

Designing Cuisine Packaging Probes for the Night Market Culture

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Abstract: The night markets in Taiwan provide people with various functions; they reflect the local lifestyle and features. The eating culture in the night markets is so all-embracing that many visitors and customers are attracted. Nevertheless, because of the disposability of the night market food packaging, many customers are frustrated by the inconvenience of the food packages used when eating in the night market. The aim of this research was to develop and apply cultural probes into the night market culture and discover packaging problems of the night market food from customers' experiences with eating activities. This research developed a series of activities as the tools with which to investigate the subjects' eating conditions, and we chose the Feng-Chia night market as the research area. The subjects' responses to the cultural probes have provided valuable insights into the attributes of successful probe activities. This research concludes with a preliminary frame for package design of the night market food and posed several issues for designers to consider when planning what form food packages should be used in night markets.

Using the responses from subjects, we generalized several design issues for the night market food packages: (1) Different eating experiences under different cultural backgrounds (2) follow-up treatment of package waste (3) Eco-friendly tableware for the night market.

In the future, these probes may be redesigned for a larger survey and those relevant design issues may provide key points for designers in developing food packages for the night market.

Key words: *culture probe, night market, packaging design, eco-awareness*

1. Introduction

The goal of this research is to determine the condition of food packaging in the night market culture in an attempt to discover current food packaging problems and then to resolve the related issues. The night markets are a reflection of the unique culture in Taiwan and represent the eating culture very well. The night market not only presents the rich diversity of Taiwan's food stalls but also reflects another lifestyle, the nightlife. Accordingly, the night market has become an attractive spot for foreign visitors as well as locals [1].

Cultural probes [2] are collections of evocative tasks meant to elicit inspirational responses from people. The aim is to develop appropriate, usable and adaptable cultural probes for examining the night market, and finally to provide a better design for night market food packaging. During the process of eating activities in the night

market, customers may encounter a number of difficulties on account of the design failure on the part of food packaging. In this research, we discuss the night market culture, eating process, and food packaging in the night market. In examining these aspects, we developed preliminary cultural probes with which to examine the relationships among food packaging, food and customers. With the use of cultural probes, we also acquire suggestions for improving the process of probing which may be helpful for a larger scale investigation in the future.

2. Literature Review

2.1 Snack culture in the night market

The night market not merely represents a unique night lifestyle, but also symbolizes the traditional culture in Taiwan. Participating in the night market activities has already become entrenched in people's daily life; it is a unique culture catering to leisure and consumption. There are various food styles in Taiwan's night market and snacks have taken on a large role in the night market. *In Taiwan, where it seems the people live to eat, it is said that there is a snack shop every three steps and a restaurant every five steps* [3]. Night market snacks have the characteristics of being simple, instant and small. The snack culture also includes many foreign foods from all over the world which have made their appearance in the night market. It is obvious that snacks in Taiwan represent a unique eating culture and it has caused a profound influence in people's daily life. *The so-called snack is the food between meals and is mainly for ordinary people* [4]. A snack is usually made from simple food material and is always from the local environment. Because of the development of modern economics, people gradually sacrifice their meal time to work and this has caused the vigorous development and expansion of a snack culture. Accordingly, people in Taiwan have gotten used to this snack culture and developed it in their night markets for satisfying immediate or sporadic hunger.

2.2 Food packaging in the night market

According to Jonathan [5], package design can be viewed in four different ways:

- *a means of protecting the contents of a package*
- *a contributor to the cost of the end product*
- *a sales canvas on which to promote the product's attributes and benefits*
- *a part of the product experience itself*

Because of the immediacy of snacks in the night market, the snack package mostly can be viewed as a means to protect contents. People purchasing snacks in the night market usually only consider the taste of the food instead of the package design. But when the snack package is viewed as a part of the product experience itself, it might produce some relationships with the users' eating experiences during their activities in the night market. Accordingly, we can view the snack package design in two ways: (1) protecting the contents and (2) product experience. Protecting the contents concerns the features of a snack (i.e., food's temperature, size, form, and method of eating) which influence the package form and design. Product experience refers to the experiences during the subjects' eating process and their habitual behavior. Nevertheless, the food package in the night market cannot merely be viewed in the two abovementioned ways; with the development of a green design concept, green package design in modern society has also become an important issue.

