

Lithuanian Non-word repetition test: research into TD and SLI children

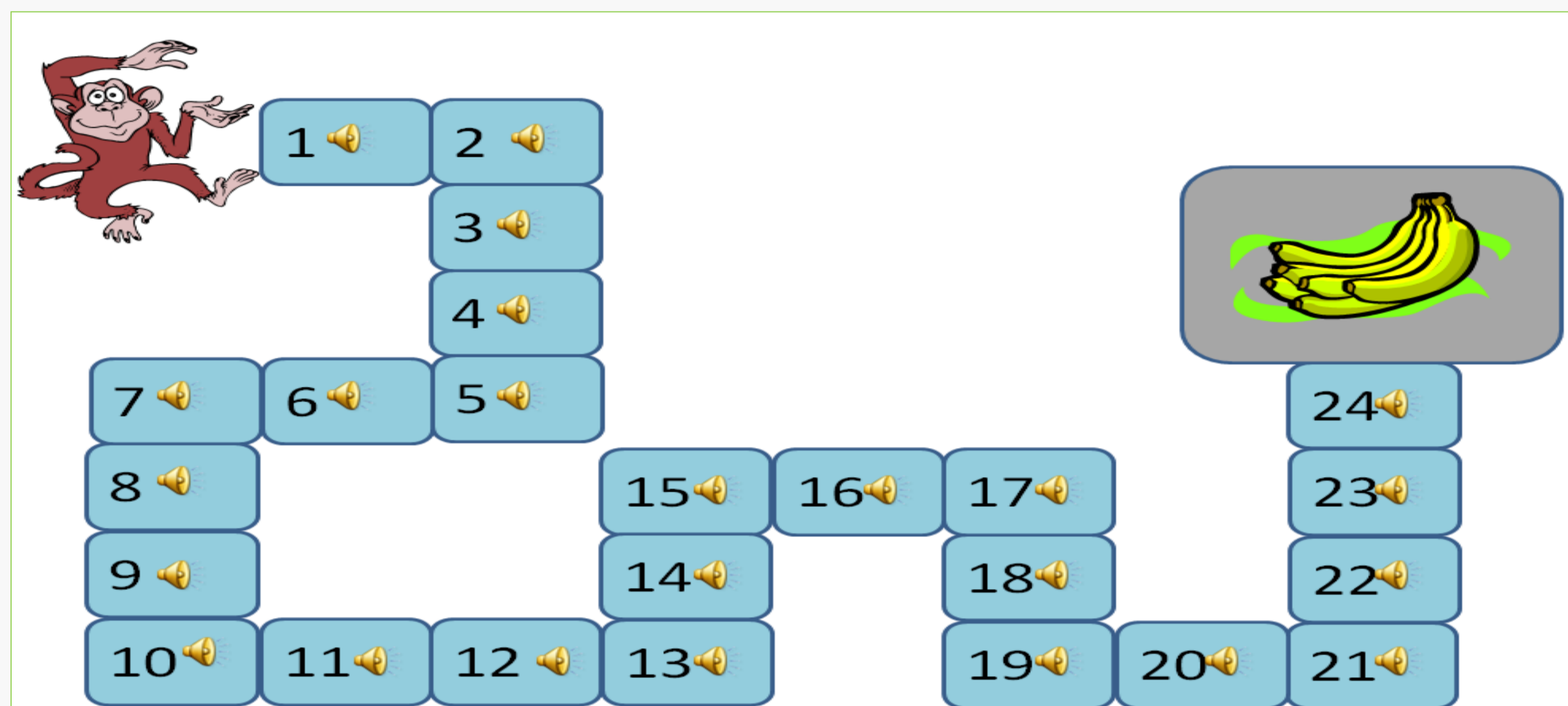
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Introduction

The **non-word repetition test** is quick and easy to administrate; it involves a series of cognitive-linguistic processes that include speech perception, phonological encoding, phonological memory and articulation (Bowey 2006). It is claimed that the ability to repeat a non-word and learn the phonological form of a new word are closely linked: individuals who perform poorly on non-word repetition typically struggle to learn the phonological form of language (Gathercole 2006).

