

Kidane Admasu, Evans Burichani, Timothy Mac Hadjah, Tano Angoua \*, Lisa van der Mark, Mariana Martins, Marta Morgado, Victoria Nyst, Marco Nyarko

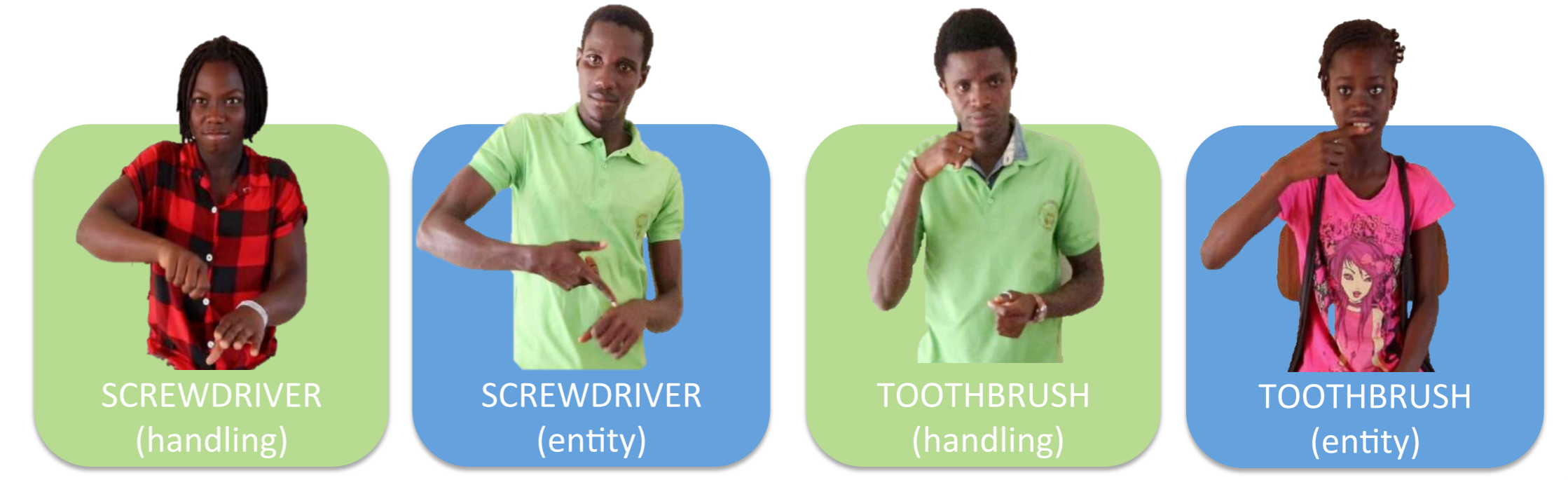
Leiden University, \* Université Houphouët Boigny

([m.morgado@hum.leidenuniv.nl](mailto:m.morgado@hum.leidenuniv.nl) / [t.m.hadjah@hum.leidenuniv.nl](mailto:t.m.hadjah@hum.leidenuniv.nl))

## Handling vs Entity: variation in the representation of hand-held objects

Recent studies have found variation in the distribution of handling and entity depiction in the representation of hand-held objects.

This variation is found across sign languages, across gesturers and across ages. This poster presents the results of two studies on the variation in the distribution of handling and entity depiction.



## Study I: cross-linguistic variation

Cross-linguistic variation found in the distribution of handling vs entity handshapes (Padden et al. 2013, 2014; Hwang et al. 2017). Only one African SL involved in these studies. For Adamorobe SL, Nyst (2007) claims a relatively frequent use of entity depiction in lexical items. In a comparison of iconicity in 3 West African SLs and 3 European SL, Nyst (2018) finds that these two groups pattern differently. According to region of origin.

