

# A Diagnostic Tool for Developmental Language Disorder in Four to Six-Year-Old Children in the Luxembourgish Multilingual Context

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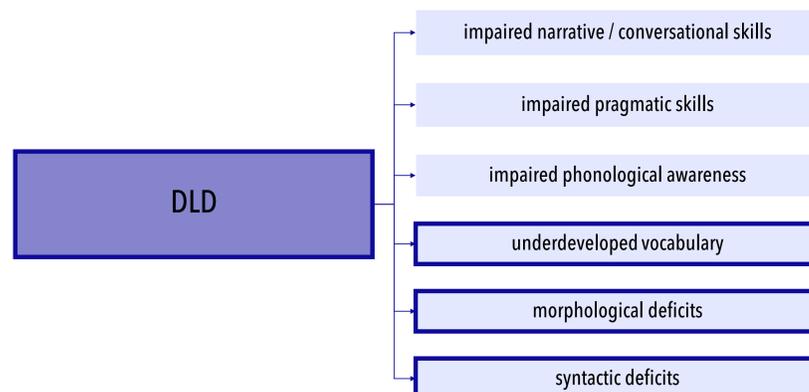
## Developmental language disorder (DLD)

DLD is diagnosed when a child demonstrates **persistent deficits** in:

- **acquisition, understanding, production and use of language** (ICD-11)
- **in the absence of a broader developmental disorder** (McGregor et al., 2020)

It concerns the domains of vocabulary, phonology, morphology, syntax, and spoken communication (World Health Organization, 2019) **across all used languages** (Tuller, 2015).

With the **criteria** that **DSM-5** (American Psychiatric Association, 2022) and **ICD-11** (World Health Organization, 2019) specify, the **prevalence** of **language disorder** is estimated at **9.92%** (7.58% DLD of unknown origin + 2.34% DLD and intellectual disability) (Norbury et al., 2016).



## Diagnostic relevance

Several studies on children with DLD show that DLD "has **correlates** in a number of **areas of functioning** and can have **long-term [consequences]**" (Conti-Ramsden & Durkin, 2012).

**Underdiagnosing** (Genese et al., 2004):

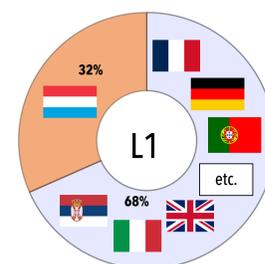
- **denies adequate help** and support needed
- **increases the risk of poor academic and social achievement** (Grimm and Schulz, 2014)

**Overdiagnosing** (Genese et al., 2004):

- can have **long-lasting negative consequences** for children with respect to their **self-esteem, attitudes about schooling, future educational opportunities** (Genese et al., 2004)

## Rationale of the project

- **currently used tests to diagnose potential DLD in Cycle 1** → only **German standardised tests** (e.g. ESGRAF 4-8, SET, TROG-D, MuSe-Pro,...) without standardized translations to Luxembourgish whereas Luxembourgish is the main language of instruction in Cycle 1
- **Luxembourg** → highly multilingual and culturally heterogeneous country, with over 2/3 of the children in primary schools having another L1 than Luxembourgish (MENJE, 2024)
- **over- and underdiagnosing DLD** → concerns children with Luxembourgish as their L1, as well as children with another L1 than Luxembourgish (Martini et al., 2021)



## Content unsuitability

Luxembourgish morpho-syntax follows **Germanic patterns** (Gilles & Trouvain, 2013), BUT → **structural divergences from Standard German** (Gilles, 2023; Döhmer, 2020), including, for example:

- **grammatical case marking**  
In German, the grammatical case is regularly marked on nouns. In Luxembourgish, the grammatical case is only marked on rarely emerging genitive cases. While in German, the dative case is marked on plural nouns with an additional n, the dative case won't be marked on plural nouns in Luxembourgish.  
German: die Kinder (the children → nominative case); den Kindern einen Kuchen geben (giving the children a cake → dative case, additional n)  
Luxembourgish: d'Kanner (the children → nominative case); de Kanner\_e Kuch ginn (giving the children a cake → dative case, no case marking)
- **use of genitive** (Only very few genitive cases exist in Luxembourgish, while in German, it still is a widely used case.)
- **use of accusative and nominative** (In contrast to German, there is no way to differentiate a nominative and an accusative case with respect to their morphology in Luxembourgish.)
- **plural noun marking** (In Luxembourgish, there exist around three times as many techniques of forming a plural than in German.)

The **German standardised tests** that are currently used in Luxembourg **do not suit the Luxembourgish context**, as the content cannot be translated 1:1 without several **Luxembourgish-specific linguistic concepts** being **underrepresented** while other **non- or less relevant concepts** for Luxembourgish are **overrepresented**.

## Target and norming group unsuitability

The **German test batteries** currently used in Luxembourg:

- are **missing a standardised Luxembourgish adaptation**
- **do not allow fair assessment of monolingual children with Luxembourgish as their L1**
- **do not allow fair assessment of multilingual children who may or may not have another L1 than Luxembourgish**
- **do not allow a fair assessment of children of simultaneous bilingualism**
- are **missing reference norms that consider children's multilingual language profiles and backgrounds** (Martini et al., 2021)

## Aim of the project

- **development of the first oral language test in Luxembourgish for Cycle 1** (1.1 and 1.2),
  - a. with **test content** that is explicitly developed for the **Luxembourgish morphology and syntax**
  - b. that provides **reference norms** that consider **Luxembourg's multilingual context**
- **fair evaluation of Luxembourgish skills in four to six-year-old children and improvement of diagnostic process** (Centre de Logopédie) of DLD
- **pretest planned for Spring 2026**
- **main test planned for Spring 2027**
- see **poster by Starcevic et al.** for information on the **test design**

development of new Luxembourgish language test for four to six-year-old children

