

NOTE-TAKING IN A NATIVE OR NON-NATIVE LANGUAGE IN BILINGUAL STUDENTS



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INTRODUCTION:

- Note-taking is an important part of studying and note-taking quality improves later test performance [1]
- Students in the UK who speak English as a second language might be disadvantaged as note-taking quality has been found to be worse in a non-native than in a native language [2]
- On the one hand, note taking might be faster in a native language and result in better quality and test performance [3]
- On the other hand, taking notes in the language of the lecture content (English) might result in better test performance thanks to the language of encoding and testing being the same [4]

AIMS:

- Examine effects of note-taking language on **note quality** and **test performance**
- Investigate the potential role of English **proficiency** as a mediating factor

PARTICIPANTS:

- N = 100** non-native English speakers studying at English speaking university
- Native languages: Dutch, German, French, Italian or Spanish
- English proficiency = 78.7% average (0-100% scale)
- Native proficiency = 85.5%

MATERIALS + PROCEDURE:

Initial pre-screening to fit language profile

First Section:

- Participants watched three x 10 minute long TED talks on academic topics: dinosaur lungs, tattoo nanotechnology, and tooth enamel
- Asked to take notes (within-subject) in one of three note-taking conditions:
 - in the native language, in the non-native language, or in both languages as they wished
- Rated understanding of the language in the video, and previous knowledge about the topic as exclusionary criteria

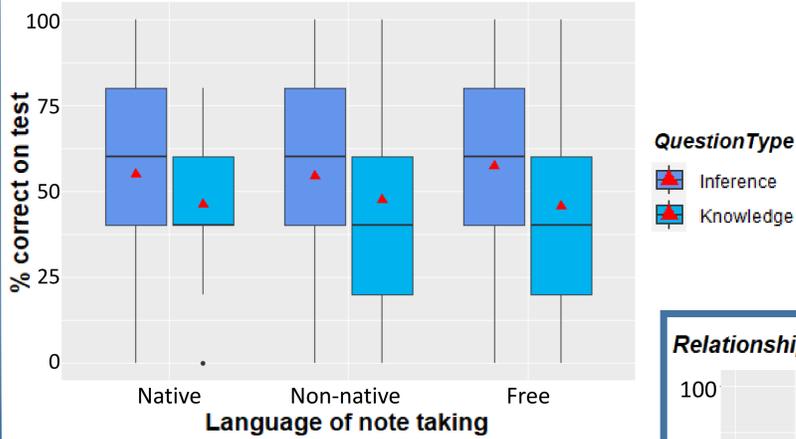
- Completed proficiency measure = **Lextales** (lexical decision task measuring vocabulary proficiency) in native and non-native languages [5]

Second Section: (1 week later)

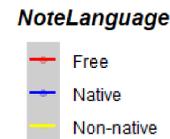
- Participants answered 30 MCQ memory test **knowledge** and **inference** questions
- Knowledge** question example: "What is the thoracic ceiling?"
- Inference** question example: "What is the purpose of a microcapsule?"
- Participants completed a questionnaire about their language use

RESULTS:

Test performance per question type and language of note taking



Significant relationship between English **proficiency** and performance, more proficient = better test performance