## Study II: age-based variation

Age-based variation is found in Turkish SL (TiD) where children have a higher preference for the depiction of action over perception than adults (Ortega et al. 2014, 2017). American studies on the handling/entity distribution in gesturing find that children have a preference for entity depiction (e.g. Overton & Jackson 1973, Boyatzis & Watson 1993).

## Study I: Research question

How do African SLs compare to each other and to SLs of European origin in the distribution of entity & handling?

## Study II: Research question

Do we find age-based variation in entity & handling depiction in African SLs and how does this variation compare to the variation found in TiD and in gesture?

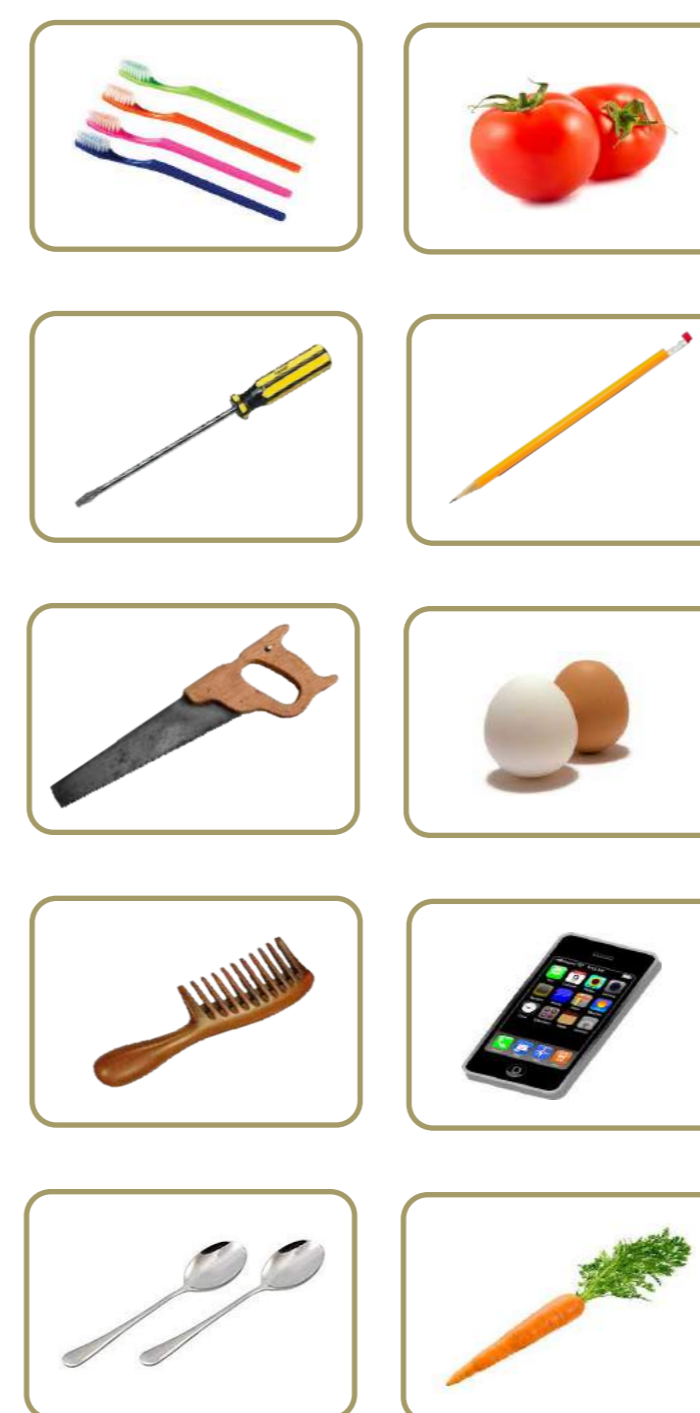
## Methodology

- 15 deaf signers for each SL (but 6 for LaSiBo) & 15 deaf children in EthSL, GSL, KSL & LGG.
- Signers asked to describe 26 pictures with hand-held objects.
- Responses were coded for entity (E), handling (H) or other (O).
- Concepts were excluded from analysis if a) all signers used the same strategy (eg. 'scissors') or b) no intercoder agreement was reached, e.g. 'soap' and 'lipstick'.



