

UNIVERSITI TEKNOLOGI MARA

DYSCALCULIA ASSISTIVE LEARNING APPLICATION

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STUDENT DECLARATION

I certify that this report and the research to which it refers are the product of my own work and that any ideas or quotation from the work of other people, published or otherwise are fully acknowledged in accordance with the standard referring practices of the discipline.

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ABSTRACT

Learning disabilities (LD) is a term that describes specific kinds of learning problems. Unlike dyslexia children who faced difficulties in reading, dyscalculia children have difficulties to understand numbers and mathematics. Commonly, dyscalculia children have issues to comprehend fundamental mathematics concepts such as numbers, mathematics operations, mathematics symbols and mathematics facts. Based on current literature, dyscalculia signs are shown as early as 4 years old and appropriate interventions should be introduced in order to address their difficulties in learning mathematics. Fortunately, in today's world technology, we have numerous option techniques for educating and supporting fundamental skills in reading, writing and mathematics such as mobile learning and web application. However, most of the applications for learning disabilities children are poorly designed because the designers and developers are lacking of guidance to design and develop an effective application. The purpose of this research is to design and develop an assistive learning application in order to help dyscalculia children stimulate their brain to learn mathematics effectively. It was found that the technology-based learning application that has potential to be leveraged to support learning applications for students. Thus, the aim of this research is to design and develop a dyscalculia assistive learning application where it can help children to practice number scale activities and can logically enhance their mind mapping capacities. Lastly, in order to create this web-based application, the design will involve a few multimedia elements such as images, sounds and animation.

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