NWR test design

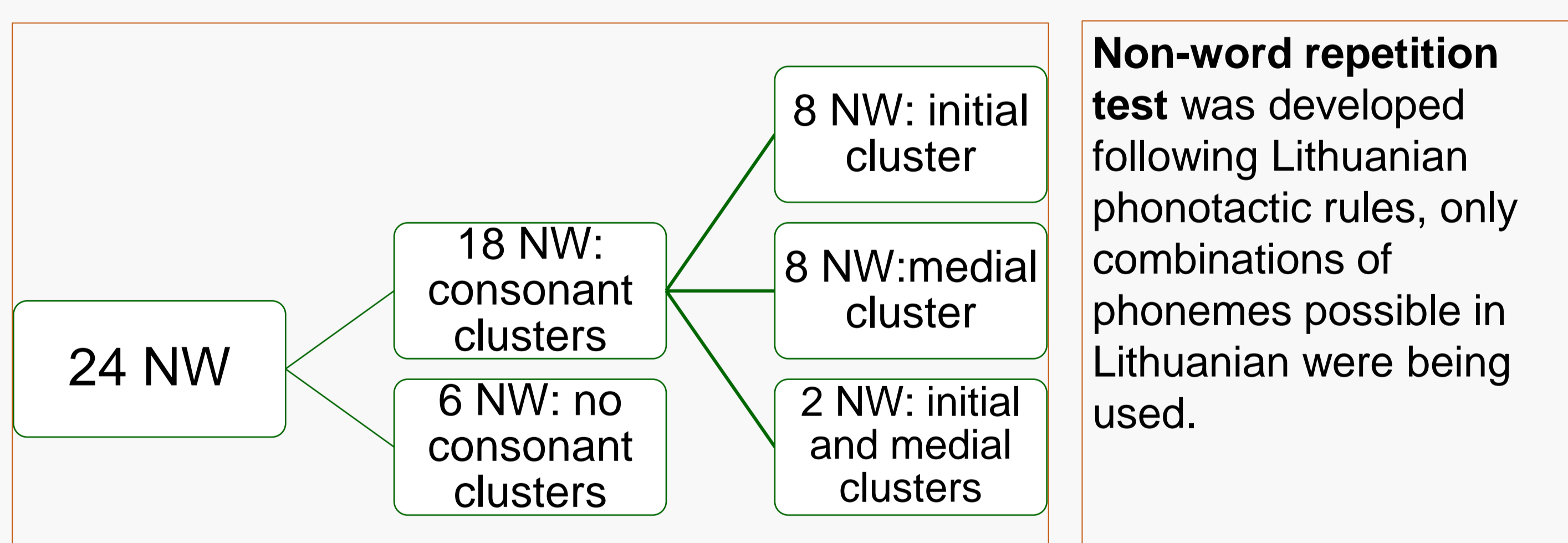


Design by Kunnari, Tolonen & Chiat (2011)

Procedure

The children were tested individually: they were asked to listen to two-, three-, and four-syllable non-words one at a time and to repeat each item immediately following its presentation. The non-words were displayed in a fixed order in a PowerPoint presentation.

Structure of NWR test



Non-word repetition test was developed following Lithuanian phonotactic rules, only combinations of phonemes possible in Lithuanian were being used.

Data (N=50)

Group	Age group	N	Mean age
TD	4;00-4;11	5	4;7
	5;00-6;11	10	5;8
	7;00-8;11	10	7;8
SLI	4;00-4;11	5	4;2
	5;00-6;11	10	5;9
	7;00-8;11	10	7;6