- The averages for E and H were calculated for each SL, with separate averages for the child data.

## Stimuli

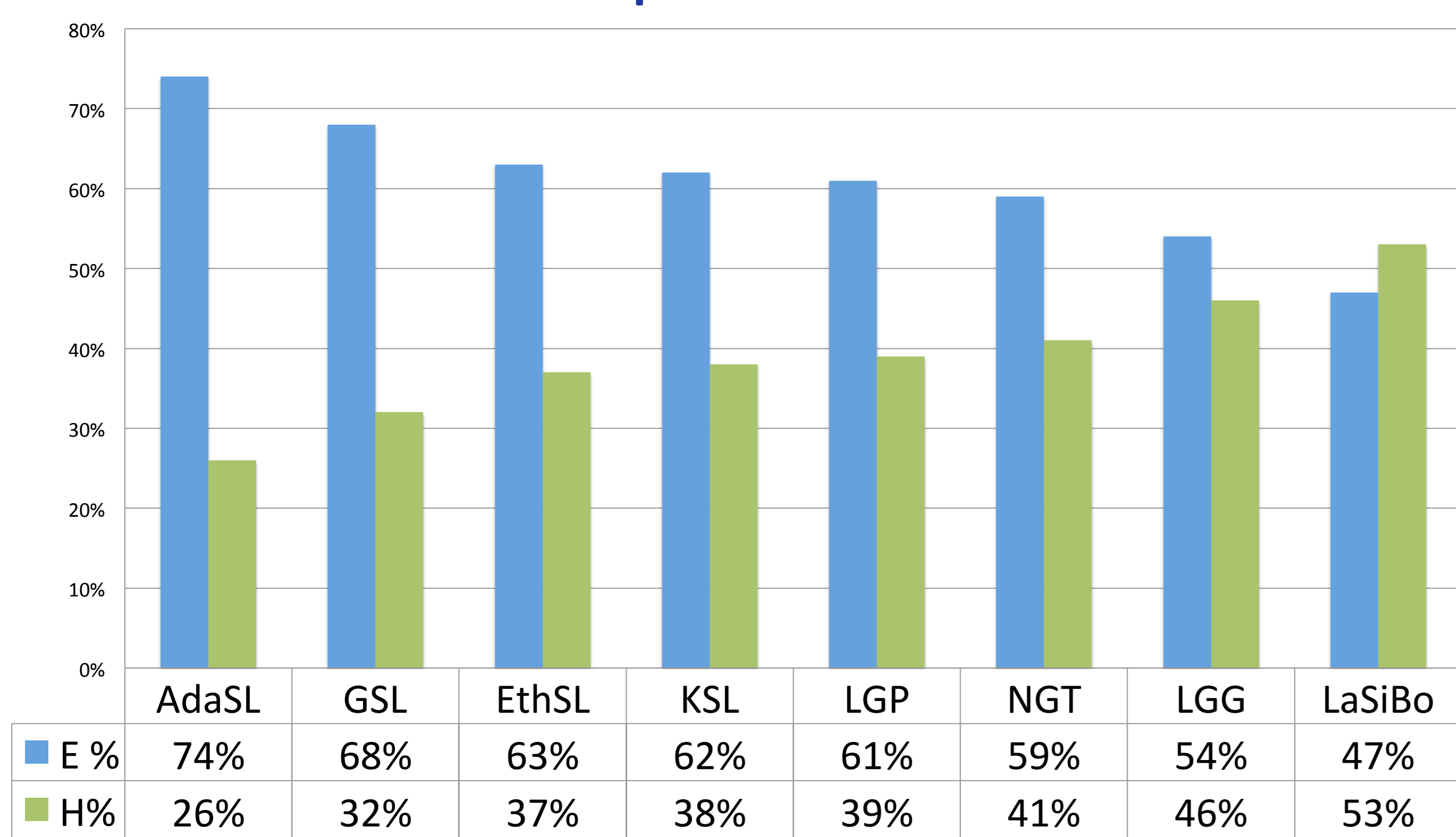


## 8 SLs

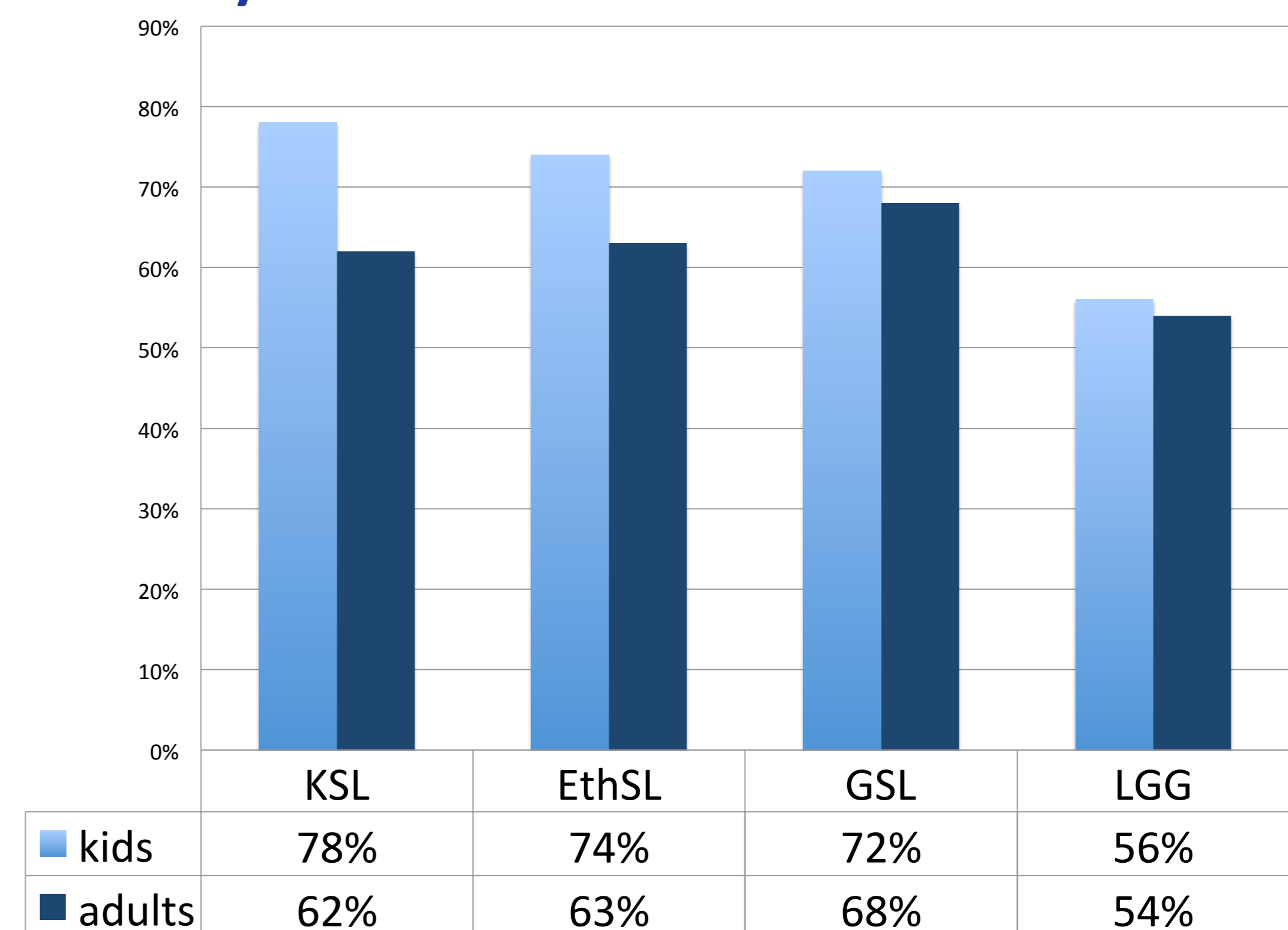
- SL Netherlands (NGT) Old SL
- Portugal SL (LGP) Old SL
- Guinea-Bissau SL (LGG) Young SL
- LS Bouakako (LaSiBo) Young village SL
- Adamorobe SL (AdaSL) Old village SL
- Ethiopia SL (EthSL)
- Kenya SL (KSL)
- Ghana SL (GSL)



