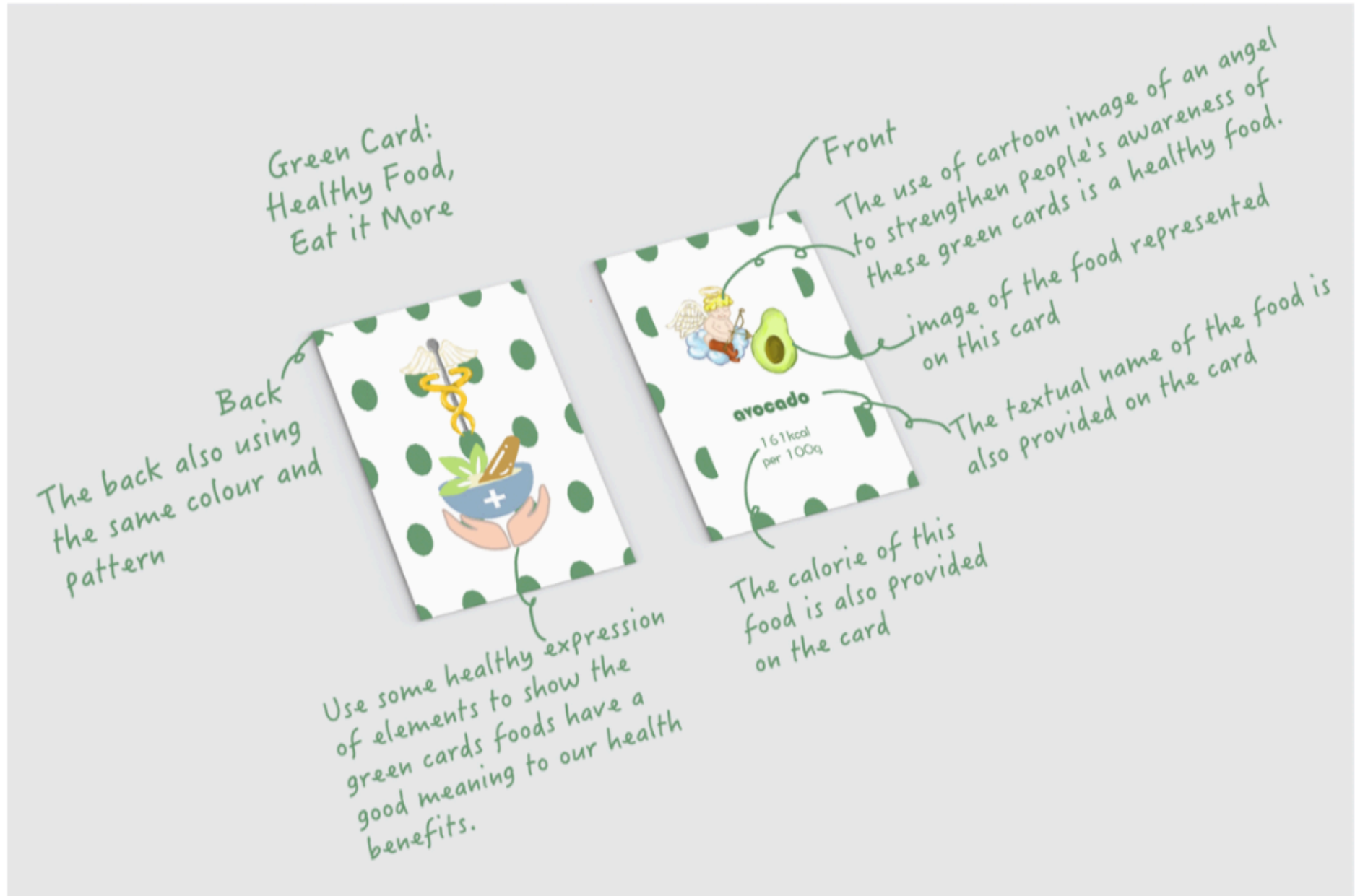


Figure 4-28 Detail of Green Cards © Jingyi Li

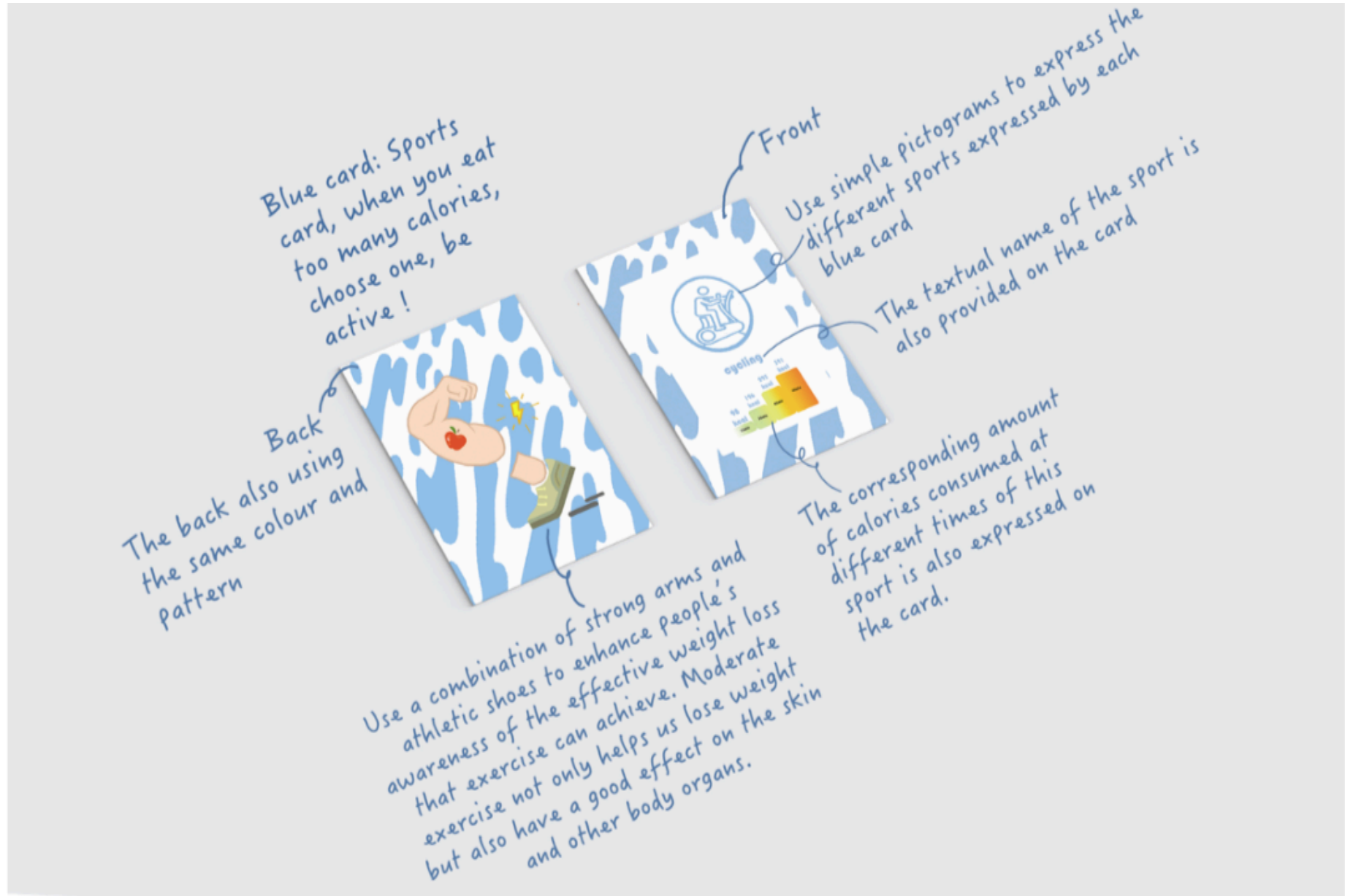


Figure 4-29 Detail of Blue Cards © Jingyi Li



Figure 4-30 Packing Design of Cards © Jingyi Li



## 5. Final Design and Commercial Applications

The following pictures in this chapter have demonstrated the design. The illustrations in the picture book have shown some typical poor dietary habits of obese people in China, and information about food and nutrition. Exploring the application of similar pictures to other applications is important. People need reminders. If these illustrations are used everywhere in daily life, people are reminded of good self-management and are more likely to avoid fast food, junk and unhealthy foods.

