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Editorial Note

It is with pride and honor that we publish this issue of the Journal of the Philippine Institute of Industrial Engineering which contains selected papers from the First Southeast Asian Network of Ergonomics Societies Conference in 2010. SEANES2010 is a momentous event as it marks the first time that a regional conference in ergonomics was held in the Philippines. Dr. Rosemary Seva, the immediate past president of SEANES was instrumental in taking the conference to the Philippines. The success of the event was made possible by the help provided by the members of the Philippine Ergonomics Society and De La Salle University. Both organizations are long time partners of the Philippine Institute of Industrial Engineers.

This special issue contains the works of authors who have been passionately involved in the study of ergonomics, with the main intent of facilitating human interactions with products, equipment, environment and systems through the design of equipment and devices that fit the human body, its movements and cognitive abilities.

This special issue of the JPIIE is a collection of papers that dealt with interesting and relevant subjects in ergonomics such as aging, lifting, safety, and cognition. The diversity of topics gives an appreciation of the large application domain of ergonomics in several areas.

The population of most first world countries in the world is aging. As most facilities have been designed for young and middle-aged population this trend may necessitate changes in design. In Taiwan, a group of researchers studied how they can satisfy the needs of the elderly population who are using train services. The keen use of observation allowed them to make service improvements that significantly increased the satisfaction of elderly users.

Lifting 5-gallon water containers is a safety problem in most households as it can easily cause back problems. In the paper of BengHui et al, alternative designs for lifting the water container were presented and evaluated using motion analysis and electromyography. With the improved design, it is expected that the danger of lifting will be greatly minimized.

The work of Tiong et al presented visual interaction between the environment and users. The intent is to take control of the elements of directional signages in order to minimize possibility of the users from being lost.

The work of Hartono and Chuan investigated the relationships among constructs during a service encounter process in luxury hotels. The findings show that emotions play a significant role as a complement to cognitive process in influencing customer satisfaction.

The work of De La Cueva et al aimed to assist in maintaining the health and safety of Persons with Disabilities (PWDs) who are employed in manufacturing organizations. The study suggests that it is important to determine the capabilities and limitations of PWDs to design tasks that will maintain their well-being.

The elderlies are the beneficiaries of the work of Kaburuan et al. They proposed a design which promotes affective service in public facilities for the elderly. It is based on the observation of elderly activities inside the waiting room in the train station.

This set of researches depict but a few of the noble works of authors addressing the needs of the human being in his various daily tasks. As Industrial Engineers, we perceive that work such as these are significant contribution to the promotion of the well-being of the worker. Therefore we find it our privilege to present this as just the first of two issues on ergonomics and design.

Anthony SF Chiu, DBA PIE
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The Role of Kansei Engineering in Influencing Overall Satisfaction and Behavioral Intention in Service Encounters

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Abstract: Customers today concern themselves more on fulfilling their emotional needs rather than rationales and functionalities. In dealing with customer emotions in products/services, Kansei Engineering (KE) is applied. A comprehensive case study in luxury hotels was conducted. Eighty one Indonesian, 75 Singaporean, and 74 Japanese tourists participated in this survey. It aims to investigate the relationships among constructs during service encounter process. The finding shows that emotions (affective process) play a significant role as a complement to cognitive process in influencing customer satisfaction. Among 3 populations, Japanese was found to be more Kansei-oriented customer.

Keywords: *Kansei Engineering, emotional needs, customer satisfaction*

1. INTRODUCTION

Today's customers are very dynamic and 'unfaithful' to particular products and services. Compared to the first launching, the sales of products or services are not increasing as before. This condition influences companies to reformulate their product and development strategies (Shimizu *et al.*, 2004). As mentioned earlier by Schütte (2005), some efforts or methods were old fashioned, such as fast product/services changes, or even price reductions and discounts. Essentially, this condition reveals an effort to explore and capture the deepest voice of customer that is "unspoken emotional need" customers seek in product and service. This strategy is potential to create "customer emotional bond" in the future.

To deal with customer unspoken emotional needs, Kansei Engineering (KE) is proposed (Nagamachi, 1995; 2002a; 2002b). This method has been extensively applied to product design and development since 1970s (Nagamachi, 1995, 2002a, 2002b; Nagamachi and Imada, 1995; Schütte et al., 2004; Schütte, 2005). The application framework of KE and its methodology has been discussed and extended into international-based services (Hartono and Tan, 2009).

Since service is the fastest growing sector in today's economies, it is potential to utilize KE on capturing and modeling customer emotions ("Kansei" in Japanese). The main part of the service processes is service encounter. It is when the server meets the customer, where the customer emotions involved, and where most people judge the quality of service. Mattila and Enz (2002) argued that consumer's evaluations of the service encounter correlate highly with their displayed emotions during the interaction process. Actually, many studies on service quality have been carried out which focusing on cognition (Liljander and Strandvik, 1997; Yu and Dean, 2001; Wong, 2004; Ladhari, 2009). Hence, this research focuses on service encounter that involves some service experience processes, such as affective (Kansei) process, perceived service quality, cognitive process, overall satisfaction, and behavioral intention.

This paper is organized as follows. Following this introduction, the paper presents the purpose of study. Afterwards, a short review of KE in services is provided, followed by a short elaboration of physical products and services, and several service experience constructs. The main contribution of this paper, namely "proposed model of Kansei Engineering in the initial stage of service experiences" followed by a case study takes the next place. Then comes the discussion and conclusion sections.

2. THE PURPOSE OF THE STUDY

KE studies on service sector have been addressed by Nagamachi since 1980s (see Nagamachi and Lokman, 2011). It was then extended by Hartono and Tan (2009) by proposing an integrative framework of KE applied to services. This study highlights a crucial part taken from the whole application framework of KE in services, i.e., the relationships among variables of service quality, cognition, affection, satisfaction, and behavioral intention in services. Hence, this study examines the role of affective process (Kansei) as an impact of perceived service quality and cognitive process, and investigates how the affective process influences customer satisfaction and also behavioral intention.