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Processes and products in reading digital text: Prospects and challenges in defining, analyzing, and interpreting log-data based process-measures

In this talk, I will firstly outline a framework connecting outcomes (learning or eventual performance on assessment tasks) with input variables such as persons’ skills and tasks’ demands through task engagement process variables. This framework suggests that task engagement processes mediate effects of person and task variables on task performance. Most importantly, the association of task variables and task engagement is moderated by person variables, and the association of person variables with task engagement is moderated by task variables. Also, task engagement predicts task performance conditionally on both person and task variables. Secondly, I elaborate how especially the interaction terms included in this model can help to conceptually disambiguate otherwise ambiguous process measures, like time-on-task, which can be indicative of both cognitive (in-)efficiency and scrutiny or engagement, or page visits in hypertext reading, which might be indicative of either curiosity or disorientation. All analyses presented will use reading digital text and the related domain of complex problem solving as examples.

Related literature


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https://dx.doi.org/10.3390/jintelligence3010021

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