### 5.1 Designing the Picture Book

The book is designed following Fogg's Behaviour Model to motivate and trigger behaviour change. Firstly, the readers' attention is drawn to the characters in the book through the illustrations, and the intention is to strengthen people's sense of substitution through using the design of New Year pictures style. Nan Hua images are socio-culturally appealing to the Chinese audience. It enhances their sense of surrogacy. After the initial substitution/adaption, readers can experience more profound feelings and resonance from the scenes displaying the bad diet habits of these characters. The purpose of the picture book is to trigger readers to transform their poor dietary habits into healthy ones. The readers then follow the explanation and knowledge of the diet and nutrition, and the calories burnt by different exercises as described in the book. Finally, readers who have obtained this information need to consolidate their new knowledge with practice, hence the inclusion of the last part: the important card games. This method allows users to master and combine what they learn about healthy diet and food nutrition from the book in a relaxed and beneficial way.

The picture book constitutes the most important component of this practice-based research study, and it has three important elements to achieve its aim:

1. The use of visual storytelling to promote understanding and the causes of obesity in a culturally appropriate and humorous way.
2. Impart knowledge about healthy eating.
3. The use of card games to put theory into practice, to achieve effective behavioural change.

The following images describe the visual storytelling approaches in the picture book.

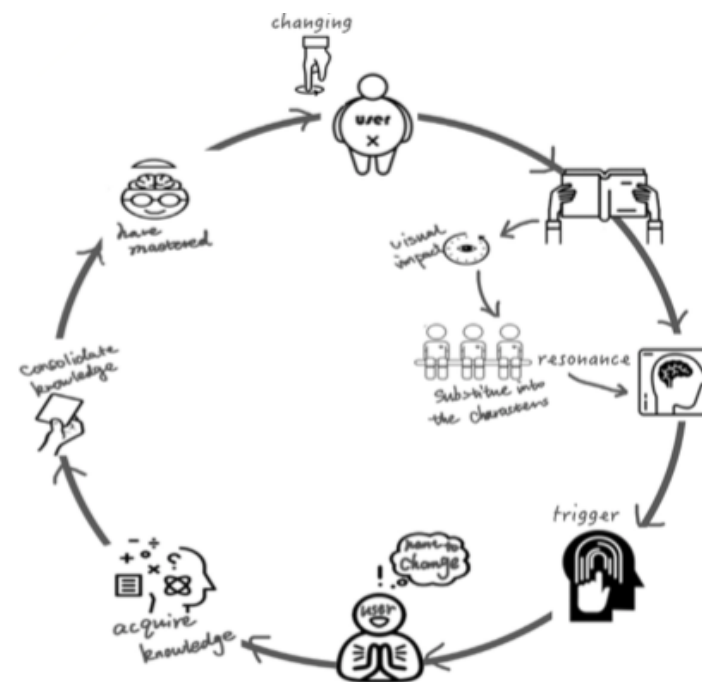


Figure 5-1 Instructions Map of Book Design © Jingyi Li

## Mockup of the Picture Book



Figure 5-2 Mockup of Select Pages of the Picture Book-1 © Jingyi Li



Figure 5-3 Mockup of Select Pages of the Picture Book-2 © Jingyi Li





Figure 5-4 Mockup of Select Pages of the Picture Book-3 © Jingyi Li





Figure 5-5 Mockup of Select Pages of the Picture Book-4 © Jingyi Li



Figure 5-6 Mockup of Select Pages of the Picture Book-5 © Jingyi Li





Figure 5-7 Mockup of Select Pages of the Picture Book-6 © Jingyi Li



Figure 5-8 Mockup of Select Pages of the Picture Book-7 © Jingyi Li



## 5.2 Poster Design and Development

Posters are a type of advertising. They are designed to attract people's attention. Posters can be published and broadcast in the media, or posted in public places for enjoyment purposes. They spread information and encourage discussion in public spaces, and raise people's awareness of obesity. The use of Nian Hua in these posters is a unique way to promote healthy living and prevent obesity in China. The following pictures highlight the illustrations used in the posters.



