

A Research Agenda for Learner Models for Adaptive Educational Digital Learning Environments

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Abstract : Nowadays, data about learners and their digital activities are collected, which could help educational institutions to better understand learning processes, improve them and be able to provide better learning assistance. In this research project, custom knowledge- and data-driven recommendation algorithms will be used to offer students in higher education integrated learning assistance. The pre-requisite for this is a learner model that is as comprehensive as possible, which should first be created and then kept up-to-date largely automatically for being able to individualize and personalize the learning experience. In order to create such a learner model, a roadmap is presented that describes the individual phases up to the creation and evaluation of the finished model. The methodological process for the research project is disclosed, and the research question of how learners can be supported in their learning with personalized, customized learning recommendations is explored.

Keywords : research agenda, user model, learner model, higher education, adaptive educational digital learning environments, personalized learning paths, recommendation system, adaptation, personalization

Conference Title : ICITE 2025 : International Conference on Information Technology in Education

Conference Location : Vancouver, Canada

Conference Dates : August 05-06, 2025