## Comparison 8 SLs



## Entity scores for adults & children in 4 SLs



## Study I: Discussion

We find cross-linguistic variation in the preference for entity over handling handshapes. The three locally evolved West African SLs (LGG, LaSiBo, and AdaSL) differ from each other maximally. As such, the results do not show a regional bias. The European SLs (NGT & LGP) and the SLs with a strong influence of ASL (GSL, EthSL, and KSL) are quite similar.

## Study II: Discussion

Adult vs child signers: preference for entity HSs in children in 2 out of 4 SLs. This goes against the preference for handling depiction found in Ortega et al (2014, 2017), but is in line with the results in the gestures of hearing children (Overton & Jackson 1973; Boyatzis & Watson 1993). In our data set, data were collected with adults connected to a deaf school (GSL & LGG).

## Conclusion

The cross-linguistic data confirm the presence of cross-linguistic variation in the distribution of handling and entity depiction, as well as the relatively high incidence of entity depiction in AdaSL claimed by Nyst (2007). Interestingly, the data are not in line with a scenario in which locally evolved West African SLs pattern alike in representational strategies (cf. Nyst 2018). Rather, they are indicative of a different distribution resulting from a difference in age. More research is needed to understand how the SL data relate to the representations used by hearing non-signers.

Study II finds a difference between adult and child signers in two out of four SLs, with children having a stronger preference for entity depiction in KSL and EthSL. As such, the results run counter to the preference for handling depiction observed in child signers of TiD (Ortega et al. 2017). They are in line with the results found for the gestures of hearing children (Watson 1991, O'Reilly 1991). It is not clear what the role of language and culture is in the distributions found, so more research is needed here too.

## References

- Boyatzis, C. J., & Watson, M. W. (1993). Preschool children's symbolic representation of objects through gestures. *Child development*, 64(3), 729-735.
- Hwang, S. O., et al. (2017). Of the body and the hands: patterned iconicity for semantic categories. *L&C*, 9(4)573-602.
- Nyst, V. (2018) Cross-linguistic variation in space-based distance for size depiction in the lexicons of six sign languages. *SL&L* 21(2), 350-379.
- Ortega, G., et al. (2014). Type of iconicity matters: Bias for action-based signs in sign language acquisition. In P. Bello, M. et al. (Eds.), *36th annual conference of the cognitive science society* (pp. 1114-1119). Austin, TX: CSS
- Ortega, G., et al. (2017). Type of iconicity matters in the vocabulary development of signing children. *Development Psychology*, 53(1) 89-99.
- Overton, W. F., & Jackson, J. P. (1973). The representation of imagined objects in action sequences: A developmental study. *Child Development*, 309-314.
- Padden, C., et al. (2014). Tools for language: Patterned iconicity in sign language nouns and verbs. *TICS*, 7 (1), 81-94
- Padden, C., et al. (2013). Patterned iconicity in sign language lexicons. *Gesture*, 13(3), 287-308.

## Acknowledgment

This research was funded by the Vidi project "From Gesture to Language" (Dutch Science Foundation, NWO) and the project "Language Socialization in Deaf Families in Africa" (Leiden University Fund). We thank all the participants in this study for their help.