Study on the Frontiers of Assistive Technologies for Smart Learning in Learning Impairment of Dyslexic Children

International Journal of Computer Applications
Foundation of Computer Science (FCS), NY, USA

Volume 182
Number 23

Year of Publication: 2018

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Abstract

Learners with dyslexia are intuitive and perceive multidimensionality. But they face severe difficulty in reading, writing, mathematics and working memory. It is a different brain organization that needs different teaching methods. This article presents a methodical review of assistive technologies used for smart learning process with dyslexia. Type of technologies used in the assistive process is analyzed and listed. These include text-to-speech, Multimedia software, Touch sensation based learning, Multisensory, Games and Virtual learning Environment. The Text-to-Speech technology is the most common type of technology used by dyslexic learners. Most of the studies focus on dyslexic children. This review also finds that a majority of these studies focus on the use of multimedia and multisensory technologies for improving the reading ability of dyslexic learners.

References


5. Carolina Mejia Corredor, Ramon Furbregat Gesa, Daniel Salas Alvarez (2012) "Integration of a framework with a learning management system for detection, assessment, and assistance of university students with reading difficulties". IEEE.


designed for people with dyslexia. In Proceedings of the 11th Web for All Conference (p. 10).
ACM.

to improve the spelling of children with dyslexia. In Proceedings of the 16th international ACM
SIGACCESS conference on Computers & accessibility (pp. 153-160). ACM.

more accessible eBooks for people with Dyslexia. Procedia Computer Science, 14, 226-233.

Ecosystem for Dyslexic Children(2013) international conference on advanced computer science
applications and technologies

dyslexia. In at IBOOC2014-2nd Workshop on Interactive eBook for Children at IDC

22. Siti Suhaila Abdul Hamid, Novia Admodisastro, Azrina Kamaruddin, Noridayu Manshor
with Dyslexia: A Preliminary Study.ACM.

23. Siti Zulaiha Ahmad, Noor Izzati Jinon, Arifah Fasha Rosmani “MathLexic: An Assistive
Multimedia Mathematical Learning Aid for Dyslexia Children”. (2013) IEEE.

**Index Terms**

Computer Science  
Information Sciences

**Keywords**

Dyslexia; Learning Impairment; Multisensory; Text-to-Speech, Speech-to-Text; Virtual Learning Environment