

- **Does a brief exposure to written L2 improves L2 spelling accuracy?**
- **How does the relationship between languages influence the spelling abilities?**
  - Spelling leans on the same linguistic representations that appear while reading (Russak & Kahn-Horwitz, 2015).
  - The similarities and differences between languages influence the ability to read and write in both languages (Kahn-Horwitz et al., 2011; Schwartz et al., 2016).
  - Characteristics of the first-language (L1) writing system influence spelling abilities in the second-language (L2) (Martin, 2016).
  - *The linguistic and orthographic proximity hypothesis* - literacy skills in L2 are affected by the linguistic and orthographic proximity between the two languages (Kahn-Horwitz et al., 2011; Schwartz et al., 2016).
  - *The linguistic affiliation constraint hypothesis* - phonemes that do not exist in L1 but appear in L2 would be less accessible.
    - Therefore, those phonemes would be harder to decode and spell in the L2 orthography (Schwartz et al., 2016).
- **How does brief exposure to one language influence performance in the other?**
  - Short exposure to the L1 has been shown to influence production performance in the L2 (Kreiner & Degani, 2015).

## The Current Study

- Does reading a short text in English (L2) influence spelling accuracy in English (L2) among native Hebrew speakers (L1)?
- Does the manner of reading (silent or aloud) influence spelling accuracy?
- Would words with orthographic challenges be more difficult to spell than words without specific challenges?

## Participants:

- 30 native Hebrew speakers (L1) who have studied English (L2) as a foreign language (EFL) since elementary school.

Characteristics	Brief exposure	
	Listening condition group	Reading condition group
Gender	5 (M), 10 (F)	7 (M), 8 (F)
Age	26.6 (3.73)	23.73 (3.65)
Hand dominance	3 (L), 12 (R)	1 (L), 14 (R)
Age of acquiring L2 English	8.27 (1.71)	8.13 (1.45)
Self-rated Hebrew proficiency	9.45 (0.54)	9.41 (0.39)
Self-rated English proficiency	6.61 (1.42)	6.61 (1.26)
Use of English reading	8.76 (1.86)	7.24 (1.62)
Use of English writing	9.05 (0.78)	8.72 (0.57)
Self-rated English reading proficiency	7.13 (1.40)	6.53 (1.99)
Self-rated English Writing proficiency	5.4 (2.32)	5.67 (1.49)

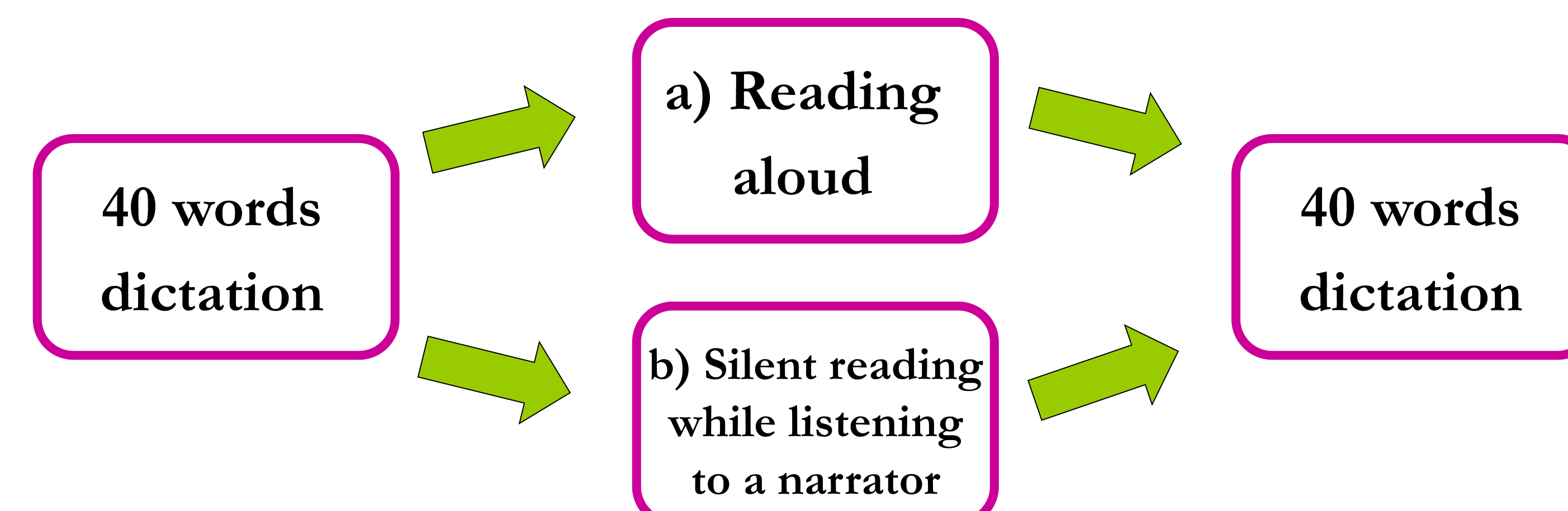
## Task & Stimuli:

- English spelling abilities were tested using an **English dictation task** (adapted from Martin, 2016).
- 80 English words were divided into two lists (40 words each) matched on:
  - *Known Challenges* - words including vowels and consonants expected to be challenging for native Hebrew speakers based on previous studies (Martin, 2016 & Schwartz et al., 2016).
  - *Newly Identified Challenges* - additional English orthographic conventions identified as potentially challenging for native Hebrew speakers due to cross-language differences.
- Words were recorded by a native English speaker.

Challenge type	Example
<b>Known challenges</b>	
consonants digraphs <th>	Th <u>u</u> mb
vowels digraphs <ee>	Swee <u>p</u>
vowels digraphs <oo>	Spo <u>o</u> n
silent <e>	No <u>i</u> se
<b>Newly Identified challenges</b>	
vowels digraphs <ou>	Sh <u>o</u> uld
vowels digraphs <ea>	Ne <u>a</u> t
vowels digraphs <ai>	<u>A</u> id
vowels digraphs <ie>	pie
consonants <gh>	T <u>igh</u> t

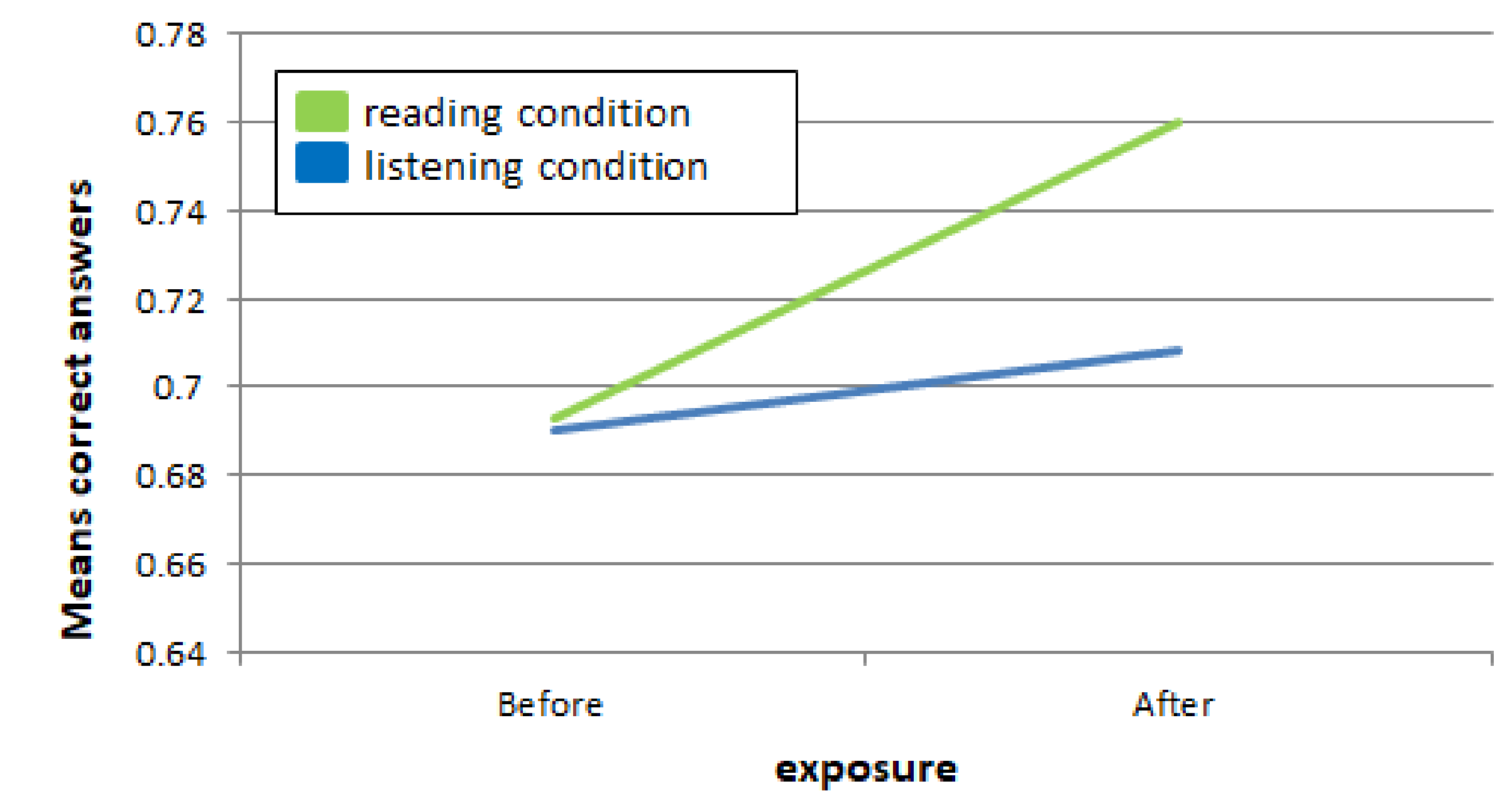
## Procedure

- A dictation task on one list consisting of 40 English words (order of lists counterbalanced).
- Reading task (~ 10 minutes) including two short stories, "The cookie thief" (by Valerie Cox) and the short folk tale "The stone soup", was administered in one of two conditions:
  - a) Half of the participants were asked to read **aloud** the two stories.
  - b) The other half were asked to **read silently and simultaneously listen** to recorded narration of the same two stories by a native English speaker.
- A second dictation task on the second list (including a different set of 40 English words).
- The two stories did not include any word from the dictation lists.

