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Introduction

Studies have shown that bilingual and monolingual children develop differently:

- Bilingual children outperform monolingual peers in cognitive control tasks [1][2][3]
- Bilingual children lag behind monolingual peers in linguistic development [4][5][6]

However, much is still unclear:

- Which executive functions benefit from bilingualism?
- Are all language skills delayed in bilinguals?
- And what about bi-dialectals?

The BiBi project

The impact of bilingualism and bi-dialectalism on cognitive and linguistic development (BiBi)

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Main research questions:

- How does bi-dialectalism affect the development of executive functions?
- Do bi-dialectals pattern with bilinguals or with monolinguals in their cognitive and linguistic development?
- How typologically different should the two languages be to find a "bilingual advantage"?

Monolinguals: 45 children from Eindhoven, who speak only Dutch at home and in school

Bilinguals: 45 children from Brussels, who speak French at home and Dutch in school

Bi-dialectals: 45 children from Ieper, who speak West-Flemish at home and Dutch in school

Children participate in:

- Cognitive test battery
- Language test battery

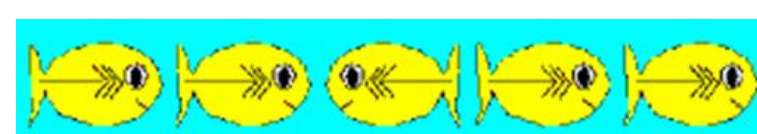
Parents fill out:

- Language background questionnaire
- Socio-economic background questionnaire
- Dialect Detection Task for West-Flemish

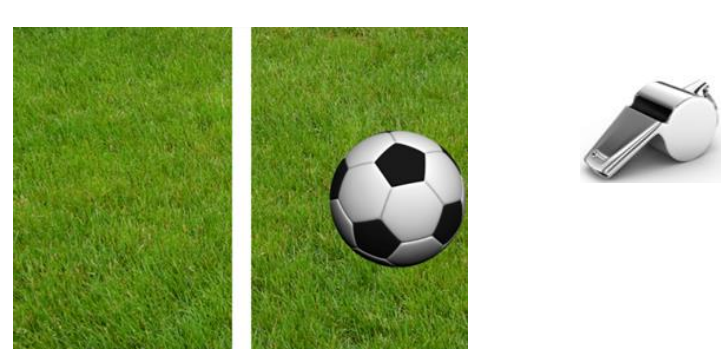
Materials

Cognitive tasks:

- Attentional Networks Task (alerting, orienting, and executive control) [7]

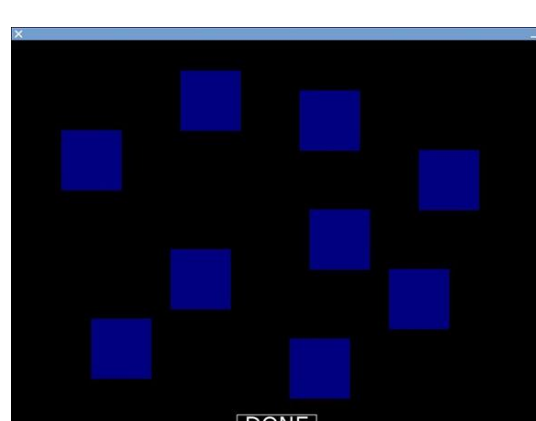


- Stop Signal Task (response inhibition) [8]



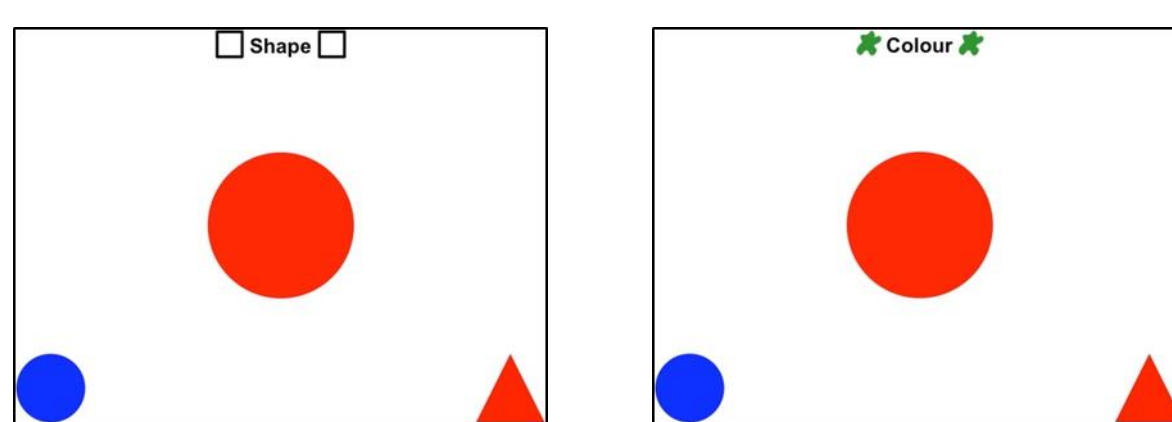
- Digit Span Task (verbal working memory) [9]

- Corsi Blocks Task (non-verbal working memory) [10]



- Silent Films Task (Theory of Mind) [11]

- Switching Task (task switching ability) [12]



Linguistic tasks:

- Peabody Picture Vocabulary Test (receptive vocabulary) [13]



- Word Definitions (productive vocabulary) [9]

- Pragmatics Task (pragmatic language comprehension) [14]



- Sentence Completion Task, (agreement production) [15]

- Picture Description Task (agreement production) [15]



Sub-project 1: Pragmatics

Pragmatic skills seem to be better developed in bilinguals compared to monolinguals [14].

Question: How does bilingualism and bi-dialectalism affect childrens' ability to understand various types of implicature?

Method: Look at comprehension of implicatures, irony, metaphors, relevance, manner, and contrast in bilinguals, bi-dialectals, and monolinguals

Sub-project 2: Agreement

Healthy native speakers produce subject-verb agreement errors (e.g., the key to the cabinets *are* missing) [15][16]. This might be related to executive control.

Question: Which executive functions are used during subject-verb agreement?

Method: Look at the relation between executive functions and agreement production

Sub-project 3: ToM

Bilingualism enhances Theory of Mind (ToM) development [17][18]. Having siblings also enhances ToM development [19].

Question: Are the effects of bilingualism and siblings on ToM development related?

Method: Look at effects of bilingualism/bi-dialectalism and number of siblings on Theory of Mind scores

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