Traditionally, the image of the night market usually is one of a crowded, messy and dirty place. This research considers that the messy and dirty images are caused by the waste from these snack packages. *A well designed*

package must also address the needs of its life cycle [5]. Because of the disposability of a snack package, there are numerous plastic and paper packages everywhere on the streets in the night market. It is obvious that packages in the night market are not well recycled, especially the plastic packages. *This life cycle runs from the moment it is used to wrap its product (whether this is by hand or in a factory), to the point of sale, to the point of use, and finally, with current tough environmental laws, to its after-use* [5]. About the green design concepts, Burall [6] posed 4 principles for green design: Reduce, Reuse, Recycle, and Regenerate. Snack packaging in the night market differs from normal package design; it emphasizes convenience and immediateness for food, instead of the exterior of the package. With these '4R' principles, the first goal in the night market is to make sure that package waste is recycled and snack packages should also use environmentally-friendly materials which can auto-decompose.

3. The operation of Cultural Probes

3.1 Why cultural probes?

According to the previous research on night market issues, the focus was on surveying customer satisfaction on the part of tourists. Most of the researchers chose interview, observation, questionnaire, and other traditional social research methods to investigate customers in the night market. This research considers that food packages in the night market have caused some problems for customers as well as for our environment, and pursues the real reactions and immediate responses from the customers. In order to understand the food package problem and customers' thoughts about the food packages in the night market, we chose cultural probes to help this research explore customers' experiences in using these food packages, and the eating activities in the night market.

Cultural Probes are not analytical tools but are meant to provide inspirational insights that 'reflect' the local culture of participants [7]. Instead of taking huge numbers of samples to investigate and analyze, cultural probes emphasize the real responses from participants at the current site. The aim of cultural probes is to obtain participants' self-searching and personal characters, and this can provide extra feedback or undiscovered issues that traditional surveys cannot achieve. This research is not trying to obtain an objective view of subjects' needs, but more helpful subjective thoughts concerning food packages in the night market, their eating habits in the night market, and the relevant aspects of the eating culture in the night market.

3.2 Cultural probe design for the night market

Our cultural probes were designed to allow insight into customers' eating activities and their experiences in using food packaging. Probe activities were conceptualized through a series of brainstorming sessions. The main goal of the cultural probes of the night market is to determine the degree of inconvenience of food packages, and to generalize using issues from the collection of photos, videos and other information derived from customers' experiences during their eating activities in the night market. In this research we chose the Feng-chia night market as the region for our investigation.

The probe packs consisted of the following steps:

1. Night market images: Asking subjects to describe the night market images in their minds, and what feature images reflect the night market.
2. Activities in the night market: Asking subjects to recall the activities in which they usually engage, and sort these activities according to their frequency.
3. Food in the night market: Asking subjects to recall the tasty foods they have eaten in the night market and to

try to describe their eating experiences.

4. Map and coupons: Giving subjects a map of Feng-Chia night market and several coupons provided by food stalls. Introducing the night market region and the assigned food that the subject should sample.
5. Image collection: Giving each of the subjects a digital camera. Telling them to observe other people's eating processes and photograph images that reflect some problems according to their points of view.
6. Video collections: At first, the subjects would go to the assigned food stalls and use coupons to purchase food. During their eating activities, subjects could help others to record their eating process with a digital camera. With the digital records, we could realize what subjects think about the food and packaging. Subjects in the video can consume their food with ease and describe the packaging problems, if necessary.
7. Other video collections: After eating the assigned food, subjects could then choose their favorite food; however, their eating process would be recorded on video at the same time.
8. Discussion for the cultural probes: After finishing the whole activity in the night market, subjects were asked to have a discussion about the process of the probes.

The cultural probe took the form of an activity pack which was distributed to students in the Feng-Chia night market. The students were asked to return the completed probe after their night market activities. A total of five probes were completed and returned.

