Comparing metacognitive monitoring of native and non-native speaking children

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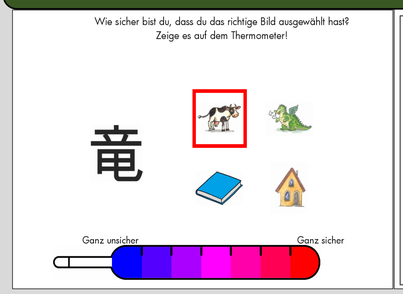
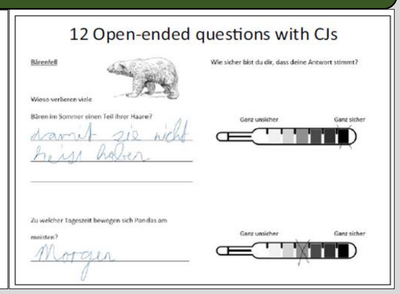
International assessments show that **non-native speaking children** – when compared to their **native speaking** peers- typically underperform in school subjects, such as reading, mathematics, and science (OECD, 2012, 2018). However, not much is known about the underlying mechanisms of performance differences between **native** and **non-native** speakers at school. We focus on **metacognitive monitoring**, which is consistently found to explain performance differences in primary school children (Freeman, et al., 2017; Roebers et al., 2014). Metacognitive monitoring is the ability to **evaluate one's ongoing cognitive processes** (Schneider & Löffler, 2016). Thus, we compared metacognitive monitoring of **native** and **non-native** speaking **primary school children**, in a paired-associates and a text comprehension task.

Method

Tasks





Subjects

36 native and 36 non-native speaking children were matched according age and gender
$(\boldsymbol{M_{age} = 10.2y}\ ;\ \boldsymbol{44\%}\ ♀)$

Measure

Performance = % of correct answers
Monitoring discrimination = $\overline{CJ_{correct}} - \overline{CJ_{incorrect}}$
Gamma Correlation between recognition and CJ

Results

Means (SD)

	Performance [%]	Monitoring Discrimination	Gammas
Study 2 Paired-associates			
Native speaking	53.99 (16.17)	1.19 (0.90)	0.50 (0.30)
Non-native speaking	53.30 (14.21)	1.00 (1.10)	0.40 (0.46)
Study 2 Text comprehension	*		
Native speaking	54.40 (17.76)	1.05 (1.17)	0.46 (0.50)
Non-native speaking	38.43 (22.21)	1.29 (1.50)	0.54 (0.47)

MANOVA

Paired associates: $F(3, 68) = 0.4$; $p = .75$; $\eta_p^2 = 0.02$.
Text compr.: $F(3, 68) = 4.20$; $\boldsymbol{p < .01}$; $\eta_p^2 = 0.16$

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Discussion

Paired-associates task

- Native and non-native speakers did not differ in recognition performance! → valid language reduced measure?
- Native and non-native speakers **monitored their performance equally well**.

Text comprehension task

- Native speakers outperformed non-native speakers in the text comprehension task.
- Native and non-native speakers **monitored their performance equally well**.
- Monitoring as a valuable resource?

Future research with NEPS data SC 2

- Language → Metacognition (procedural and declarative)
- Monitoring in various tasks, such as math., science, vocabulary, grammar