# **ABOUT THE DATASET**

**Title**: Dataset for a meta-analysis on word learning in children with developmental language disorder

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**Description**: This dataset includes data analysed in a meta-analysis on word learning abilities in children with Developmental Language Disorder (DLD). It contains all data extracted from each of the 46 studies that met inclusion criteria, each comparing word learning in children with DLD to their typically developing peers.

The studies used a variety of experimental tasks, therefore the dataset includes detailed information on task characteristics, such as the number of words taught, maximum word length, exposure frequency, type of instruction (explicit or implicit), paradigm and outcome measures. Additionally, it specifies the stage of word learning assessed in each study (encoding, consolidation, or reconsolidation).

Demographic details about participant groups are included, along with data on children’s cognitive and linguistic profiles as reported in each paper. This dataset is a valuable resource for exploring the types of experimental word learning tasks in the literature, examining task characteristics and participant profiles, and investigating word learning outcomes for children with DLD compared to typically developing children.

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**Related publication**: This dataset has been created with the purpose to conduct a meta-analysis of word learning in children with DLD with results intended for publication. The manuscript, titled "Word Learning in Children with Developmental Language Disorder: A Meta-analysis Testing the Encoding Hypothesis" *Journal of Memory and Language* (under review). Authors: Paola Calabrese, Nicholas Hedger, Katherine Pritchard, Vesna Stojanovik, Emma Pagnamenta.

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# **TERMS OF USE**

This dataset is licensed under a Creative Commons Attribution 4.0 International Licence: <https://creativecommons.org/licenses/by/4.0/>.]

# **PROJECT AND FUNDING INFORMATION**

**Title**: First study of PhD in clinical language sciences titled “Does a combined Language-Verbal Working Memory intervention improve word learning in children with Developmental Language Disorder?”

**Dates**: September 2021- September 2025

**Funding organisation:** University of Reading

# **CONTENTS**

* **Dataset\_wordlearningDLD.xlsx:** This Excel file includes all data extracted from each study, identified by a study number. It includes details on tests used to assess participants’ cognitive and linguistic profiles, paradigms, sample sizes, demographic characteristics (e.g., age), information on the experimental word learning paradigm (explicit vs. implicit instructions, number and maximum number of targets, exposure frequency, outcome measures), and group data (children with DLD vs. typically developing children) for mean and SD on the word learning task. Data was manually extracted, and cells are left blank if specific information was unavailable. The dataset comprises 172 observations taken from 46 studies
* **Dictionary\_Ds\_WordlearningDLD.xlsx** This Excel file provides a detailed description of the columns in *Dataset\_wordlearningDLD.csv* and the coding scheme used, along with definitions of abbreviations.

# **METHODS**

This dataset was generated for a meta-analysis exploring the phases of word learning (encoding, consolidation, recondolidation) in children with DLD.

**Search Terms and Sources**: Key terms for retrieving papers were used in PsycINFO, MEDLINE/PubMed, Web of Science, and Linguistics and Language Behavior Abstracts:

“novel word\*” OR “word learning“ OR “vocabulary difficult\*” OR “vocabulary acquisition” OR “vocabulary learning” OR “lexical acquisition” OR “word acquisition” OR “lexical learning” OR “word find\*” OR “verbal learning” OR “verbal acquisition” OR “incidental learning” OR “fast mapping” OR “word retention” OR “word retrieval” OR “word encoding” OR “implicit learning” OR “lexical representation\*” AND DLD OR “Developmental Language Disorder\*” OR “Developmental Language Impairment\*” OR SLI OR “Specific Language Impairment\*” OR “Specific Language Disorder\*” OR “Primary Language Disorder\*” OR ”Primary Language Impairment” OR “Language Delay” OR “Language Learning Impairment\*” OR “language impairment\*” OR “low verbal” OR SLCN OR “Speech-language communication needs” OR “Developmental dysphasia” AND “ child\*”.

**Study Selection**: The first search in February 2022 identified 1410 references, with 833 remaining after duplicate removal. The screening procedure was comprised of two phases: review of abstract and titles first, and full texts after. Each phase was completed by two raters independently and the results were compared and discussed until full agreement.

**Inclusion Criteria**:

* Group Comparison: Studies needed to compare word learning in children with developmental language disorder, defined in accordance with the criteria outlined by Bishop et al. (2017), with typically developing peers of the same age.
* Experimental Task: Tasks required children to learn both meaning and word form of new words presented verbally.
* Data: Studies needed to report group means and standard deviations and at least assess the initial stage of word learning (encoding) to establish a baseline.

**Results**: The first search and screening identified 43 papers for data extraction. A second search in April 2024 added three studies. The meta-analysis was conducted in R using the *metafor* package. The articles whose data were included in the database are cited in the reference list.

A detailed description of the methods cand be found in the manuscript Calabrese, P., Hedger, N., Pritchard, K., Stojanovik, V., & Pagnamenta, E. (under review). *Word learning in children with developmental language disorder: A meta-analysis testing the encoding hypothesis*. *Journal of Memory and Language*.

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