3.3 Responses to applying cultural probe activities

The returns of the cultural probe kits were discussed and interpreted, thereby revealing several issues. These probes provided true conditions of the night market, eating images, the subjects' eating process and problems of the food packaging. These data helped the research to resolve several issues about the night market food packaging and provided a preliminary model for the night market cultural probes. By the participation of students with a design education background, the problems of food packaging could be described and recorded in a clearer way. While discussing the progress of cultural probes in the night market, several problems were mentioned which would help to improve the cultural probes.

The responses from the cultural probe activities are as follows:

• Impression of the night market:

In response to the question: "What do you think about the night market?" all of the subjects mentioned the various types of food in the night market and agreed that the eating culture can represent the night market culture. It is obvious that most people may purchase some food or snack in the night market, and sometimes the eating activities will be the main purpose that brings people to the night market. Besides, subjects also mentioned images of "being crowded" and "messy". With these images provided by the subjects, we can understand their opinions and feelings regarding the night market.

• Activities in the night market:

In the response to the sorting of subjects' activities, we found out that gender may affect the choice of activities in the night market. Two male subjects thought the activity they usually engaged in was eating. Three females considered shopping as the first purpose in the night market, even though they might still grab some snack in the night market. In these responses, eating in the night market plays an important role for both females and males.

• **Food in the night market:**

Subjects were all excited to share their eating experiences, especially to introduce featured snacks in different night markets. In their responses, subjects mentioned oyster omelet, doubled layer roll (sausage), meatball, pig's blood cake, coffin, horse hooves, chicken-fried-steak, and so on. In describing the eating experiences, all subjects indicated that they would be with their friends, and a majority also demonstrated that subjects may simultaneously engage in eating as well as other activities. For example, one female subject mentioned that while eating Tempura, she had once smeared food on a skirt which was on sale in a women's apparel shop.

• **Map and coupons:**

The main purpose of introducing the Feng-Chia area by a map was to inform subjects of the locations of the assigned food stalls, and to distribute the accompanying coupons for the subjects to buy the assigned food. In the response to this step, subjects suggested that they had never seen the map before even though they had already been to the night market several times. It demonstrated that in the night market field, it seems unnecessary for people to be informed regarding the location relationships in the night market. Even when it is their first time to visit the night market, people may be with friends who have been there before.

• **Video recording of the eating process:**

In the returns of the probes, we have subjects' video recordings of their eating processes, with the assigned foods being: egg waffles, fried-noodle-bread, chicken fried steak, and Chai Tea Latte. With the videos of subjects' eating processes, several problems and accidents were truly recorded by the digital camera and by the descriptions of the subjects. For example, one female subject accidentally splashed Latte on her sleeve and hands. As shown in Figure 1, according to the video and her description, this accident was caused by over-squeezing the



Fig. 1 The accident caused by over squeezing package

beverage package. The package is in the form of a simple plastic bag with the plastic tie on the top. When the subject was trying to squeeze the latte from the top, the liquid had gushed out and smeared her clothing.

In addition, because the subjects were assigned food in the beginning, most had had sufficient food after the assigned task. In the following activities, subjects paid attention to hanging around, shopping, and playing at game booths. In the returns of these video records, we have subjects' eating processes with the assigned food being: tea egg, and pickled mango.

• **Discussion for applying probes:**

After all of the activities were completed in the night market, subjects had a short discussion together with a researcher in a coffee shop. This final step was to better understand the subjects' feelings about the process of cultural probes used in the night market. During the discussion, subjects' suggestions and comments were recorded by pen. According to the content of the discussion, subjects and researcher agreed that the eating activities in the night market were quite complicated. The eating process in the night market included various activities occurring at the same time.

4. Analysis

4.1 Inspiration from Applying the Cultural Probes

Unlike traditional research methods, it is obvious that the probes are better suited to investigating customers' package using experiences, and their thoughts regarding the packaging problems. Such activities provided us with glimpses of the customers' eating process and their ideas about food in the night market; these are useful in inspiring the package design for the night market food. For example, we found that subjects always eat food while walking and most food stalls in the night market don't provide any space for eating. Accordingly, we can figure out the package design for food in the night market must provide people with a more convenient form for tarrying for a longer time.