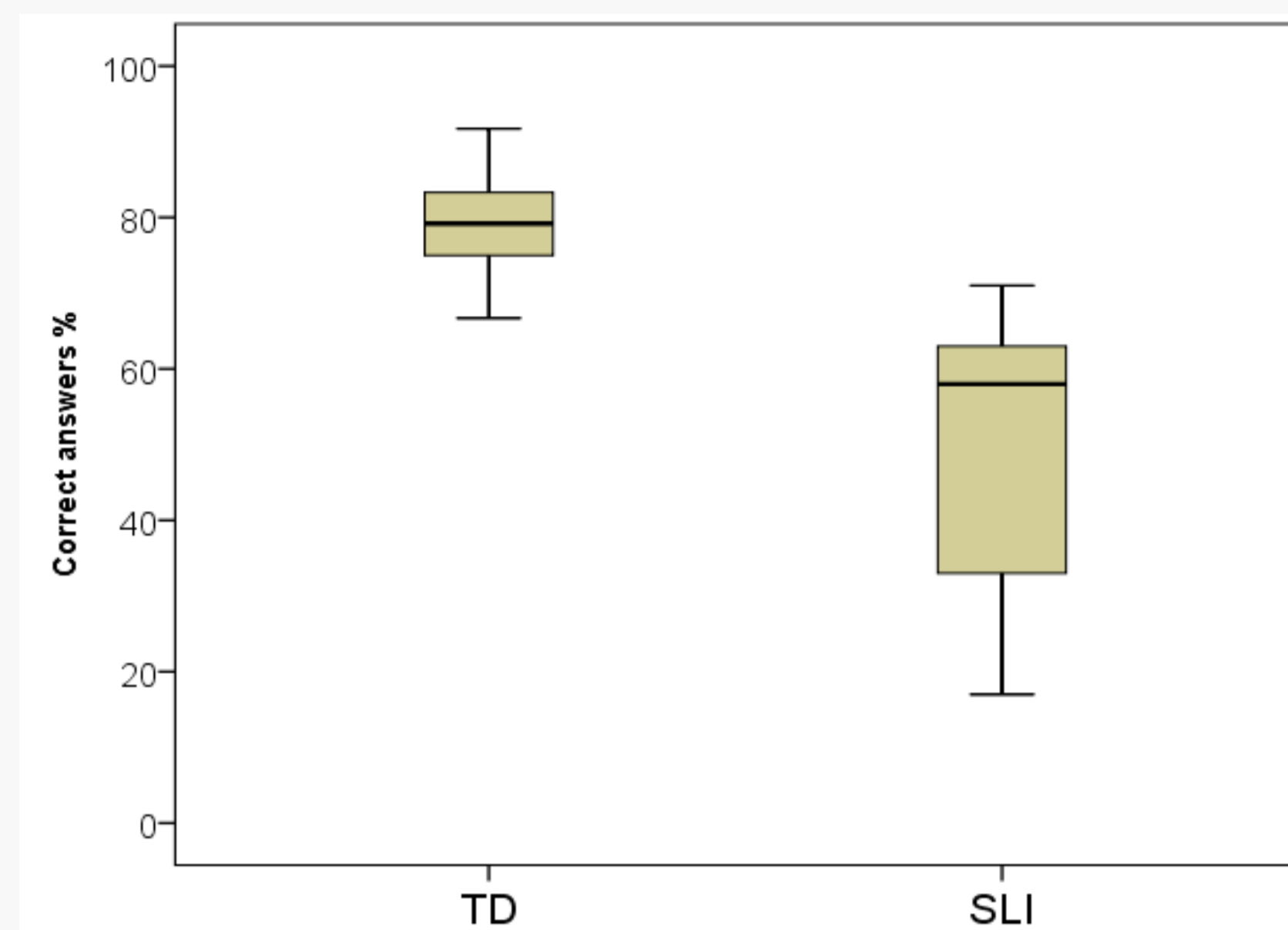
Acknowledgments

The study was based on a methodology developed in the framework of the COST Action IS0804 *Language Impairment in a Multilingual Society: Linguistic Patterns and the Road to Assessment*.

