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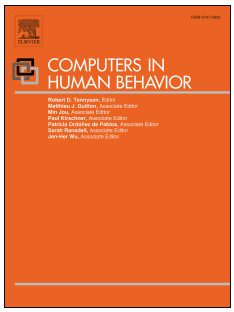

Student profiling in a dispositional learning analytics application using formative assessment

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Abstract

How learning disposition data can help us translating learning feedback from a learning analytics application into actionable learning interventions, is the main focus of this empirical study. It extends previous work (AuthorA, 2015), where the focus was on deriving timely prediction models in a data rich context, encompassing trace data from learning management systems, formative assessment data, e-tutorial trace data as well as learning dispositions. In this same educational context, the current study investigates how the application of cluster analysis based on e-tutorial trace data allows student profiling into different at-risk groups, and how these at-risk groups can be characterized with the help of learning disposition data. It is our conjecture that establishing a chain of antecedent-consequence relationships starting from learning disposition, through student activity in e-tutorials and formative assessment performance, to course performance, adds a crucial dimension to current learning analytics studies: that of profiling students with descriptors that easily lend themselves to the design of educational interventions.