Traditionally, researchers observe subjects with a video camera by themselves. According to the previous experiences about observation, people tend to refuse to be a subject on the screen or feel uneasy about being in the video recording. All these factors may cause mistakes while analyzing the presentation from subjects. In this case of probing, we let the subjects be observed by their friends using a digital camera while they also observe others' behavior at the same time. By the video records, subjects seemed to be interested in this new way of investigation. Instead of the previous experiences where they have participated in traditional surveys, subjects feel more comfortable to be under observation and more willing to accept this survey. These responses also demonstrated that subjects can offer a better description about the problems recently encountered. And this may help researchers to acquire subjects' ideas and attitudes regarding the food packaging.

4.2 Limitation of applying cultural probes

Even though probes are not the right tools for providing large and detailed samples, a number of activities can still help us to form opinions regarding several issues of food package in the night market and establish preliminary concepts. In this case, the subjects had a design education background; it was easier for them to observe and interpret problems. In the future, we will use these probing tools for normal customers in a larger survey. Accordingly, with these responses, we may improve and combine different research skills to help normal subjects explore their real reactions and usage experiences.

4.3 Design conceptualizing

Although the probes were central to our understanding of the sites, they didn't directly lead to our designs. They were invaluable in making us aware of the detailed texture of the sites, allowing us to shape proposals to fit them [7]. The results obtained from the cultural probes helped us to form several opinions about design food packages for the night market. The night market culture in Taiwan provides people with various functions when using its food, space and stalls. With the development of the night market culture, we also considered the details regarding the various activities it offers. Eating activity in the night market takes a large part and plays a key role.

By the research into the food packaging, we are trying to help people promote the quality of their eating process and to think about the environmental problems caused by the waste consisting of these packages in the night market. With a view to making both designers and customers consider package design for the night market food, we pose several issues as follows:

• Different eating experiences under different cultural background:

Because of the various functions the night market provides, eating in the night market culture needs to be viewed with another perspective. The eating ways and needs of customers differ from their daily diet preferences. According to the exploration of subjects' eating and other activities in the night market, we found that eating in the night market is quite complicated as it usually accompanies other activities. As shown in Figure 2, in these probing activities, subjects' eating experiences also accompany other activities such as hanging around, shopping, playing games and more. Therefore, we can figure out that when customers are in



Fig. 2 The complicated eating process in night market

the eating activities they must pay less attention to the food itself. The distraction caused by other events in the night market makes people lose focus on the food they are eating. Thus, the food package design must help people to reduce accidents caused by their distraction while dealing with their food in a more convenient way.

• Follow-up treatment of packaging:

Almost 9 million tons of waste are produced in Taiwan every year and package waste comprises half of these waste products. [8] Based on the video records, we can see that the night market street is filled with package waste. Even though there are several garbage cans along the street and the environment may be cleaned by scavengers at night, these waste products still cannot be recycled. In this case, we must come up with some ways to remind people about pollution or help them to deal with package waste. In addition, because the package is mainly for food, there may be leftovers within the package waste when customers finish eating. This also leads to some problems of recycling. Having leftover inside the package waste requires separation, another issue for designers to be concerned with.

• Eco-friendly tableware for the night market:

There is another consideration regarding night market food. Because of the rising eco-awareness and green consumption, the use of eco-friendly tableware has influenced people's daily eating behavior in recent years. Eco-friendly tableware helps to reduce the use of a good package and is gradually being accepted by customers. In this research, we found that package waste was not convenient to deal with for customers in the night market field. Instead of package design thinking, the design of eco-friendly tableware for the night market may be one possible solution. However, the form of eco-friendly tableware must be noticeably different from normal tableware. Now that the night market eating is a part of people's daily diet, the design of eco-friendly tableware for people in Taiwan should also consider the eating activities in the night market.

5. Conclusion

This project has suggested that cultural probes are a useful method by which we can gain contextual insight into the eating culture of the night market. Early research has shown some problems in the night market, but the use of quantitative methods could not determine the problems or solve them. The night market is a special area which is crowded and full of various stalls so it is hard to observe by a researcher; therefore, we designed the application of cultural probes for customers, thereby obtaining their ideas directly, which normal observation cannot achieve. In this step of research, we posed several issues about the package design in the night market. The application of cultural probes will be taken as a basic framework for further exploration in the near future.

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