TELKOM UNIVERSITY

Abstract

School of Computing
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Master of Engineering

Indonesia Dyslexia Early Identification System

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Dyslexia is a specific learning difficulty in language areas such as the language used for oral, written and social communication. Dyslexia causes difficulties in reading, writing, spelling, and organization. To identify dyslexia, this study proposed to build dyslexia early identification system for Indonesian. The system consists of two stages, main screening and deep screening. Main screening is aimed to identify whether a child has a risk of dyslexia or not. Deep screening is the next process; it is to determine the severity level of dyslexia. In order to build dyslexia early identification system, this study uses Natural Language Generation (NLG) for generating the screening report. The report generation for main screening adopts the semi template based NLG, because the structure of the sentences is not a complex one, whereas deep screening report requires more sophisticated techniques with statistical based NLG, because the structure of the sentences is more complex than the main screening report. The result of experiment shows that this method can overcome the problem, because it has the ability to identify the children at risk for dyslexia that can be accessed anywhere and anytime, and generate report that is in line with Indonesian language and culture.