Using ICT for Interventions to Dyslexia in Cyprus: the Case of Difficulties in World Mathematical Problem Solving

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Dyslexia is a specific developmental disorder that affects literacy across the life-span. According to the phonological theory, people with dyslexia encounter difficulties in the presentation, storage and activation of speech sounds. Such difficulties are the answer we get when we ask someone to refer to the weaknesses of children with dyslexia. But does dyslexia refer to difficulties in speaking and writing only? Since dyslexia is a specific difficulty of writing and speaking, obviously it is accompanied by difficulty in dealing with numbers and thus, mathematics in general and word mathematical problem in particular. In Cyprus, all students with dyslexia are included in the mainstream classrooms, a fact that constitutes a challenge for teachers who have no training of how to manage difficulties in handling with word mathematical problems solving which derive from dyslexia. The chain failures lead to underestimated self-esteem and lack of self-confidence, a feeling that may lead to the abandonment of any trial to cope with word mathematical problem solving. There is strong literature evidence that Information Communication Technology can be used as an ultimate tool to support students with dyslexia and that it can help teachers to differentiate their instruction, and thus, equalize the learning opportunities and physical access in the mainstream classroom. However, the single-computer classroom model in Cyprus provides restricted facilities to teachers who face difficulties for embedding ICT in their instruction due to limited resources. As such, it would be beneficial to investigate how the limited ICT resources can be used for interventions to dyslexia during mathematics sessions, in mainstream classrooms in Cyprus. This paper outlines the framework for the study, the questions it seeks to address and describes how the new technologies can provide innovating pedagogical practices towards more-inclusive and dyslexia-friendly mainstream schools.