Figure 5-9 Display of Posters-Poster in Restaurant 1 © Jingji Li





Figure 5-10 Display of Posters-Poster in Restaurant 2 © Jingyi Li





Figure 5-11 Display of Posters-Poster in Office 1 © Jingyi Li





Figure 5-12 Display of Posters-Poster in Office 2 © Jingyi Li





Figure 5-13 Display of Posters-Poster in Library © Jingyi Li





Figure 5-14 Display of Posters–Household Poster 1 © Jingyi Li





Figure 5-15 Display of Posters—Household Poster 2 © Jingyi Li





Figure 5-16 Display of Posters–Household Poster 3 © Jingyi Li





Figure 5-17 Display of Posters—Household Poster 4 © Jingyi Li





Figure 5-18 Display of Posters—Poster in Public Places 1 © Jingyi Li





Figure 5-19 Display of Posters—Poster in Public Places 2 © Jingyi Li





Figure 5-20 Display of Posters-Poster in Public Places 3 © Jingyi Li





Figure 5-21 Display of Posters-Signage on Bus Stops 1 © Jingyi Li





Figure 5-22 Display of Posters-Signage on Bus Stops 2 © Jingyi Li





Figure 5-23 Display of Posters-Signage on Bus Stops 3 © Jingyi Li





Figure 5-24 Display of Posters-Signage on Bus Stops 4 © Jingyi Li

### 5.3 Applications of Visual Stories on Consumer Products

These visual stories are printed on cups, notebooks, eco-friendly bags, mobile phone cases, and other essential products commonly used in daily life. These applications play an important role in reinforcing the messages in a fun and humorous way. In the process of weight loss and changing dietary habits, the hardest thing is to resist the temptation of pleasant tasting junk foods. So these items printed with illustrations can be timely reminders so that users can avoid the temptation to eat them.

