

# IS1404 E-READ: Evolution of Reading in the Age of Digitization

## Position paper

Maria **Armanda** Martins da **Costa**

University of Lisbon, Portugal

Psycholinguistics Lab, FLUL

Linguistic Center of Lisbon University

<http://www.clul.ul.pt/en/researcher/133-armanda-costa>

WG: WG2 *Developmental aspects of reading*

### 1. **Potential research contribution**

As a researcher on psycholinguistics with particular interests in written language processing, I would like to participate in activities concerning the identification of specific reading abilities taking a developmental perspective, and across languages and cultures.

In my research on reading, I have been focused on the interrelation between certain text properties and comprehension. Taking the core concept of linguistic or discursive complexity, in our lab – *Psycholinguistics Lab* at Faculty of Letters, University of Lisbon - we develop experimental research, aiming to identify linguistic processing costs and its effect on comprehension and fluency. Using controlled stimuli or more naturalistic materials (texts from literature or advertising), we evaluate the effect of lexical or syntactic complexity, or the effect of theme familiarity or graphic layout on reading behavior.

We conduct experimental work on reading in adults and children, with typical and atypical development, using behavioral approaches through several experimental techniques such as eye tracking, visual world paradigm, self paced reading or lexical or syntactic priming.

More recently, we developed studies on measures of reading fluency, combining speed and accuracy as usual, but particularly with a particular attention to prosody. Combining eyetracking procedures with acoustic analysis of speech in reading aloud, we attempt to get fluency indicators from silent reading and reading aloud.

Taking into account the specific objectives of this action, I propose to develop and enhance research on reading fluency and comprehension, now with a special attention on effects of reading modality: in paper or screen. Given the composition of my multidisciplinary research team, we have conditions to combine the expertise of graphic design and visual cognition domains to control the interaction text/image, the typographic aspects and the general text layout.

## B. Action objectives

Considering the specific Action objectives, we propose to contribute with empirical data to the construction of *an aggregate measure of reading on paper and screens*. Our specific contribution could extend to two model dimensions:

- a) Relationship between text linguistic and graphic properties and measures of reading comprehension, considering literal and inferential levels
- b) Relationship between the reading modality (digital or paper) and fluency.

Based on experimental research, we could participate in the definition of *recommendations to educational practitioners and policy makers*, to increase properties of text readability in the digital age and mitigate reading challenges across languages and cultures. Also we can contribute *to provide recommendations for optimal text/content design for educational publishing*,

We are interested in *establish long-term theoretically and methodologically innovative research collaboration*, searching for complementary approaches and knowledge on reading cognitive processes, on communication in a broad sense but also in the specific sense of literacy as defined in the OECD PISA international surveys. Portugal is a country that has improved greatly the literacy levels of its 15 years old population on reading since the first participation in 2000 to the last one (2012). But there is an imperative need to improve the training of teachers, approaching the fundamental and experimental research to teaching reading in basic schools (till 9<sup>th</sup> degree). We hope our contribution inform *recommendations for the pedagogical field*.

2.

We propose, with my colleague Isabel Falé, who is also a member of this E-COST Action, to organize a training school in Lisbon, at the University of Lisbon, in the Autumn of 2016 (3/4 days). Given that our lab organize every two years a colloquium on reading (focus on research, teaching, disorders, ...), the previewed colloquium in 2016 could encompass the training school. The school could have focus on theoretical and technological approaches to reading and digital reading, and relying in plenary lectures from invited speakers and workshops on data collection and analysis, supported by our lab resources.

It will be a great opportunity to sharing experimental results and data, to find new research topics and start new inter-country partnerships.