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Using Computerized Analogical Reasoning Tasks as a Way to Improve Literacy Skills in Children with Mild Intellectual Disability

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Abstract: The ability to read is crucial for a successful path in school and in a social and professional context. Children with mild intellectual disability are confronted to serious difficulties in literacy. A lot of them do not read or are illiterate. Only one child out of five is able to acquire basic reading skills, which increases the likelihood to misfit in society, especially when these children grow up and cannot manage themselves in situations requiring higher reading levels. One way to help these children acquiring basic reading skills is to use analogical reasoning, as some researchers demonstrated that this mechanism is fundamental for any reading process. For this purpose, we developed computerized analogies displayed on a touch screen tablet. Analogies are comparisons that give children a framework they can use to understand new information. They work by comparing one thing to another in order to emphasize some mutual quality. If one of the items is unfamiliar, that mutual quality can help make it understandable, or it can cause the children to consider something familiar in some new way, such as transferring what they know about familiar words to help them identify unfamiliar words. In addition, using touch screen tablets represents several advantages: the ease of use, the relevance to this specific population and the appeal of a self-directed activity gives individuals and practitioners a modern tool that differs from the traditional paper-and-pencil material. In addition, the touch screen dimension is especially appropriate for children as assistive technology has been found to be more motivating that any other types of devices and improves the children' attention span.

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