

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

Position paper

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WG(s): WG2: Developmental aspects of reading

1. **Potential research contribution** in light of, or linked to

A. WG interest and Scientific programme:

In the past, I tried to investigate the predictors of undergraduate students' foreign language reading comprehension in a hypermedia environment where I delved into variables such as reading ability, topic interest, prior topical knowledge, and multimedia annotation use. In a parallel study, I investigated immediate and delayed effects of different hypermedia glosses on incidental vocabulary learning and reading comprehension of advanced foreign language learners.

Recently, I and my PhD student have been working on the influence of digital media, particularly that of different multitasking scenarios, on achievement. In addition, we have tried to see the relationships between working memory capacity and achievement tests in multitasking settings. The PhD dissertation based on this research question will be over in June and our national project on the issue will be completed in November 2015. We generally resorted to standardized assessments of reading along with working memory span tasks. We also included user log files in the analyses. However, in a new research study, we are trying to access electroencephalography devices to include the measures of brain activity in the multitasking experiments. I believe, we will be able to publish the preliminary findings within a few months.

In brief, I want to focus further on similar studies in computer based learning environments where I can delve into the interdisciplinary nature of human computer interaction. I am particularly interested in evaluating the responses of the multimedia readers through physiological means in addition to common standardized assessments of reading.

My primary weakness is that I have mostly studied with undergraduate students in computer based environments. Even though they might be considered as digital natives by some scholars, the target population might not be appropriate to address the developmental aspects of reading among younger learners. On the other hand, this difference may be considered as a source of alternative viewpoints while proposing implications for the developmental aspects of reading.

B. Action objectives (pages 7-10 in the MoU):

I noticed on the COST website that a particular emphasis is placed on ensuring inclusiveness from different countries and disciplines. In this regard, I believe that our recent and ongoing research in digital learning environments may provide educational practitioners with alternative evidence-based recommendations that are derived from an alternative research context. Our current findings may also be used to support current recommendations to create optimal digital learning environments. Our studies may be somewhat modest to contribute to the aggregate measures of reading aimed by the action. On the other hand,

meeting and studying with scholars who conduct similar studies in different settings may help us derive better implications and come up with better recommendations for further instructional endeavors.

2. Interest in

A. organizing and/or participating in a **short-term scientific mission (STSM)**.

Optional: pursuing what research questions/projects; where to/with whom; linked to what objective(s) of the Action:

I have a lot to learn and implement particularly in terms of the physiological measures of reading. Thus, visiting institutions and laboratories in relevant COST institutions may contribute to my current vision and competences regarding the use of physiological measures such as eye tracking, galvanic skin response, blood pressure-volume, and electroencephalography within the context of the HCI research.

B. organizing and/or participating in a **Training School** (please indicate what kind of training [theoretical; methodological; technical]).

Optional: linked to what objective(s) of the Action:

I will be happy to contribute to methodological workshops and training schools on quantitative data analysis particularly through SPSS and LISREL. I will also be happy to participate in relevant meetings, workshops and conferences to study further predictors of reading particularly in digital learning environments.