VISUAL SCAN TASK FARSI-DARI
A SIMILARITY ANALYSIS FOR THE L1 FARSI-DARI

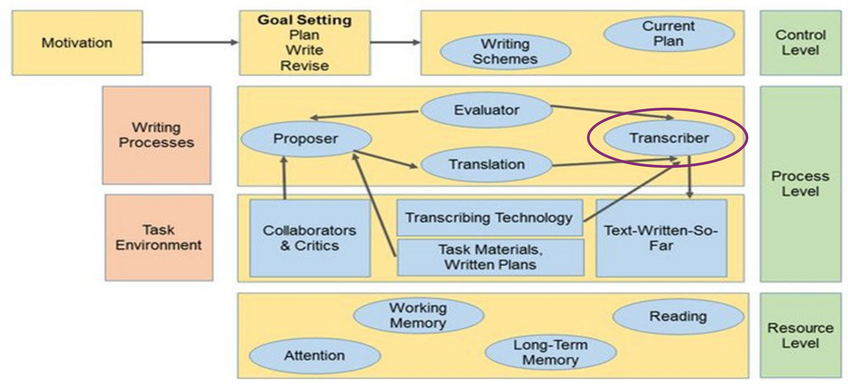
Parivash Mashhadi, Gina Do Manh & Feroz Nuranfar
Friedrich-Schiller Universität Jena

p.mashhadi@uni-jena.de, gina.do.manh@uni-jena.de, feroz.nuranfar@uni-jena.de

INTRODUCTION

To assess the L1 written language proficiency of native speakers of Farsi-Dari with heterogeneous literacy experience, we adapted the Visual Scan Task Farsi-Dari following the Visual Scan Task German (Czinglar et al. 2022) and comparable studies on grapheme recognition in the context of SLA (Green et al. 1983, 1987). The focus of this experiment is the grapheme recognition, which is a prerequisite for orthographic processing, visual word recognition, reading and writing (Boudelaa et al. 2020) since letters of individual words are thought to represent the first "language-specific" stage of reading process. Mastering alphabetical reading as a first step requires the ability to map letters and letter strings onto the sounds of the language (Bowey 2005; Snowling & Hulme 2011).

THEORETICAL BACKGROUND



Hayes (2012) and Breadmore et al. (2019) model of writing.

Transcriber according to Hayes (2012):

Graphomotor skills
- Learning the letters,
- GPC and
- Control and automation of writting movements

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HOW WELL CAN PARTICIPANTS IN GSL LITERACY COURSES DISTINGUISH GRAPHEMES IN THEIR L1 FARSI-DARI AND TO WHAT EXTENT DOES SIMILARITY AFFECT IT?

VISUAL SCAN TASK FARSI-DARI

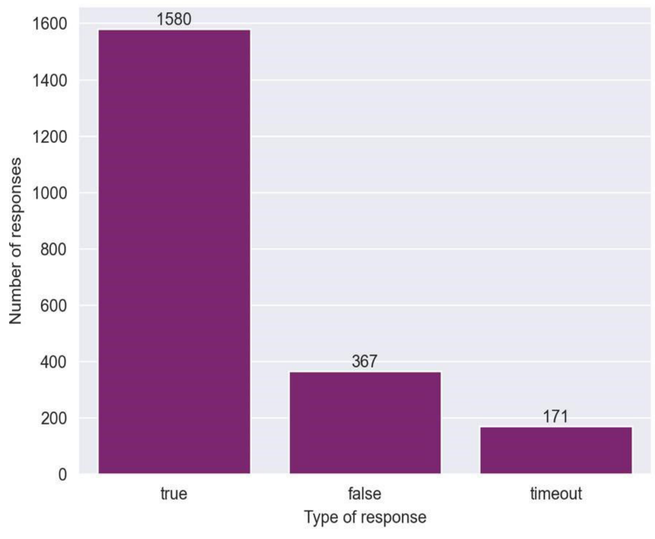
The Visual Scan Task Farsi-Dari consists of a two-step task. First, the target grapheme is displayed on an iPad (Figure (a)) for two seconds as part of a repetition priming, followed by an image of an item (a word or non-word consisting of five graphemes). Participants were asked to decide whether the target grapheme was contained in the item (Figure (b)). If the response was a match (green button pressed by participant), the target grapheme should be selected by tapping on the actual word/ non-word, supported by a colored hover effect (Figure (c)). This second step provides a more accurate picture of the learner's skills due to the lower probability of guessing. Participants were allocated 80 randomized trials (20 words/match, 20 words/ non-match, 20 non-words/match, and 20 non-words/non-match) per person by the testing platform. In addition, there was a time -out, the time-out value for one trial is 13 seconds, after 10 seconds a time-out bar is displayed on the right as in Figure (c). However, the adaptation was conceptually and technically challenging, because Farsi-Dari is one of the few languages that makes use of a cursive writing system, even in the typed script, which means that the letters are connected to each other with the exception of six letters. In addition, some letters are visually very similar and can only be distinguished by the number and position of dots. These properties complicate grapheme recognition in Farsi-Dari and require more visual attention.

Participants:
- 34 adult migrants with L1 Farsi-Dari (8 males, 26 females)
- Average age: 50,04 years
- Duration in Germany: 5-7 years
- Average schooling: 5,14 years (12 test persons didn't attend school at all)

(a) target grapheme (b) string/ word/ match (c) selection of the target grapheme

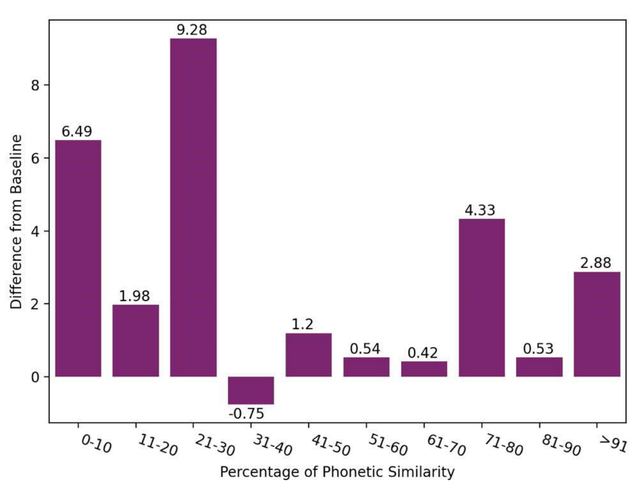
RESULTS & EVALUATION

Grapheme recognition results
n=2118



The results indicate that the participants are able to visually recognize and distinguish graphemes in their L1, even when they have limited writing experience (according to self -assessment) limited writing experience. Thus, it can be concluded that the participants possess visual and cognitive prerequisites that enable them to perceive distinctions necessary for writing acquisition even in complex visual situations. A closer look at the results reveals that similarity is not significant as an influencing factor. Nevertheless, the following error categories can be derived:

error categories	target	response	
visual similarity	ض	ـص	تفصیل
phonological Similarity	د	ـت	گیتار
visual phono-logical similarity	ح	ـخ	گحخرس
other	ك	ـی	کلیسا



GEFÖRDERT VOM
AlphaDekade 2016–2026
Bundesministerium für Bildung und Forschung
ELIKASA
FRIEDRICH-SCHILLER-UNIVERSITÄT JENA