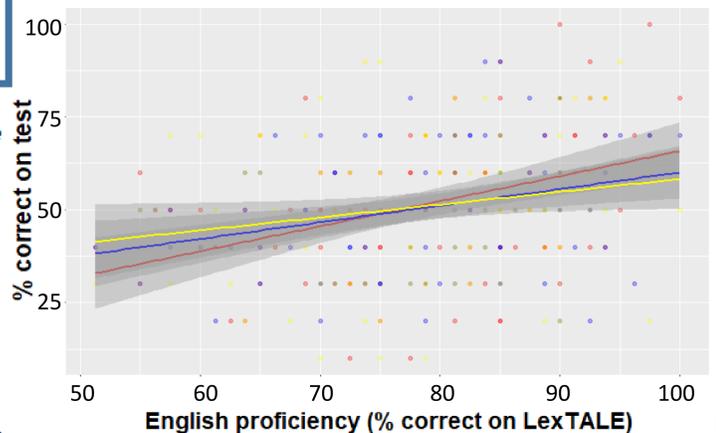


NATIVE = NON-NATIVE = FREE LANGUAGE

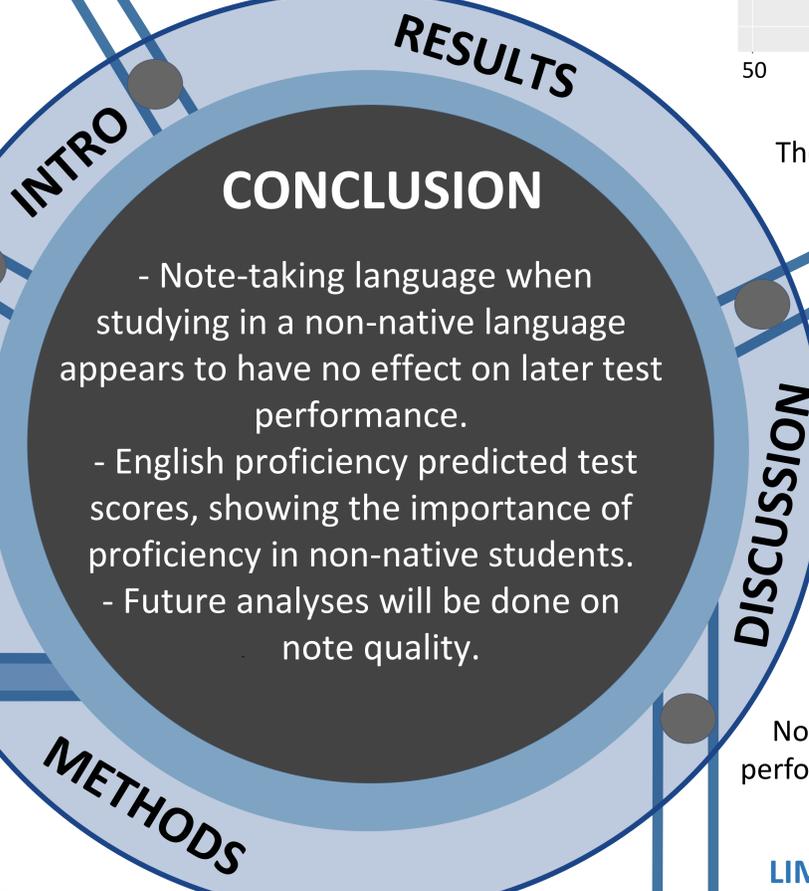
No significant effect of **note-taking language** on memory test performance

Inference questions > **knowledge** questions

Relationship between English Proficiency and test performance



The proficiency relationship didn't differ by note-taking condition



DISCUSSION:

IMPLICATIONS

Current results show no differences for test performance based on note-taking language

Results suggest international students should choose which language they feel works best for them

Non-native students may be able to improve performance by improving English proficiency

LIMITATIONS AND FUTURE RESEARCH

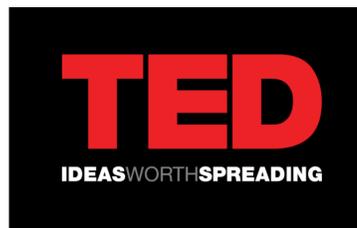
Effects of note-taking language are perhaps more likely to emerge when the content is longer or more complex

Native and non-native proficiencies were very close to each other, which might have reduced language effects

Participants were also unable to revise from notes before the test to control for individual differences in revision

Note taking language may impact test scores when they can revise from the notes beforehand

Note quality is still in the process of being scored to examine effects of language on quality



Box for note-taking

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- 1: Peverly, S.T. and Sumowski, J.F. (2012). What Variables Predict Quality of Text Notes and are Text Notes Related to Performance on Different Types of Tests?. *Applied Cognitive Psychology*, 26, 104-117.
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- 3: Iniesta, A., Paolieri, D., Serrano, F., & Bajo, M. T. (2021). Bilingual writing coactivation: Lexical and sublexical processing in a word dictation task. *Bilingualism: Language and Cognition*, 24(5), 902-917.
- 4: Marian, V., & Fausey, C. M. (2006). Language-dependent memory in bilingual learning. *Applied Cognitive Psychology: The Official Journal of the Society for Applied Research in Memory and Cognition*, 20(8), 1025-1047.
- 5: Lemhöfer, K., & Broersma, M. (2012). Introducing LexTALE: A quick and valid lexical test for advanced learners of English. *Behavior Research Methods*, 44(2), 325-343.