

MATH EDUCATION DEALING WITH MATHEMATICAL LEARNING DISABILITIES: A LITERATURE REVIEW

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In recent times, research interest in *mathematical learning disabilities* (MLD) has increased around the globe, but their definition and diagnosis does not enjoy a clear scientific consensus (Lewis & Fisher, 2016). Research regarding MLD is carried out in different fields, with various theoretical backgrounds and aims (Lewis & Fisher, 2016): cognitive sciences, neuroscience, psychology, mathematics education. We conducted a systematic literature review of the last 10 years of PME and CERME proceedings. We followed the main lines of the methodology used by Joklitschke, Rott, and Schindler (2018) for our study which is structured in 3 main steps: the identification of keywords about MLD, the selection of the founded articles following these keywords and a synthesis of the main features of these papers. Our research question is: How has the field of mathematics education dealt with MLD these last 10 years? According to our literature review, the keywords that identify MLD in math education are: *disab**, *dyscalcul**, *disord**, *difficult**, *inclus**. We used them to search articles for our review by focusing on titles, abstracts and keywords in proceedings of PME and CERME (2009-2018). We obtained 348 articles. After reading the articles, we retained 13 pertinent papers for our review about MLD. Our review shows that there is no consensus about the definition of MLD in mathematics education. In fact, the 13 articles can be subdivided into three classes according to the specificities of the participants of the experiments evoked in the articles: with diagnosis of MLD (often referred as dyscalculia, 4 articles), with learning disabilities with or without comorbidity (8 articles), with specific difficulties in learning mathematics but without diagnosis of MLD (6 articles). To conclude, it would be interesting to have a better understanding of research questions, definitions, theoretical frameworks and methods in research about MLD in math education.

References

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