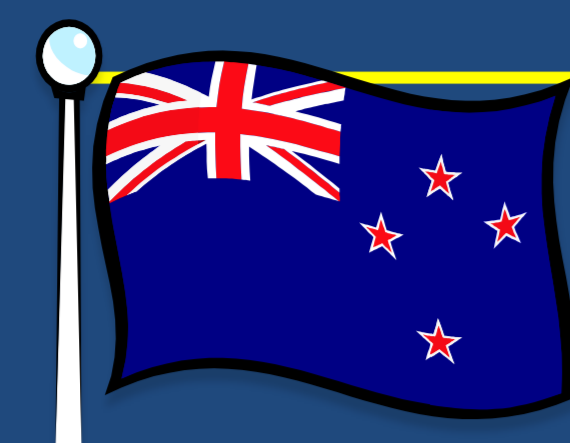
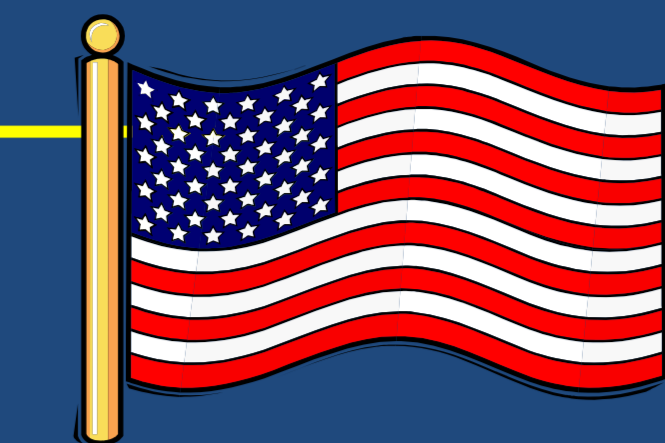


# Narrative analysis: The effects of geographical location on children's spoken language performance



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Detailed analysis of children's oral narratives is considered an ecologically valid way to describe children's oral language skills. To improve the clinical utility of the narrative assessment process, groups of researchers have developed databases of samples elicited from typically developing speakers to use as a comparison for their clients with suspected language impairment. While it is expected that the samples produced by children from English speaking countries should generalize to the wider population, there is a chance that children from different geographical and/or cultural groups may perform differently on the oral narrative tasks. The purpose of this project was to analyze oral narratives produced by children from New Zealand (NZ), at microstructure and macrostructure level, and compare their performance to age-matched samples from one of the most comprehensive databases documenting children's oral narrative skills that is available with the Systematic Analysis of Language Transcripts (SALT) software (Miller & Iglesias, 2010).

## Participants

New Zealand	US
Sixty-six typically developing monolingual English speaking children, aged between 6;0 and 7;11	73 samples from a database containing language samples produced by monolingual English speaking children living in Madison, WI and San Diego, CA.

## Methods

All children retold the story "Frog Where are You" (Mayer, 1969) after listening to the story once on tape. The US children had access to the picture when retelling the story. In NZ, approximately half the children retold the story from memory and half the children were allowed to use the pictures to assist in the retell.



## Measures

Transcripts were transcribed, using standard Systematic Analysis of Language Transcripts – NZ Version 2008 (Miller, Gillon, & Westerveld, 2008) conventions. Utterances were segmented into C-Units. Unfinished utterances or utterances containing unintelligible segments were excluded from analysis. The following measures were calculated:

- **Utterances:** Total number of utterances
- **MLUW:** Mean length of utterance in words
- **NDW:** Number of different words
- **Mazing behaviour:** % Maze words
- **NSS:** Narrative Scoring Scheme (range 0-35)
- **NQ:** Narrative Quality (range 8-40)

## Results

Table 1: Mean values for language sample measures broken down by geographic location and presence of pictures