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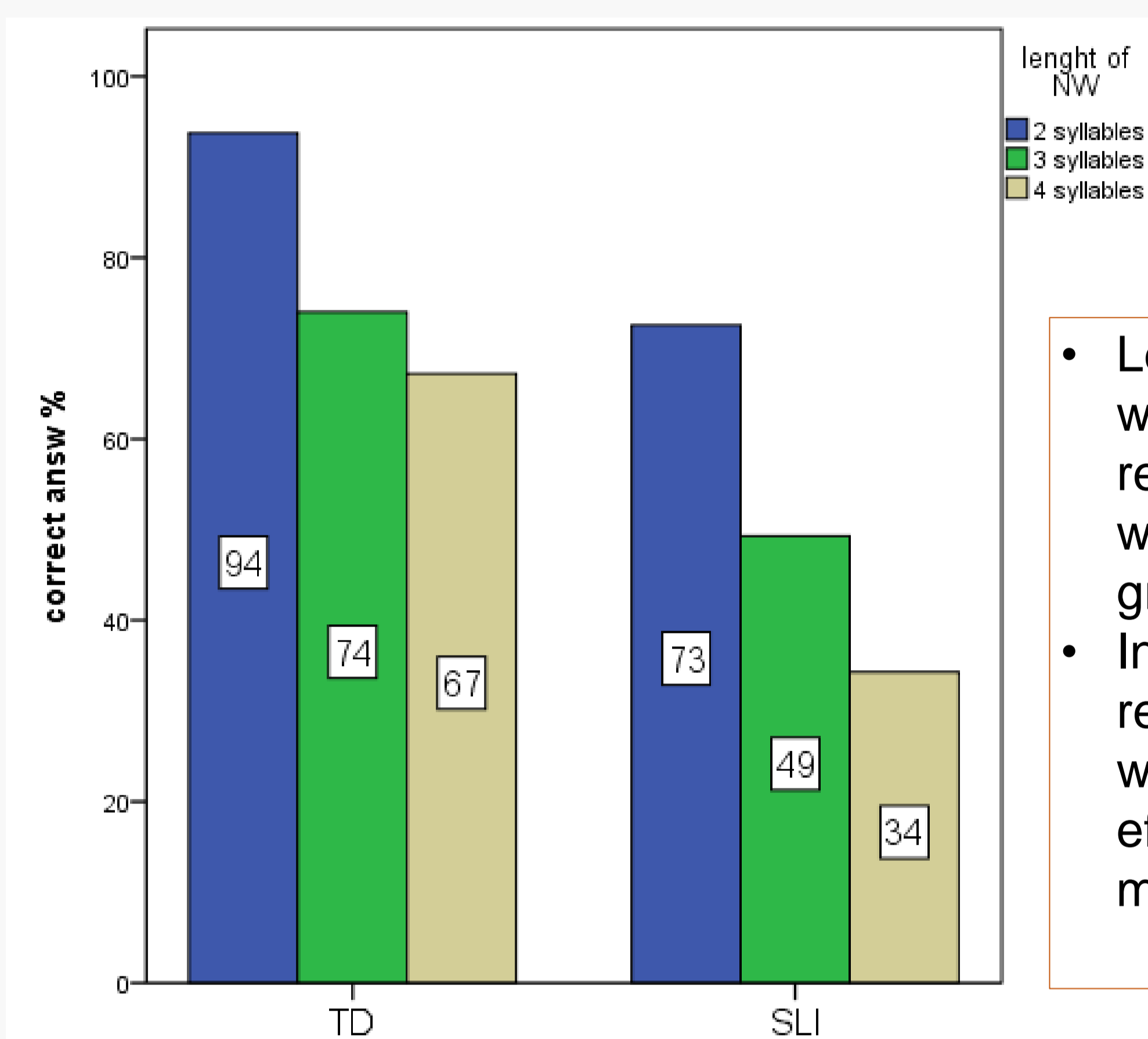
Results

