THE DEVELOPMENT OF USABILITY MEASUREMENT MODEL CONSIDERING COGNITIVE AND AFFECTIVE ASPECTS AND CULTURAL DIMENSION AS MODERATION: A RESEARCH FRAMEWORK

Heru Prastawa
Department of Industrial Engineering, Sepuluh Nopember Institute of Technology,
Department of Industrial Engineering, Diponegoro University
Surabaya 60111 Indonesia, E-mail: heru.prastawa@gmail.com

Udisubakti Ciptomulyono
Department of Industrial Engineering, Sepuluh Nopember Institute of Technology,
Surabaya 60111 Indonesia, E-mail: ciptomulyono@hotmail.com

Moses L Singgih
Department of Industrial Engineering, Sepuluh Nopember Institute of Technology,
Surabaya 60111 Indonesia, E-mail: moseslsinggih@gmail.com

Markus Hartono
Department of Industrial Engineering, University of Surabaya
Surabaya 60111 Indonesia, E-mail: markus@staff.ubaya.ac.id

ABSTRACT
In a highly competitive market, product design has shifted from production-oriented approach to marketing-oriented approach, and ultimately to the customer-oriented approach. The study of the needs, desires and preferences of the users becomes of highly important, so that developing products based on user experience is an important policy to the company, including the measurement of usability of products. Many studies have examined the themes of and usability as a good customer response to the product's predecessor. One of considerations in the product functionality is cognitive aspect in order to accommodate human cognitive capabilities, limitations, and tendencies. Moreover, empirical evidence showed that affective aspects correlated with the usability of a product is being considered by many researchers. In addition the affective aspects of the product should be integrated in the study of human factors. Both cognitive and affective aspects are important to the product design and process. Eventually, it will create more complete human-product interaction and experience. However, in the global market, product usability will vary across cultures. The influence of cultural dimensions within the scope of the usability and quality research has been done by several researchers. It showed that the Hofsted’s cultural dimension approach can be adopted. This paper tries to generate the applicability of the Hofstede’s culture dimension in sub cultures. A case study has been conducted in Indonesia that has many sub cultures. There would be six sub cultures indexed using Hofsted’s indexes.

Keywords: cognitive, affective, cultural dimension, usability measurement,

1. INTRODUCTION
In the fierce competition, there has been a shift from production-oriented approach that was applied in the past, then a marketing-oriented approach, and ultimately to the customer-