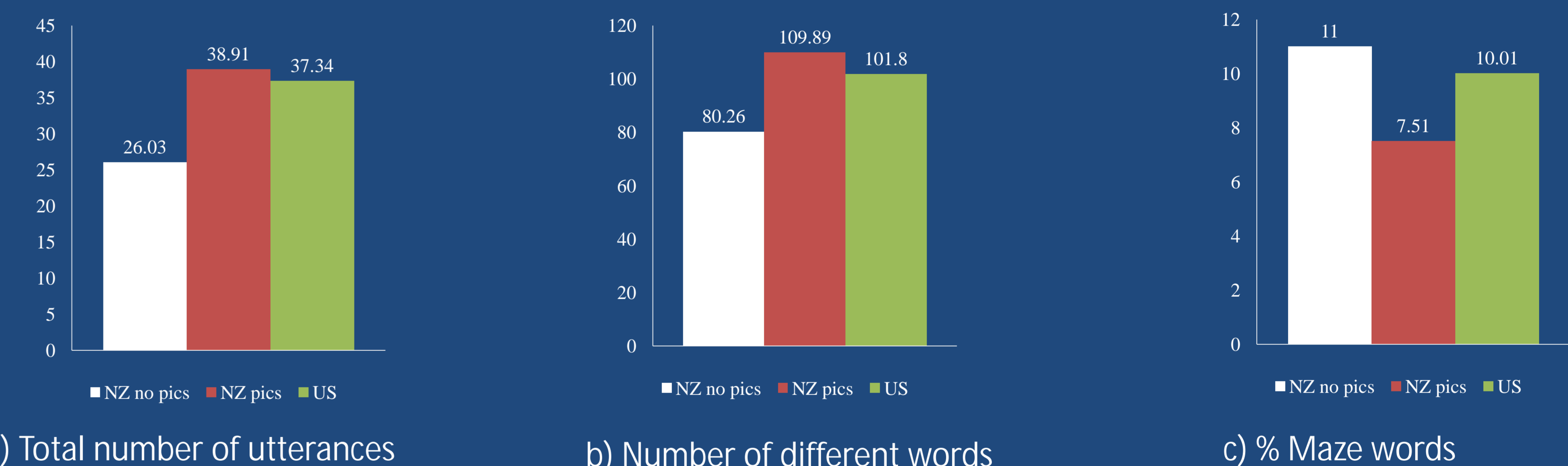
Country	Pictures	n	Age	Utterances*	MLUW	NDW*	%Maze words*	NSS	NQ
NZ	No	31	7;1 (0;6)	26.03 (11.33)	9.01 (1.11)	80.26 (26.56)	11.00% (7.05%)	16.81 (4.88)	20.26 (4.97)
	Yes	35	7;1 (0;6)	38.91 (12.43)	8.83 (1.42)	109.89 (35.98)	7.51% (3.96%)	19.76 (6.36)	21.77 (6.79)
US	Yes	73	6;8 (0;4)	37.34 (10.21)	7.58 (1.15)	101.08 (19.92)	10.01% (19.92%)	19.88 (2.89)	22.24 (4.83)

\* Significant main effect at  $p < .05$

Table 2. Eta squared values summarizing the amount of variance accounted for by 1) the presence of pictures and 2) geographic location

	Utterances	MLUW	NDW	%Maze words	NSS	NQ
Pics vs. no pics	.231*	.005	.181*	.090*	.065	.016
NZ vs. US	.002	.001	.005	.051*	.002	.008

Figure 1: Group performance on measures of length, number of different words, and mazing behaviour



## Main findings

1. For the NZ samples, results from a series of analysis of variance equations indicated that the children told significantly longer stories, used significantly more different words, and demonstrated significantly fewer mazes when they had the pictures during retell (see Table 2).
2. The results form a series of analyses of covariance comparing the NZ and US samples (pictures available, see Table 2) and controlling for age, indicated that %Maze words was the only measure that varied significantly as a function of location (explaining 5.1% of the variance); All other measures were not significantly different and accounted for <1% of the variability in the measures.

## Conclusion

The results suggest that adhering to language sampling elicitation protocols when comparing a narrative sample to a reference database may be more important than its geographical origin. Further research should consider different discourse contexts and include children with differing language ability profiles.

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