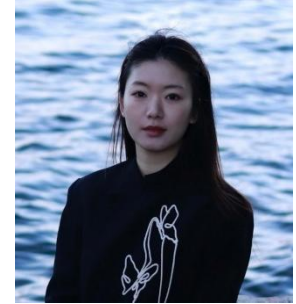


Researcher

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Title of Project

The Effects of Reading Modality on Incidental Vocabulary Learning and Comprehension: An Aptitude-Treatment Interaction Design

**Research Supervisor**

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TIRF Research Topic Investigated

Individual Learner Differences and Effective Language Education

Supported by

Duolingo

Bio

Xin Hu is a Ph.D. candidate at University College London. Her research interests include the teaching and learning of vocabulary in a second or foreign language and the cognitive processes underlying second language learning and use. Her doctoral project investigates how reading modality and cognitive individual differences influence L2 processing and learning using mixed methods, with a focus on low-proficiency EFL learners.

Project Summary

Reading plays a fundamental role in successful L2 communication and is an effective source of incidental vocabulary learning. Thus, researchers and teachers have explored ways of supporting it and maximizing its vocabulary learning potential. Among these, reading-aloud and reading-while-listening are two widely used instructional approaches. However, evidence on the effectiveness of reading-aloud and reading-while-listening relative to reading-only is mixed for both incidental vocabulary learning and comprehension. Theoretically, the three reading modalities differ in the phonological decoding process and the cognitive load imposed on readers. From an aptitude-treatment interaction perspective, instructional treatments that place greater demands on a given process require learners to have higher levels of the corresponding ability to benefit from them. However, no study has examined the extent to which phonological decoding ability and working memory capacity moderate the relative effects of the three reading modalities on incidental vocabulary learning and comprehension. Additionally, very little is known about how such factors influence L2 learners' cognitive processing across reading modalities. This study addresses these gaps.

In a between-subjects design, 144-180 elementary-to-intermediate Chinese learners of L2 English will read silently, read aloud, or read while listening to two short stories, while their eye movements will be recorded. They will complete comprehension tests, and take immediate and delayed vocabulary posttests, along with measures of phonological decoding ability and working memory capacity. Examining the interactions between these two important cognitive abilities and the three reading



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modalities can help determine the optimal instructional practices that involve matching learners' cognitive strengths to instructional approaches.