

Differential Effects of Cognitive Load on Working Memory in Students with Linguistic Versus Perceptual Dyslexia

Malihe. Ramezani Doroh¹, Zahra. Hosseinzadeh Maleki^{1*}, Ali. Mashhadi¹, Ahmad. Khamesan²

1. Department of Psychology, Faculty of Education and Psychology, Ferdowsi University of Mashhad, Mashhad, Iran

2. Department of Psychology, Faculty of Psychology and Educational Sciences, University of Birjand, Birjand, Iran

* Corresponding author email address: z.hmaleki@um.ac.ir

E d i t o r

Majid Mahmoud Alilou
Professor, Department of Clinical
Psychology, Tabriz University,
Tabriz, Iran
alilou_647@yahoo.com

R e v i e w e r s

Reviewer 1: Farhad Namjoo
Department of Psychology and Counseling, KMAN Research Institute, Richmond
Hill, Ontario, Canada. Email: farhadnamjoo@kmanresce.ca
Reviewer 2: Roodabeh Hooshmandi
Department of Psychology and Counseling, KMAN Research Institute, Richmond
Hill, Ontario, Canada. Email: roodhooshmandi@kmanresce.ca

1. Round 1

1.1. Reviewer 1

Reviewer:

In the paragraph discussing multifactorial accounts, the manuscript appropriately critiques single-deficit theories; however, it lacks a clear theoretical synthesis. I recommend adding a short integrative statement explaining which specific multifactorial framework guided hypothesis formulation in the present study.

The section beginning with “One influential strand of subgroup research distinguishes ‘accuracy-disability’ and ‘rate-disability’ profiles” should clarify how these historical subtyping models conceptually map onto the perceptual vs. linguistic classification used here. Currently, the conceptual bridge is assumed rather than demonstrated.

In the paragraph describing participant selection, purposive sampling is mentioned but not justified. Please explain why probabilistic sampling was not feasible and discuss potential sampling bias affecting external validity.

The inclusion criterion “documented lack of response to early literacy interventions” requires operational clarification. Specify how non-response was determined (duration, intervention type, or standardized threshold).

Authors revised the manuscript and uploaded the document.

1.2. Reviewer 2

Reviewer:

The paragraph starting “Working memory (WM) is a particularly promising domain...” is theoretically strong but overly general. Please explicitly articulate a directional hypothesis linking linguistic dyslexia to verbal working memory updating deficits under high cognitive load before presenting methodological details.

The sentence “The N-back paradigm is widely used to operationalize WM updating...” would benefit from a brief methodological justification explaining why N-Back was preferred over span tasks (e.g., digit span, complex span). Reviewers may question ecological validity without such clarification.

The paragraph beginning “Despite advances, several gaps remain” identifies multiple research gaps but does not prioritize them. Please restructure this section so that the final gap directly leads to the study aim, strengthening logical coherence.

Authors revised the manuscript and uploaded the document.

2. Revised

Editor’s decision: Accepted.

Editor in Chief’s decision: Accepted.