

# Multilingualism and language learning

## A study of Portuguese immigrant children growing up in a multilingual society

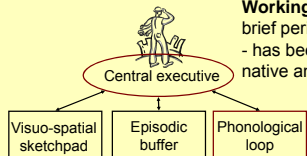
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### Introduction

**Working memory** - the ability to store and manipulate information in mind for a brief period of time in the course of ongoing cognitive activities (Baddeley 2000) - has been suggested to play a crucial role in children's **language acquisition**; native and foreign.



Working memory model (Baddeley 2000)

The **central executive** and the **phonological loop** have been found to make significant contributions to **vocabulary acquisition** and the **comprehension** of language.

*I know it is 'Wollek' in Luxembourgish, but what is it in Portuguese? Maybe Wollk-ão?*

How does growing up with an immigrant background affect children's linguistic and working memory skills?

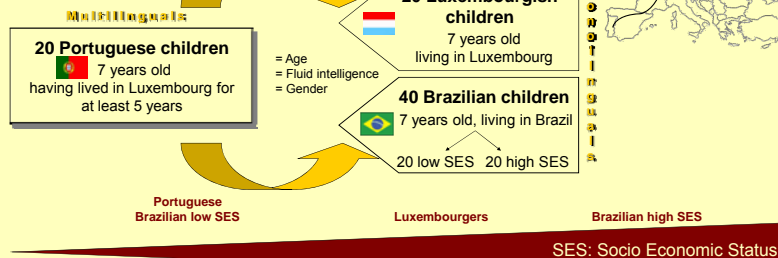
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### Method

#### Summary

**Working memory skills, vocabulary and comprehension** were investigated in native and secondary languages in a population of **Portuguese** immigrant children **growing up in Luxembourg** - a country in which Luxembourgish is mainly used in social interactions, and German and French are instructed in schools

#### Participants

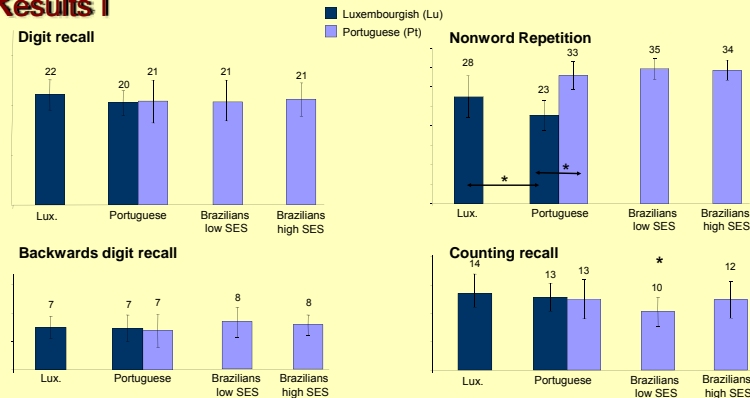


*I know the word in Portuguese but what is it again in Luxembourgish?*



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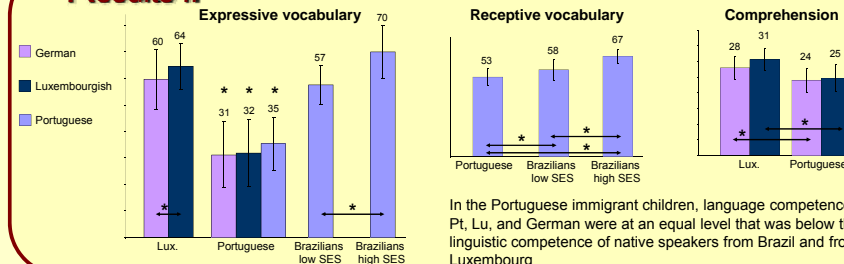
### Results I



(1) Portuguese children performed equally well in the Lu and Pt versions of the digit recall, backwards digit recall, and counting recall tasks (2) Portuguese children's performance in these three measures did not differ from their monolingual peers from Luxembourg and Brazil (3) Nonword repetition: the Portuguese children performed equally well to their Brazilian counterparts in the repetition of the Pt sounding nonwords whereas their performance in the repetition of the Lu nonwords was below that of the native Luxembourgish speakers ~ familiarity effect

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### Results II



In the Portuguese immigrant children, language competences in Pt, Lu, and German were at an equal level that was below the linguistic competence of native speakers from Brazil and from Luxembourg

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### Method

The monolingual children performed the tasks in their native language and the Portuguese immigrant children in both languages - Luxembourgish (Lu) and Portuguese (Pt).

#### Material

#### Central executive

Counting recall → 6 5

Backwards digit recall 9 3 7 → 7 3 9

Lux.	Port.	Bra.

Lu nonwords were based on the sound structure of Lu.  
Pt. nonwords were based on the Pt language.

#### Phonological loop

Nonword repetition

Digit recall 8 2 5 → 8 2 5

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### Method

#### Material

#### Expressive vocabulary

Expressive One Word Picture Vocabulary Test

Lux.	Port.	Bra.

#### Receptive vocabulary

British Picture Vocabulary Scale

Lux.	Port.

#### Syntactic comprehension

Test for Reception of Grammar

Lux.	Port.

Tables: Languages in which the different groups of children performed each language task

### Discussion

As the Portuguese immigrant children and their monolingual peers from Luxembourg and Brazil performed at comparable

levels on the working memory measures, their poor language performance in all three languages is unlikely to be related to a fundamental cognitive deficit. The fact that their knowledge of Portuguese vocabulary was even lower than that of children from impoverished backgrounds in Brazil also rules out the hypothesis that their poor language skills are simply a reflection of lower SES. Instead, the findings appear to be a direct consequence of growing up as an immigrant in a multilingual society raising the question of the necessity of specific language support for immigrant children.

Whereas language assessments may overestimate language learning difficulties in children with an immigrant background working memory measures might not. As working memory measures are highly associated with children's language learning and more general academic progress, these tests can provide methods of identifying children with potential learning difficulties that are unlikely to be distorted by differences in wealth or other significant environmental factors that have an impact on language learning opportunities.