

The Multilingual Mind: lecture series on multilingualism across disciplines

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Desiré Carioti (University Milano Bicocca)

A Reading-Free Tool for the screening of developmental dyslexia in monolingual and minority language children

Abstract

Due to the increasing number of immigration flows, students with a foreign familial family, often exposed to two or more languages in the daily life experience are increasing in the Italian school classes.

Linguistic experience of these children can vary based on cultural habits, L2 linguistic skills of parents, numerosity of family, and so on, so they are not always skilled bilinguals, but, more specifically, minority language children (MLC) with some degree of exposure to a foreign language in the familial context.

Often these children underperform in reading skills compared to Italian monolinguals and show a learning profile similar to those of dyslexic readers (Azzolini et al., 2012). Nevertheless, the intrinsic linguistic nature of the reading process biases the assessment of MLC for learning disorders and does not allow to discern between the disorder or a difficulty due, for example, to a less extended vocabulary in L2.

For solving this issue, we developed a computerized “Reading-Free Screening Tool”, aimed at testing children for cognitive markers of developmental dyslexia. The tool was conceived for significantly reducing the involvement of language and, for this reason, aligning with evidence in literature (Bonacina et al., 2015; Flaughnacco et al., 2015; Rautenberg, 2015; Swierk, 2018; Tallal & Gaab, 2006; Thomson & Goswami, 2008), precursors of phonological awareness (i.e., rhythmical skills) were tested together with executive functions and attentional processes, both in the auditory and visual modality.

Results of a first exploratory validation in both monolingual and minority language children will be presented, together with limits of the instrument and feature perspectives.

References:

- Azzolini, D., Schnell, P., & Palmer, J. R. (2012). Educational achievement gaps between immigrant and native students in two “new” immigration countries: Italy and Spain in comparison. *The Annals of the American Academy of Political and Social Science*, 643(1), 46-77.
- Bonacina, S., Lanzi, P. L., Lorusso, M. L., & Antonietti, A. (2015). Improving reading skills in students with dyslexia: the efficacy of a sublexical training with rhythmic background. *Frontiers in psychology*, 6, 1510.

- Flaugnacco, E., Lopez, L., Terribili, C., Montico, M., Zoia, S., & Schön, D. (2015). Music training increases phonological awareness and reading skills in developmental dyslexia: a randomized control trial. *PloS one*, *10*(9), e0138715.
- Rautenberg, I. (2015). The effects of musical training on the decoding skills of German-speaking primary school children. *Journal of Research in Reading*, *38*(1), 1-17.
- Swierk, K. G. (2018). Correlation Between Music and Preliteracy Skills in Preschool Age Children. *Scholarly Undergraduate Research Journal at Clark*, *4*(1), 5.
- Tallal, P., & Gaab, N. (2006). Dynamic auditory processing, musical experience and language development. *Trends in neurosciences*, *29*(7), 382-390.
- Thomson, J. M., & Goswami, U. (2008). Rhythmic processing in children with developmental dyslexia: auditory and motor rhythms link to reading and spelling. *Journal of Physiology-Paris*, *102*(1-3), 120-129.