Correct answers of non-words



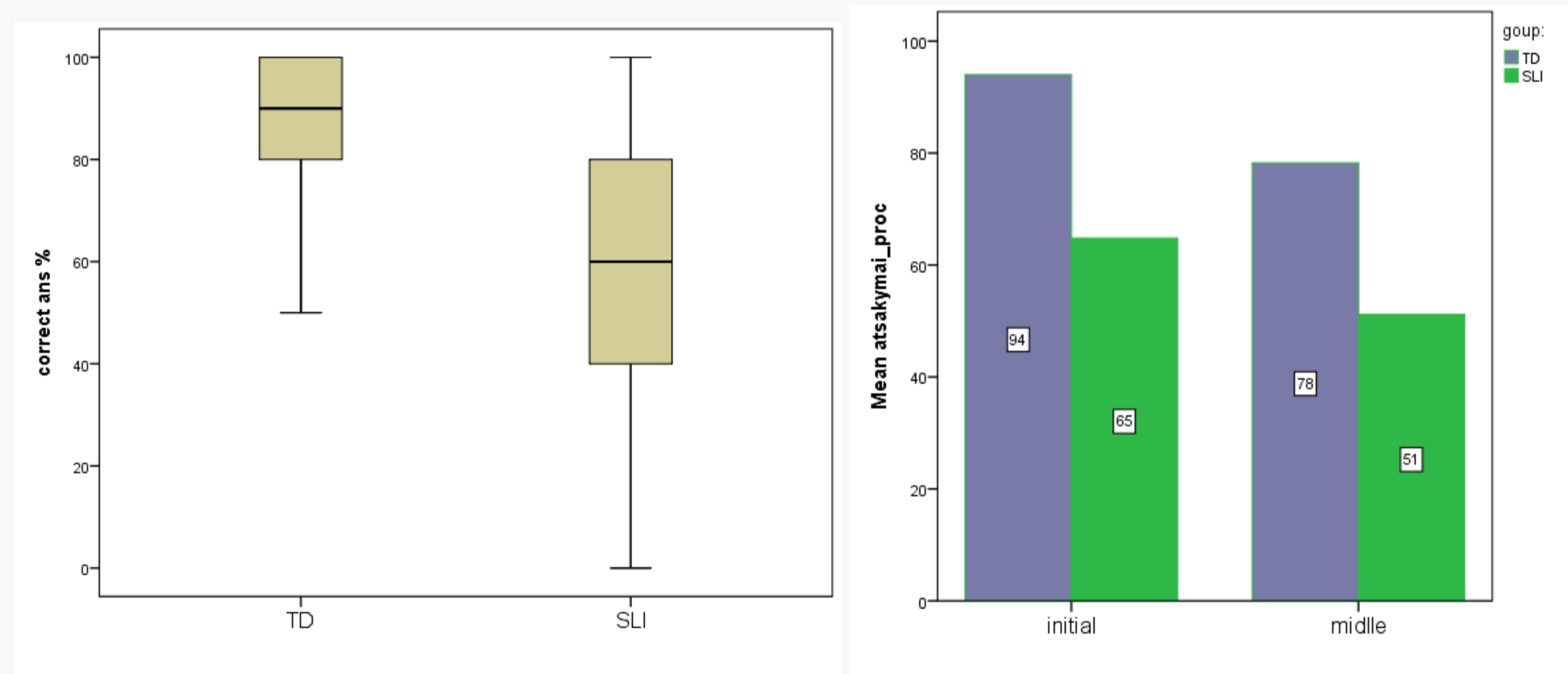
A significant effect on repetition accuracy between the TD ir SLI groups was observed ($p=0,000$): SLI children performed more poorly than TD children.

Word length (syllables)



- Length effect: longer non-words are more difficult to repeat than shorter non-words for both TD and SLI groups.
- In order to perceive and repeat more complex words, more linguistic efforts and additional memory are necessary.

Complexity (clusters)



- Repeating complex non-words with consonant clusters is much more difficult than non-words with a CV structure especially for SLI group.
- The cluster position in a word is especially important for children with SLI. They repeated the clusters in the medial position significantly worse than in the initial position, especially in longer non-words (mostly of four syllables).

Conclusions

- The performance of all groups was affected by item length, and structure complexity.
- The results show that SLI children scored below TD children.
- The performance in the SLI group was significantly poorer but demonstrated the same trend as TD group: longer words and medial clusters were difficult to repeat for all groups.
- In all groups repetition accuracy in the test was found to decline with the number of syllables, but especially in children with SLI.

References

- Bowey J. A. (2006). Clarifying the phonological processing account on nonword repetition. *Applied Psycholinguistics*, 27, 548-551.
Gathercole S. E. (2006). Nonword repetition and word learning. The nature of the relationship. *Applied Psycholinguistics*, 27, 513-543.