

Andrea Díaz-Barriga Yáñez

Postdoctoral Researcher



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EDUCATION

Ph.D. in Psychology / 2014-2018

The University of Sheffield, Sheffield, UK

Thesis: Domain-general precursors of children's mathematics skills: The role of working memory and language.

MSc Psychology / 2012-2014

Autonomous University of San Luis Potosi, San Luis Potosi, Mexico

Thesis (approved with honours): Neuropsychological intervention program in a paediatric sample with HIV: The roles of attention, memory, language, and executive functions.

GPA: 9.84/10

Bachelor in Psychology / 2006-2011

Autonomous University of San Luis Potosi, San Luis Potosi, Mexico

Thesis (approved with honours): Relationship between low and high academic performance and executive functions in two high schools in the city of San Luis Potosi.

GPA: 9.4/10

EMPLOYMENT HISTORY

Postdoctoral Fellow / 2021-Present

Laboratory for the Study of Cognitive Mechanisms (*Laboratoire d'Etudes des Mécanismes Cognitifs*), Bron, France

Postdoctoral Fellow / 2019-2021

Lyon Neuroscience Research Centre (*Centre de Recherche en Neurosciences de Lyon*), Bron, France

Lecturer (Temporary) / January-June 2019

Autonomous University of San Luis Potosi, Faculty of Psychology, San Luis Potosi, Mexico

Cognitive Psychologist / January-June 2019

Neuropsychology Attention Center (*Centro de Atención de Neuropsicología, CEAN*), San Luis Potosi, Mexico

Cognitive Psychologist / 2013-2014

CANTA and TGD Centre (*Centro de Atención a Niños con Trastornos de Aprendizaje y Trastornos Generalizados del Desarrollo, 'CANTA y TGD'*), San Luis Potosi, Mexico

Cognitive Psychologist / 2012-2014

Paediatric HIV Clinic at the 'Soledad de Graciano Sanchez' Hospital (*Clínica Pediátrica de VIH- Hospital General de Soledad de Graciano Sánchez*), San Luis Potosi, Mexico

RESEARCH EXPERIENCE

Exploring the neural correlates of attentional refreshing / 2021-Present

Laboratoire d'Etudes des Mécanismes Cognitifs, Bron, France

PI. Dr Gaëlle Plancher

Can distractors under the threshold of consciousness lead to forgetting in working memory? / 2021-Present

Laboratoire d'Etudes des Mécanismes Cognitifs, Bron, France

PI. Dr Gaëlle Plancher

Neurodevelopment of arithmetic skills/ 2019-2021

Centre de Recherche en Neurosciences de Lyon, Bron, France

PIs. Dr Jérôme Prado and Dr Catherine Thevenot

Learning to run the number line: the development of attentional shifts during single digit arithmetic / 2020

Centre de Recherche en Neurosciences de Lyon, Bron, France

PI. Dr Jérôme Prado

Evaluation of the magnitude of exposure to PBDEs, PCBs and lead on Mexican families' health working with electrical waste and electronic equipment. Pilot study / External collaboration / 2019

Autonomous University of San Luis Potosi, Faculty of Medicine, Gender, Health, and Environment Lab. San Luis Potosi, Mexico

PI. Dr Leticia Yanez Estrada

Domain-general precursors of children's mathematics skills: The role of working memory and language

The University of Sheffield, Psychology Department, Sheffield, UK

Supervised by Dr Daniel Carroll and Dr Danielle Matthews

Deconstructing mathematics word problem-solving: Contributions of cognition and language / Supervision / Summer 2017

The University of Sheffield, Psychology Department, Sheffield, UK

Neuropsychological intervention program in a paediatric sample with HIV: The roles of attention, memory, language, and executive functions / 2012-2014

Autonomous University of San Luis Potosi, Faculty of Psychology, San Luis Potosi, Mexico

Supervised by Dr Maria Elena Navarro and Dr Omar Sanchez-Armass

PUBLICATIONS

Díaz-Barriga Yáñez, A., Longo, L., Chesnokova, H., Poletti, C., Thevenot, C., & Prado, J. Neural evidence for procedural automatization during cognitive development (under review)

Poletti, C., Díaz-Barriga Yáñez, A., Prado, J., & Thevenot, C. (2023). The development of simple addition problem solving in children: Reliance on automatized counting or memory retrieval depends on both expertise and problem size. *Journal of Experimental Child Psychology*, 234. <https://doi.org/10.1016/j.jecp.2023.105710>

Díaz-Barriga Yáñez, A., Couderc, A., Longo, L., Merchie, A., Chesnokova, H., Langlois, E., Thevenot, C., & Prado, J. (2020). Learning to run the number line: the development of attentional shifts during single-digit arithmetic. *Ann. N.Y. Acad. Sci.*, 1477: 79-90. <https://doi.org/10.1111/nyas.14464>

Díaz-Barriga, A., & Navarro, M.E. (2014). Características neuropsicológicas de una población pediátrica con VIH. *Revista Neuropsicología, Neuropsiquiatría y Neurociencias*, 14(3), 1-17. <http://revistaneuropsicologia.com/index.php/RNNN/article/view/35/24>

Book chapter

Díaz-Barriga, A. (2017). Capítulo 23. Aspectos neuropsicológicos y neurológicos asociados a la infección por VIH/SIDA pediátrico. In *Neuropsicología Clínica Hospitalaria* (pp. 425-427). México: Asociación Mexicana de Neuropsicología, A.C

SELECT PRESENTATIONS

Can distractors under the threshold of consciousness lead to forgetting in working memory?

22st Conference of the European Society for Cognitive Psychology (ESCP), Lille, France

Computational and neural bases of arithmetic procedures in "From counting to arithmetic fluency" symposium.

Mathematical Cognition and Learning Society (MCLS) Conference 2022, Anvers, Belgium

The emergence of attentional shifts during single-digit calculation in 8 to 11-year-old children

Society for Research in Child Development (SRCD) 2021 Virtual Biennial Meeting

Comment Notre Cerveau Apprend-il à Faire des Maths ?

La Semaine Du Cerveau 2021, Lyon, France

The role of language and working memory in children's mathematics skills in "The importance of linguistic and cognitive information-processing skills for mathematical learning" symposium

18th Biennial EARLI Conference for Research on Learning and Instruction. 2019, Aachen, Germany

PROFESSIONAL MEMBERSHIP

- Society for Research in Child Development: Latinx Caucus Member (Since 2016)
- Mathematical Cognition and Learning Society (Since 2017)
- European Society for Cognitive Psychology (Since 2022)
- Psychonomic Society (Since May 2023)

OTHER SKILLS AND ACTIVITIES

- **Peer-reviews:** Journal of Cognitive Psychology (2022), Journal of Numerical Cognition (2022), Infant and Child Development (2021, member of the Editorial Board since January 2023), and Quarterly Journal of Experimental Psychology (2020).
- **Statistical software :** JAMOV(highly competent), JASP(highly competent), MATLAB (working knowledge), RStudio (working knowledge), SPSS (highly competent).
- **Other software (highly competent):** MS-Office suite, Psychopy, OpenSesame, DMDX, E-prime, Canva.
- **Neuropsychology :** Cognitive assessment.
- **Languages:** Spanish (first language), English (fluent), French (advanced).