

# IASCL2017

## Anonymous abstract SUBMISSION Form for POSTERS

### Title of poster:

Bilingualism and cognition: acquiring cognates with a cross-linguistic phonological regularity

### Abstract proposal for poster (300 words max):

#### Aims

It has been argued that bilingual speakers of phonologically overlapping languages make use of cross-linguistic phonological regularities (Rys, 2009; Taeldeman, 2013). An example is Frisian *-ân* [ɔ:n] and Dutch *-and* [ɑnt], as in the cognate pairs *hân* [hɔ:n] - *hand* [hɑnt] 'hand' and *lân* [lɔ:n] - *land* [lɑnt] 'country'. Acquisition of these regularities can be seen as a form of rule-based learning, which has been shown to be related to both verbal working memory and selective attention (e.g. Rabi & Minda, 2014). We investigated the relationship between verbal working memory and selective attention on the one hand and the acquisition of cognates with a cross-linguistic phonological regularity on the other.

#### Method

For three consecutive years, Frisian-Dutch bilingual children ( $n = 120$ ) were tested annually on selective attention, verbal working memory and a Frisian receptive vocabulary task that comprised four cognate categories: (1) identical cognates, (2) non-cognates and (3) non-identical cognates that either do or (4) do not exhibit a simple phonological regularity between Frisian and Dutch. Non-verbal IQ, SES and exposure to Frisian were statistically controlled.

#### Results

Cross-lagged regression analyses were performed. Selective attention at time 1 only predicted growth of identical cognates,  $\beta = -.20$ ,  $p = .006$ ,  $\Delta R^2 = .038$ , and non-identical cognates with a cross-linguistic phonological regularity,  $\beta = -.20$ ,  $p = .008$ ,  $\Delta R^2 = .035$ . Conversely, only the acquisition of cognates with a cross-linguistic phonological regularity predicted verbal working memory at time 3,  $\beta = .254$ ,  $p = .014$ ,  $\Delta R^2 = .037$ .

#### Conclusions

The results show that (1) selective attention advances the acquisition of identical cognates and cognates with a cross-linguistic phonological regularity and that (2) the acquisition of cognates with a cross-linguistic phonological regularity enhances verbal working memory. This suggests a bidirectional relationship between cognitive functioning and the acquisition of cross-linguistic phonological regularities.

#### References (3 max)

- Rabi, R. & Minda, J. P. (2014). Rule-based category learning in children: The role of age and executive functioning. *PLOS ONE*, 9(1), 1-10.
- Rys, K. (2009). Intersystemic correspondence rules and headwords in Dutch dialect lexicography. *International Journal of Lexicography*, 22(2), 129- 150.
- Taeldeman, J. (2013). Recent developments in the East Flemish dialect area. In F. Hinkens & J. Taeldeman (eds.), *Language and space, Volume 3, Dutch* (pp. 255-276). Berlin: De Gruyter Mouton.