#### Lunch Box



Figure 5-25 Display of Consumer Products – Lunch Box 1 © Jingyi Li





Figure 5-26 Display of Consumer Products – Lunch Box 2 © Jingyi Li

## Ribbons



Figure 5-27 Display of Consumer Products – Ribbons © Jingyi Li





Figure 5-28 Display of Consumer Products – Greeting Cards I © Jingyi Li

## Greeting cards



## Greeting cards

Figure 5-29 Display of Consumer Products – Greeting Cards 2 © Jingyi Li



## Bags



Figure 5-30 Display of Consumer Products – Bags 1 © Jingyi Li



Figure 5-31 Display of Consumer Products – Bags 2 © Jingyi Li





Figure 5-32 Display of Consumer Products – Bags 3 © Jingyi Li

## Cups



Figure 5-33 Display of Consumer Products – Cups 1 © Jingyi Li





Figure 5-34 Display of Consumer Products – Cups 2 © Jingyi Li



Figure 5-35 Display of Consumer Products – Cups 3 © Jingyi Li





Figure 5-36 Display of Consumer Products – Cups 4 © Jingyi Li



Figure 5-37 Display of Consumer Products – Cups 5 © Jingyi Li



## Phone Cases



Figure 5-38 Display of Consumer Products – Phone Case I © Jingyi Li



Figure 5-39 Display of Consumer Products- Phone Case 2 © Jingyi Li







Figure 5-40 Display of Consumer Products – Phone Case 3 © Jingyi Li



## Socks



Figure 5-41 Display of Consumer Products – Socks © Jingyi Li



## Hoodie



Figure 5-42 Display of Consumer Products – Hoodie 1 © Jingyi Li

## Hoodie



Figure 5-43 Display of Consumer Products – Hoodie 2 © Jingyi Li



## Calendar



Figure 5-44 Display of Consumer Products – Calendar 1 © Jingyi Li

## Calendar



Figure 5-45 Display of Consumer Products – Calendar 2 © Jingyi Li



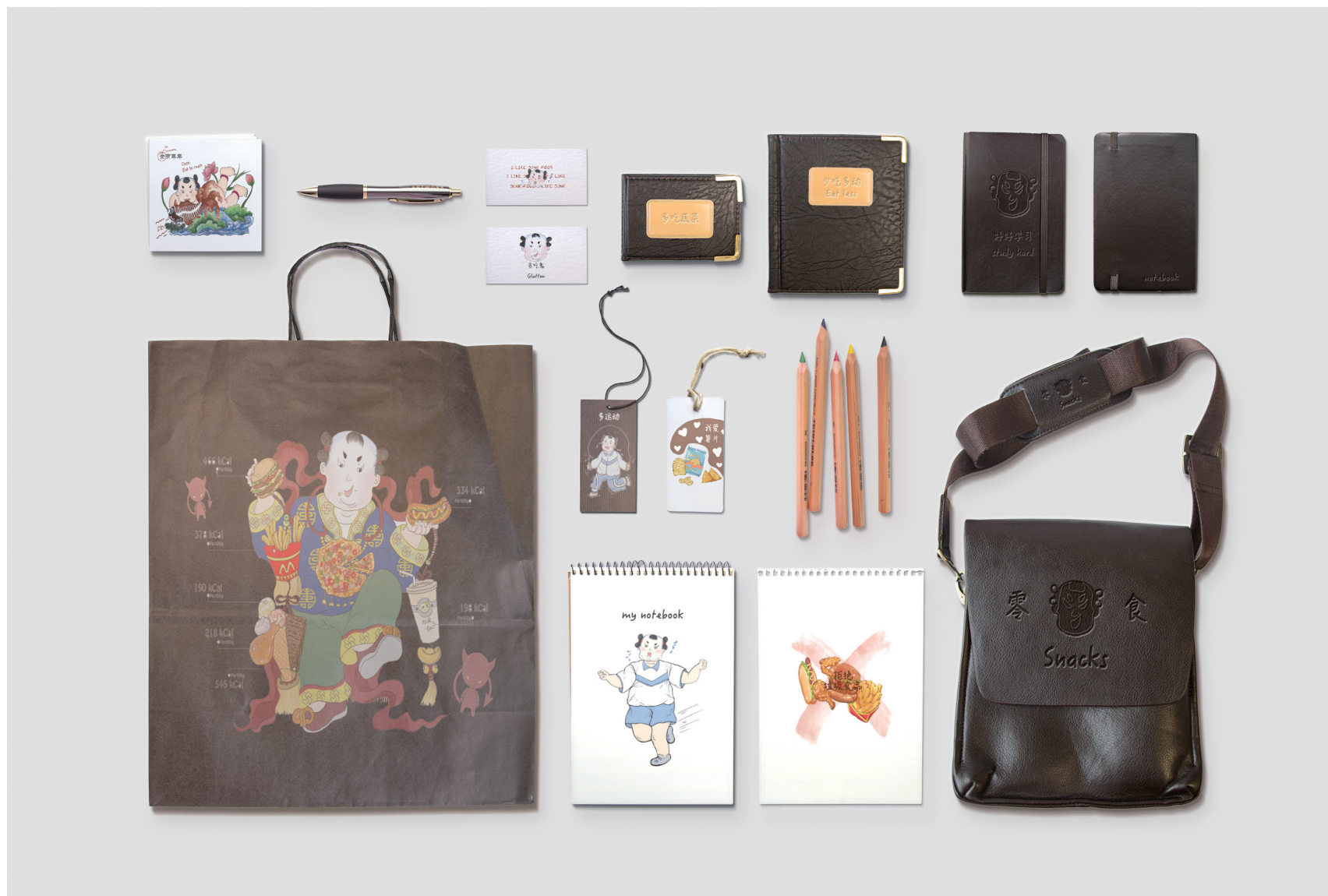


Figure 5-46 Display of Consumer Products –Products for Women © Jingyi Li



Figure 5-47 Display of Consumer Products -Products for Men © Jingyi Li





## 6. Discussion and Conclusion

This thesis comprises two major components. First, the design theory and principles to understand the audience and inform the design and development of the practical work. The second part of this dissertation consisted of the design and development of a variety of visual storytelling techniques based on the understanding and findings of the written report.

The significant part of the design principle and theories have been sourced from many sources. The understanding, knowledge and insights that inform the practical part of this thesis need to be interdisciplinary. A multidisciplinary framework of art, science, and humanities can produce a more reliable result. The prevention of obesity and the challenges faced by designers in designing preventive measures that can efficiently reduce unhealthy eating habits, nutrition and behavioural change would require a holistic and interdisciplinary approach, such as the one that this project has applied. Science, humanities and art have been discussed in these three sections. Science has enabled the author to understand the reason that obese people suffer as a result of their poor habits. Humanities, such as Maslow's Hierarchy of Needs, the Four-Pleasure of Design, and Fogg's Behaviour Change Model, allowed me to understand how people will psychologically react to my various design proposals. Moreover, art, which is a creative process, has enabled me to apply theory and principles from the heuristic and scientific studies through a trial and error process to come out with various visual communication strategies; storytelling is produced through the historical, cultural and auspicious emotional attachment to the Chinese Nian Hua.

Nian Hua is one of the most respected and auspicious visual communications for the Chinese throughout the world, and it has

- broad social and cultural meaning. These meanings are usually
- about health, safety and prosperity. It is visual communication
- that is psychological, and meaningful to the Chinese. One of the
- essential messages is that Nian Hua is supposed to convey
- through humour, fear and emotion.

