UNIVERSITI TEKNOLOGI MARA

A FRAMEWORK FOR GRACEFUL INTERACTION FOR WEB INTERFACE DESIGN

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AUTHOR'S DECLARATION

I declare that the work in this thesis was carried out in accordance with the regulations of Universiti Teknologi MARA, It is original and is the, result of my own work, unless otherwise indicated or acknowledged as referenced work. This topic has not been submitted to any other academic institution or non-academic institution for any other degree or qualification.

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ABSTRACT

It is argued that the design of life experiences with digital artifact should be aligned with the rich experience of the physical sensory life. The emphasis of functionality and efficiency of digital artifact is currently being infiltrated with new design criteria such as friendliness, playfulness, aesthetically pleasing and emotionally satisfying. Designing for aesthetic interaction is designing for a beauty that is rewarding in itself leading to aesthetic experience, which involves bodily skills and emotional sensitivity. Following the argument that form in an aesthetic experience has deep roots in organic bodily rhythms and the social conditions which help structure them, we conceptualize graceful interaction as a form to enrich user experience. Using the design science approach, graceful interaction is conceptualized through the abstraction of graceful dance movement that was derived from an interview with an art performance expert. The graceful dance movement elements is then mapped into the set of graceful interaction design elements obtained from the integration of Laban Effort Movement Theory with effort qualities of movement by Bacigalupi. This mapping is the basis of the prescription of the graceful interaction design framework that also encompasses the criteria of movement quality. The framework was then validated through experimental work. A within-subject experiment was conducted to engage thirty participants in graceful interactions activities with several IT artifacts that were designed with the built-in movement qualities as prescribed by the graceful interaction design framework. Eighteen prototypes, which incorporate various combinations of graceful design elements, were developed and used in the experiment as the artifacts of intervention. The aesthetic evaluative judgment for graceful interaction is achieved through the use of the subjective checklist rating representing emotional response towards movement quality. The emotional response checklist is organized as a 5-point semantic differential scale. The participants were requested to perform navigational activities in each of the prototypes. After performing the required task the participants we asked to fill-in the emotional response checklist. The participants were also interviewed individually to further probe and counter check their emotional response towards graceful interaction. An analysis of the response was then conducted and the overall results of showed that there is a similarity between the response given in the emotional response checklist rating when compared to analysis of the emotional response obtained from the interview. This reflects a consistency in the response, which also signified the emotional response checklist is a good indicator participant's emotions when engaging to graceful interaction. The emotional response given by the participants are in agreement with the graceful interaction design elements and this result verifies the framework. The finding of this research contributes to the theoretical knowledge of aesthetic interaction design.

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CHAPTER TWO: LITERATURE REVIEW