

Can I Help You?: Towards the Improvement of Occupational Experience for Convenience Store Employees in Taiwan

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Abstract. This article explores the occupational experiences of convenience store frontline service employees in Taiwan. We find that in addition to physical labor, employees must incorporate job crafting to effectively meet customers' assumptions and expectations for immediate and efficient services, and to manage many types of in-store contingencies. We consider the infusion of job crafting into frontline service work to be critical to the smooth operation of the overall convenience store service experience. However, these skills are largely considered to be 'invisible,' and are not adequately supported by the convenience store work context. We suggest that certain types of smart devices be incorporated both seamlessly and seamlessly into the convenience store environment, to work in tandem with, and to support frontline service employees.

Keywords: convenience, frontline service employees, experience-based design, task revision, seamless sensing, seamful actuating.

1 Introduction

In Taiwan, an average urban citizen only has to walk less than 500 meters to reach a convenience store, and will patronize one on average 17 times a month [1], to receive instant access to a wide variety of products and services, 24 hours a day, seven days a week. We found that the customers' assumptions of, and expectations for immediate service within convenient stores can take physical, mental and emotional tolls on the providers of these services. Initially, the nature and content of convenience store work appears to be labor intensive and monotonous. Upon closer examination of the insights garnered from our data, we found that convenience store work is far from mundane, and workers must possess a wide range of skills to manage frequent spontaneous in-store incidents. In general, employees must be equipped with certain interpersonal and emotional management skills in order to provide service to a wide range of customers. Their attitudes towards, and interactions with, customers, such as displays of courtesies, friendliness and efficient and effective service delivery have considerable effects on customer satisfaction, as found by Hochschild [2] and Rafaeli [3].

Moreover, employees must also be prepared with a wealth of information that is both within and beyond the convenience store product and service parameters. For example, they are often requested by customers to provide street directions, transportation information, or recommendations for local attractions or eateries. In order to cope with the broad scope of on-the-job duties and responsibilities, we discover that employees need to be more sufficiently supported both emotionally and by the technological facilities in-store. To this end, after providing a brief review of literature, and a description of convenience store working experiences, we will focus the discussion on suggestions for both emotional and technological enhancements.

2 Literature Review

Previously, research conducted on convenience stores emphasized business, management, marketing and retail perspectives, Terasaka [4], and Cheng et al [5]. However, other studies, such as those by Rafaeli [3], Mohr and Bitner [6] and Katz et al. [6] have suggested that the experiences of frontline service employees are also a critical component to consider in the overall service experience. Despite the fact that front line service work may appear to be monotonous and routine, in reality, these roles often require the infusion of many elements of “invisible skill,” such as job crafting. The adoption of these types of skills may be necessary when interacting with a wide range of customer types, oftentimes under extreme time pressure.

More specifically, job crafting occurs when employees adapt some aspects of their preexisting jobs to suit their individual needs. The adaptations are usually within the parameters of their preexisting work roles, and are frequently performed without direct knowledge or permission from management level staff [7], [8]. These changes can vary in scope, type, frequency and duration, and may also be visible or invisible [8]. Job crafting can give workers the opportunity to take initiative and express creativity, and may increase efficiency. Further, studies show that some employees may be motivated to engage in job crafting, for the opportunity to increase their sense of control over their work, develop a sense of connection with other social beings present in their work environment, and derive positive feelings relating to self image and job meanings [7].

Job crafting is still a relatively new avenue of research, however, most studies conducted on job crafting, in fields such as custodians, nurses, professional restaurant cooks concur that for the most part, job crafting has advantages for both individual job performance and for the overall organization [7], [8]. These positive changes derived from job crafting thus make it a potentially fruitful area of research to consider in a convenience store setting.

3 Methodology

This research was operationalized through the utilization of a triangulation of data collection methods, including field studies, in-depth interviews and experience based lab research. A purposive, non-random sample was used to reach the interviewees of interest for this study. We interviewed 16 employees from a variety of store locations

backgrounds and characteristics. To further enhance our interview data, we also conducted further interviews and focus groups in a replicated convenience store lab in our research center. We also enlisted 16 additional volunteers to test our technological enhancements in the simulated convenience store lab.

4 Employee Work Circumstances

Convenience stores are distinguishable from other retail settings for their ability to efficiently provide a wide range of constantly updated products and services. Since new products and services are added frequently, convenience workers must employ considerable efforts into retaining information about these additions. Moreover, they must recall and convey this information to customers rapidly and accurately in order to prevent customer impatience or frustration. One employee explains:

It's hard to let the customers understand unless you can be very clear. Sometimes even if you have reminded him, he will still tell you that he didn't know and then accuse you of not providing enough information. Then he will file a complaint against you." (Male, 30s, full time)

In order to be able to be better informed about new products and services, many of the employees will take it upon themselves to try the new additions. For example, in addition to reading the internal company publications, they will take time to sample new food products, or to go through the steps on the information kiosk to visually familiarize themselves with the steps to complete a particular task. These "hands on learning and experiencing" tasks are examples of voluntary roles some employees will undertake, in order to provide more knowledgeable, personal and comprehensive service to their customers.