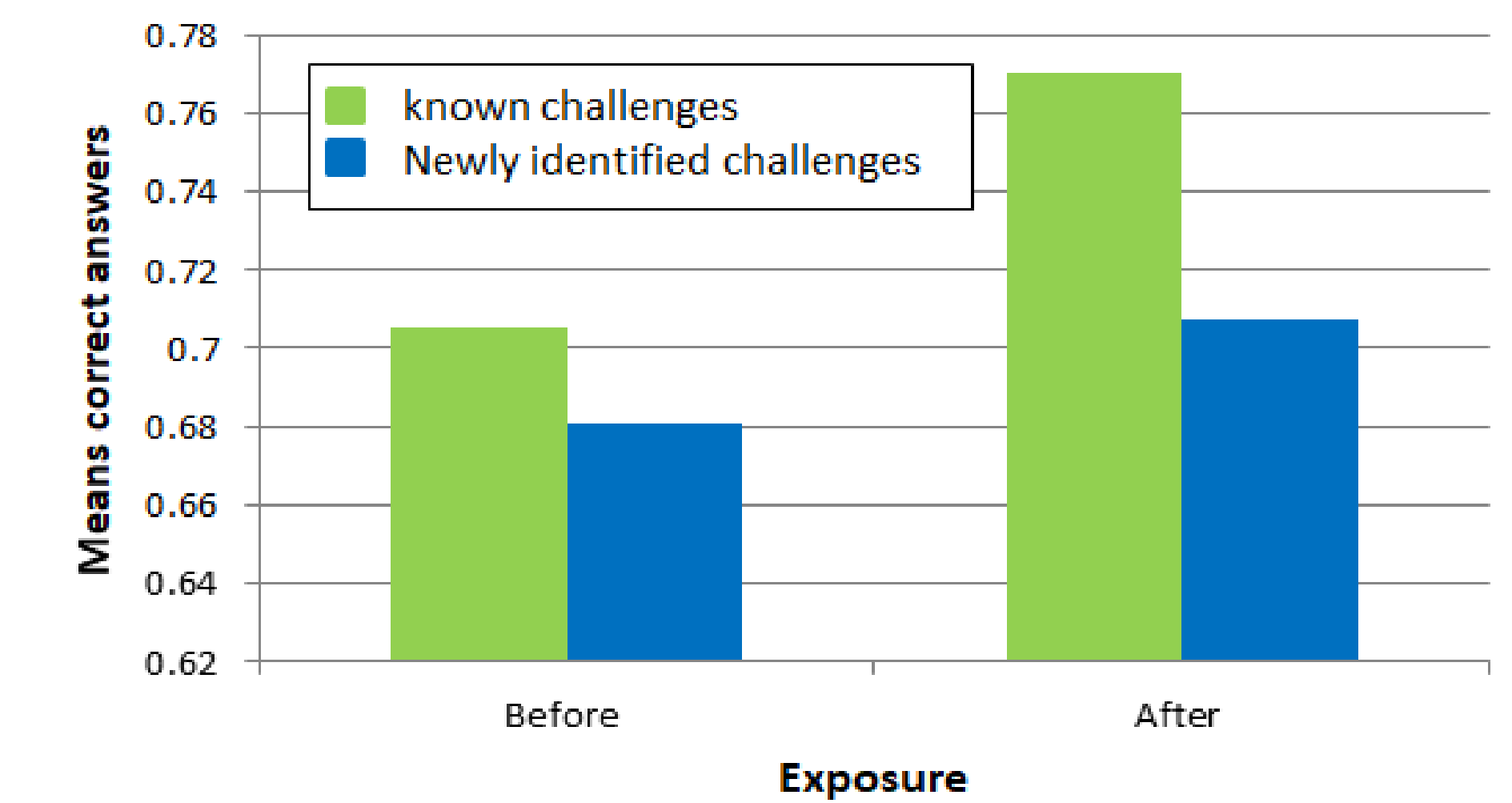


## Results

- Overall marginal effect of the exposure.
- A significant effect of the exposure only in the read aloud condition, such that after reading aloud in English, participants performed the spelling task more accurately.
- In addition, words with orthographic and phonological challenges were spelled significantly less accurately than words without challenges.



- Words with newly identified challenges were spelled less accurately than those with known challenges.



## Discussion

- Brief exposure influenced spelling abilities among bilinguals. Specifically, brief exposure to the same language lead to more accurate spelling following the exposure.
- Reading text aloud lead to more accurate spelling compared to reading a text while listening to a narrator, perhaps because reading aloud requires more explicit attention to grapheme-to-phoneme orthographic conventions, which facilitate spelling abilities.
- The effect of orthographic challenges suggest that cross-language differences between Hebrew and English made the spelling in L2 more difficult, supporting *The linguistic and orthographic proximity hypothesis* & *The linguistic affiliation constraint hypothesis*.
- Pedagogical implications - during the process of L2 literacy instruction, the use of reading aloud tasks on written texts might improve spelling performance.

## References

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