- In this project, I have researched genuinely on some of the more
- scientific evidence, such as the psychology, cultural, emotion,
- belief, and the psychology of Chinese thinking. I have also
- included knowledge and insights from the humanities, such as
- the Maslow's Hierarchy of Needs, Four-Pleasure of Design and
- the Fogg's Behaviour Change Model. These scientific and
- humanity insights have combined to inform and shape a variety
- of design outcomes to change the various bad habits that lead to
- the obesity problem in China. I have used a heuristic method to
- design three characters and the four Door Gods to communicate
- the problem of obesity in a humorous, jovial manner. These
- characters have been designed to be readily applied to various
- artefacts to spread the message. One of the challenges in the
- character decision is to ensure that the pictures of the character
- follow Nian Hua tradition which represents good health, while my
- characters appear to be plump, I intended to communicate the
- problem in a humorous way rather than as a man shaming the
- victim. It is hoped that by humorously picturing obesity, it will be
- well received and acceptable by young people rather than being
- too serious and thereby shunning the participation of the younger
- generation.

- I have designed the following to spread the message:

- 1. A picture nutrition guidebook
- (Picture books are a suitable carrier. It cannot only carry
- scientific knowledge about food nutrition and pictures that I have
- designed combined with humanities about Chinese culture and
- belief through the heuristic approach, but it also enabled me to



add and design more functions to enhance its practicality. Besides, the information and knowledge in this book are from scientific fields; they are more reliable and will make users have no terrible influence when practising them.)

## 2. A card game

(Because knowledge will be forgotten quickly without using and practising it. Therefore, combined with card games, through the way of entertainment, let them practise and apply this knowledge in the game, which can help the reader to change the bad eating habits more effectively, and will not cause pressure. By combining colour perception systems to set foods into a different colour, such as the healthy foods as green cards, because the green colour can more effectively enhance audience memory of these foods. Combining scientific theory into the design can make it more useful.)

## 3. Posters and applied images of the three characters on tee shirts, lunch boxes etc., such as I showed in Chapter Five of my report.

(I have also experienced the process of this change, and I was knowing deeply that changing bad habits requires constant persistence. So, I applied these illustrations to posters, bags, cups, lunch boxes and other typical daily necessities to remind the audience: do not give up easily, insist on, defeat the temptation of junk food, complete the change, believe in yourself, and achieve self-actualisation. Because these humorous images have a rich humanistic meaning and folk features, they are more appealing than ordinary text and pictures. Also, they express information in a relaxed and entertaining way which will not put pressure on users. Instead, they can motivate them. So these pictures are the best choice for reminders.)

I believe this approach would work well for current teenagers not only in China, but also in other western countries as well. I have hoped this entire product will be used to remind teenagers to be concise about lousy eating habits, their diet and exercise. The printed images on products are mainly intended to deliver some humour into a serious problem. Visual communication is the most intuitive and direct expression that can impress people, and through visual storytelling, we use images to explain the knowledge about healthy eating, and junk food will make readers' memories more profound. Also, by using the Nian Hua style to depict some popular bad eating habits, these familiar elements and ethnic sentiments could enhance readers' sense of substitution and deepen the influence of these illustrations on them. Besides, using the humorous visual expressions help them to solve this serious problem; it will not cause more mental stress on the reader, but make a relaxed atmosphere for them to learn the relevant knowledge so that they have an optimistic attitude to complete the change.

On reflection, I believe the picture guidebook and card game that is designed to guide young people to follow a healthy diet, which has extremely nutritious and healthy food. Introduced some terrible eating habits, the harm of junk food, recommending healthy foods with high nutritional value and the colour skin of the cards was purposed for various food: protein, vegetables, nuts, etc. It was a useful handy guidebook for many teenagers, because the combination of theoretical and professional knowledge in the field of science will make the information in this guide more reliable, and the design will be more perfect in many aspects. At the same time, through the heuristic method, the human culture, and beliefs and emotions are combined with the art, which makes the design more full of national sentiments, satisfying the needs of the audience in visual aesthetics and psychology. The result of this

interdisciplinary approach can make the design more reliable and comprehensive, and protect the safety of users.

The whole process has been a challenge; while it is a graphic communication project, this project also involved ensuring that the outcomes are supported by a robust Human Centred Design method. The author is of the belief that visual storytelling as presented in this project is a useful method for preventing or minimising obesity. However, not all of the presented concepts and designs have been evaluated with the actual audience who are likely to be affected by this research study. The project was not evaluated because of the limited time available for the project. If time were available, the concepts and designs would be evaluated and perhaps altered according to the evaluation results before being put into actual use. Finally, the author has learnt a great deal from this project. As a designer, I now understand that design has an important role to play in public health, but to be effective, a design must be informed by design principles and theory from science to be useful.





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