

CERTIFICATION OF APPROVAL

**Investigating A Suitable Technique to Implement A Haptic Interface in
Supporting Dyslexic Children's Learning**

By

Mohd Khaizie bin Kamaruddin

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Approved by,

(DR. SUZIAH BINTI SULAIMAN)

UNIVERSITI TEKNOLOGI PETRONAS
TRONOH, PERAK
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CERTIFICATION OF ORIGINALITY

This is to certify that I am responsible for the work submitted in this project, that the original work is my own except as specified in the reference and acknowledgements, and that the original work contained herein has not been undertaken or done by unspecified sources or persons.

(MOHD KHAIZIE BIN KAMARUDDIN)

ABSTRACT

Dyslexia is a type of brain disorder whereby a person has difficulties to read and understand written letters, words or phrases. These difficulties have caused dyslexics to have problems in their learning as collecting information is rather difficult for them. Affecting children since birth, dyslexia is a disorder that can be found in almost all parts of the world. Hence, it is important to help these children in coping with this particular problem as it can still affect them even when they are at an adult stage.

This project is specifically done to aid dyslexic children in coping with their learning difficulties. This project focuses on two elements of sensory modalities, visual and kinaesthetic. Kinaesthetic is the highlight for the entire project. By using haptic technology, these two elements are combined to develop a haptic interface that can make learning faster, easier and interactive for dyslexic children. This project explores three techniques to implement a haptic interface for writing: engraved, embossed and “sticky-heavy”. The prototype compares these techniques in order to determine which one is the best to be implemented in a haptic interface.

Hence, this project is hopefully able to give the general idea on how to develop an effective haptic interface for dyslexics in supporting and improving their learning experience.

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ABBREVIATIONS AND NOMENCLATURES

API	Application Programming Interface
CAL	Computer Assisted Learning
RAD	Rapid Application Development
VAK	Visual, Auditory, Kinaesthetic

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