During their shifts, workers have frequent competing demands on their time; and are constantly interrupted from their task at hand to assist with another task. An assistant store manager describes the content and nature of her work shift:

Our work is scattered. Very scattered. We get distracted a lot. Sometimes we feel really annoyed. (Female, 20s, assistant store manager)

For example, one frequent source of task distraction is processing and accepting customer purchases and payments. Major convenience store chains in Taiwan, such as Uni-President 7-Eleven have strict policies that lines are not to exceed over three people in length. Once a fourth person joins a line, the cashier is required to ask for immediate assistance from his/her colleague(s). Upon arrival at the cash register, usually the cashier will shout, "I can help the next waiting customer." However, it is usually unclear which waiting customer s/he is referring to, and there is usually a tumult that follows as customers vie to be the next served.

Waiting customers can cause considerable consternation for the frontline employees. According to our field observations and interviews, customers are usually unoccupied according to our their focus and line of vision is usually directed towards the cashiers. One worker describes:

I start to get really nervous. It's like I want my hands to go faster, but they can't. Then I look out at the line and everyone looks really impatient and that makes it even worse...I just put my head down and try to go even faster. (Female, 20s, part-time)

One way of coping with the visual cues of impatience and annoyance from waiting customers is to simply ignore them, or to distract oneself from feeling nervous by accelerating their motions. However, we found that more experienced employees have developed their own methods of processing customers through their lines quickly. One store manager describes a situation in which he is processing bill payments for one of his regular customers. He explains:

If the customer is a regular whom you can trust, you will be tearing the [receipt] stub when she's counting out the money. You count the money the same time she's counting. Then you give her the receipt and it takes less than five seconds. (Male, 30s, store manager)

In this particular situation, the frontline employee is experienced enough to anticipate the actions of the customers. When the customer presents him with a bill that she wants to pay, he is able to condense the motions required to complete the process. He also is observant and counts the money simultaneously with the customer. Since this is one of his regular customers, he has placed implicit trust in their interactions, so he knows that she will have the right amount of money to complete the transaction. These three elements of anticipation, observation and implicit trust trim down the customers' waiting time. It should be taken into consideration that these elements may only come into place if the cashier has spent enough time within the store, interacts with customers on a regular basis, and has a comprehensive understanding of the inner workings of each transaction.

We also found that more seasoned employees tend to employ certain strategies, such as directing customers into certain line formations to maintain both order and control over the lines. One full time employee explains:

Lots of people break the rules and try to push their way to the front. The line is especially frustrating when people don't line up in an orderly way. You have to tell them how to line up to make it easier for you. I tell them to form a straight line because it is less stressful for me, because I won't have to referee who came first and who came after. (Male 30s, full time, store owner)

We find that not only the type of line, but also the frontline employee's ability to take initiative to direct how the customers should line up also affects his/her feelings of control over the in-store experience. In this situation, the employee is experienced enough in his role to know what type of line formation will allow him to process customers most fairly and efficiently.

These elements of anticipation, observation and initiative, among others can be considered a part of the 'invisible skill' and job crafting described by James [9], Korczynski [10], Tancred [11], Bolton and Boyd [12], and Lyons [8] involved in his job, but that is rarely recognized or appreciated by the customer, unless it is absent from the interaction. We found that all employees engage in the critical tasks of noticing, perceiving, absorbing and responding to customers. This task involves a considerable amount of both accumulated experience and consistent effort, but the employee is not given adequate training or tools to encourage or support these skills. However, our research suggests, and also supports previous research that the development of invisible skills and occasions for job crafting give convenience store employees a sense of job satisfaction and feelings of mastery over their overall work

experience. In addition to job crafting, we suggest that technological enhancements can be added to the store environment in order to provide further assist employees in carrying out their roles.

4.1 Technology Propositions

We selected and incorporated two of the previously proposed convenience store enhancements [13] to make waiting-in-line less daunting for both customers and employees. These two implementations are primarily based on the growing attention in ubiquitous computing initiated by Mark Weiser [14] so that the enhanced environment can better react to humans, make decisions, and subsequently provide attentive services.

The first enhancement is the seamless sensing for ubiquitously collecting information from both the physical environment of a convenience store and its users (customers and employees). To accomplish this, we seamlessly integrated smart sensors into a convenience store. With the seamlessly deployed technologies, the interactions between a customer and the enhanced convenience store environment will remain the same as usual. This is particularly important for a smart convenience store due to its variety of customers and the demand of high service availability. Currently, this concept of collecting real-time information from both customers and the store environment can be applied by using wireless sensor network (WSN) technology.

