

**UNIVERSITI TEKNOLOGI MARA**

**EVALUATION OF eBOOK DESIGN ELEMENT  
USING EYE TRACKER**

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Computing Project submitted in partial fulfillment  
of the requirements for the degree of  
**Master of Science in Information Technology**

**Faculty of Computer & Mathematical Sciences**

January 2017

## ABSTRACT

eBook is more accessible to user needs for learning process in the education field. However, the empirical evidence of its effectiveness is still lacking. Reading an eBook provides a different experience compared to reading traditional textbooks. Therefore, the problem addressed in this study is to provide empirical evidence about the effectiveness of eBook to support user experience. Thus, this study aims (i) to identify the key design elements of the eBook for effective learning and (ii) to evaluate the effect of eBook design elements on user experience using eye tracker measures. This project employs experimental study with fifteen participants. The results of the study encompass the reading patterns of user experience while reading the eBook which is analysed from the eye tracker data. This reading patterns are measured based on reading fixated, reading time spent on Area of Interest (AOI), reading trail and first user reading attention. Generally, the results of this study on reading time spent indicate that no difference between reading times spent on AOI between cooking eBook with or without visual illustration, as well as between black and white cooking eBook and multi colour cooking eBook. Result from reading trail indicated that the centre left part drew the first attention of most participants part of cooking eBook with visual illustration compared to cooking eBook without visual illustration which is participants focus on the top left. In addition, result from the user preferences have showed that all participants prefer eBook with visual illustration, multi colour and nutrition facts. In addition, the majority of the participants found that font type in the cooking eBook is important to them. The significance of this study is to provide empirical findings on the user experience while reading the eBook which then can be used as guidance in improving the design of the eBook in the future. This project can be replicated to further analyse the influence of demographic factor on reading pattern.

## ACKNOWLEDGEMENT

Praise to the Almighty Lord, the most merciful and compassionate, for granting me the strength and wisdom to complete this Information Technology Project.

My deepest appreciation and special thanks to my dedicated supervisor, Associate Professor Dr. Wan Adilah Wan Adnan for her continuous support, patience, motivation, invaluable guidance and immense knowledge throughout this research journey.

A heartfelt love and gratitude to my mother, Nurulhuda Abdul Malek and father, Abdul Aziz Mustaffa for supporting me spiritually in all steps of my life. My deepest gratitude to my siblings Nazliatul Aniza and Ahmad Nazrin for their continual encouragement and prayers. Not forgetting to all my loved and supportive friends' fi sabilillah.

May ALLAH rewards you all for the love and motivation spread to me. Ameen.

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