UNIVERSITI TEKNOLOGI MARA

THE EFFECT OF VISUAL THRESHOLD ON DISTANCE READING PERFORMANCE

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AUTHOR DECLARATION

I declare that the work in this dissertation was carried out in accordance with the regulations of Universiti Teknologi MARA. It is original and is the results 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 degree or qualification.

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ABSTRACT

Previous studies have shown that there were four major factors that affect the reading performance, which are visual threshold, contrast threshold, field of view and size of scotoma. The purpose of this study is to determine the critical print size and the pattern of acuity reserve in distance reading performance. In addition, we also focus on how reading rate performance affected by print size. This study is a cross sectional study. Twenty two subjects with normal sights were randomly recruited through randomized sampling. Subjects were required to read a set of five different texts projected on the screen and their time taken to read each word will be recorded and any errors have also been noted. Reading performance was evaluated in term of reading speed as words per minute (WPM). The mean reading speed of the subjects is between 80 wpm to 160 wpm with the maximum peak reached at 145.9 wpm. Based on the result obtained, the critical print size was at text number 3 with 17 mm size of letter and the reading performance was 145.9 wpm. The pattern of visual threshold had also been determined and the reading rate increase as the visual threshold increase. The visual threshold reach its maximum peak at range 0.3 to 0.5 and it indicates the optimum visual threshold. Statistical analysis shows that reading rate was statistically significant with the texts. Visual threshold and critical print size is an important factor to optimize the distance performance.

Keywords: visual threshold, reading performance, words per minute, critical print size.

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