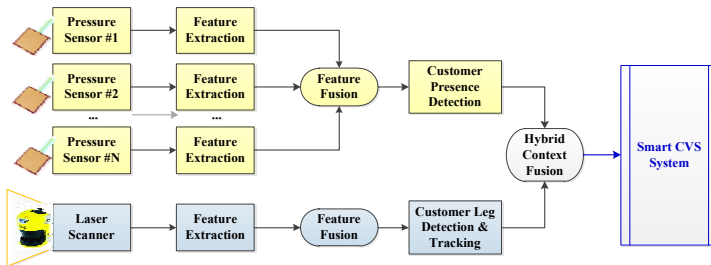


Fig.1. Block diagram of the proposed seamless customer-state detection system

More specifically, in order to detect of the number of customers waiting in line, we propose a seamless customer-state detection module that can be deployed in front of a service area (e.g. in front of the cash register). As shown in Fig. 1, the prototype of the proposed seamless module consists of pressure sensors and an optional laser scanner. All associated sensors can be used to collect features such that these features can be extracted first and later be fused to obtain more high-level and informative contexts (or even situation) to detect customers' presence, positions or their in-store activities. Although pressure sensors are useful in detecting the presence of a customer, and can be advantageous because they can be readily hidden from customers (i.e. seamlessly embedded into the environment), they become incompetent or ambiguous in correctly detecting the number of customers in some occasions or in certain locations in a convenience store. To address this shortcoming, a laser scanner will be incorporated into the module to assist in detecting and tracking the positions of

customers' legs. By counting the number of pairs of legs, the system can detect how many customers are in an area of interest (especially in front of the service counter). Since a laser scanner is more expensive than a pressure sensor, we can selectively deploy pressure sensors in the areas in front of single-user self-service machines such as the in-store information kiosks, Slurpee machines, or the automatic teller machines (ATMs) to decrease the overall costs of deployment. The system can combine these hybrid features from the pressure sensors and the laser scanner to provide a more accurate estimate of waiting customers in a convenience store. Such information can later be utilized to trigger actuators (such as a voice reminders) to call for assistance from another employee working elsewhere in the same store. Subsequently, we will further evaluate the effectiveness of this module to see if more sensors need to be employed for better accuracy improvement.



Fig. 2. The seamful screen is deployed behind the counter

The second implementation is the seamful actuating for attentively providing ambient services [13]. This is inspired by Chalmers et al. [15] and Broll et al. [16] who advocated the usefulness of both seamless and seamful designs. Rogers [17] further suggests shifting ubiquitous computing from calming people (i.e. seamlessness) to engaging people (i.e. seamfulness) and therefore enriching user experiences (this is referred to as “appropriation”). In this research, the preliminary implementation of this concept is accomplished by adding a display near the service counter. This screen will contain displays of informative and/ or entertaining media content, and will ideally serve to distract customers from the realization that they are wasting time by waiting in line.

For a preliminary evaluation of this approach, we installed a 17” display screen as a seamful device, on the ceiling, behind the service counter (as shown in Fig. 2). This screen played commercials in sequence, with the intention of attracting customers’ attention. To test the effectiveness of this device, we conducted three rounds of field studies and focus groups in the convenience store lab at our research center. Alongside with three convenience store employees, we invited 16 volunteers to act as customers. However, from our observations we discovered that the majority of our participants did not pay attention to the screen, during their wait for service at the cash register. In our subsequent focus group interviews, our participants mentioned that the screen was not large enough, and was installed at an awkward angle that was too high to attract their line of vision. Moreover, they suggested that the screen would

have more effectively attracted their attention if the screen display were accompanied by sound. Thus, with these insights in mind, in the next phase of this research, we will consider elements related to the size and position of the seamful device. In addition, we will pay more attention to the display content, such as color, type of content, and ways that the content is presented.

5 Conclusions and Further Directions

Our research illustrates that convenience store work is physically, mentally and emotionally demanding. In these working situations, employees must be well equipped with certain types of skills in order to provide effective and efficient service. We suggest that both emotional and technological enhancements can be incorporated into the convenience store work role and environment. The first method includes introducing a variety of ways to recognize and subsequently encourage employees to feel a sense of mastery, empowerment and control over various aspects of their job. The second enhancement involves incorporating technological elements into the convenience store environment to work in tandem with the employees. These enhancements can potentially serve the critical purposes of reducing employees' mental burden, thus allowing them to better focus on other areas of the service experience.

Thus far, this exploratory research has made some initial observations into the convenience store work experience and environment. Next steps will involve a more rigorous analysis of the contribution of job crafting to the overall service experience, and individual workers' feelings of job satisfaction and mastery. In terms of technology, our subsequent steps will involve the evaluation of the correct detection rate of the seamless sensing module and to propose an index of a seamful device for its effectiveness in informing and engaging customers during their service experience. The intersection of emotional and technological enhancements in a convenience store setting is a relatively unexplored area of research that requires more thorough analyses from multi-disciplinary methods and perspectives.

Acknowledgements .This research was supported National Taiwan University and the National Science Council of Taiwan (NSC 99-2218-E-002-001). We would like to thank our participants for sharing their valuable experiences.

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