Abstracts and keywords

Ellen De Bruyne, Laura Herrewijn, Amber Hoefkens, Wannes Heirman, Gert Vanthournout and Pieter Depessemier, An evidence-based development of a learning analytics dashboard: the case of the LAP!-project

Abstract Learning Analytics (LA) are concerned with using data to monitor, understand and optimize students' learning processes and to make data-informed innovation possible. High-quality dashboards are crucial to attain these goals. The applied scientific research project LAP! aims to develop dashboards for various user groups in a research-informed way, using educational design research. The current contribution illustrates the analysis and exploration phases in this project. During these phases, research was conducted on the content, structure, layout and relevance of dashboards using three specific research-actions: a literature review, user research with students, teachers and deans and a database analysis on the predictive power of available variables for study-success. In addition, a data protection impact assessment (DPIA) was carried out to map the legal basis for using and presenting personal data in dashboards. The results of these actions were not always conclusive, but provided sufficient common ground to allow the prototyping of a first, generic dashboard. Cyclic development using an alternation of development and user testing will further refine and adapt this dashboard for specific user groups.

Keywords Educational Design Research, user research, machine learning, GDPR

Marieke F. van der Schaaf and Bert Slof, Feedback at the workplace: the potential of e-portfolios with learning analytics

Abstract Higher education students make more extensively use of electronic portfolios (e-portfolios). In this paper, we examine whether e-portfolios augmented with learning analytics can be used to improve the quality of feedback and formative assessment at the workplace. The contribution is based on a European project called WatchMe, aimed at improving feedback in e-portfolios by adding learning analytics. The development of the e-portfolio supplemented with learning analytics consisted of an iterative co-design with stakeholders, which can be ordered to the stages of designing assessments according to Mislevy et al. (2012): (1) domain model, (2) task model, (3) evidence model, (4) presentation. Next, an evaluation study focused on: the motivation of students in teacher education in the Netherlands (n = 66) their experiences and use of the e-portfolio. The results show that students were motivated and valued the feedback obtained from their supervisors as positive. They varied to what extent they used the learning analytics features in their e-portfolios. It is concluded that learning analytics connected to e-portfolios is still in its infancy and that joint development and implementation from a user perspective is crucial.

Keywords E-portfolio, Feedback, Learning analytics, Formative assessment, Workplace-based learning

Dirk Tempelaar and Bart Rienties, Learning analytics and the necessity of rich data

Abstract In this paper, we describe the introduction and use of learning analytics as the culmination of a development process in which the transition from secondary to higher education, the addressing of knowledge deficits in that transition, the use of digital learning and practice platforms, hybrid instructional formats and intensive formative assessment are all stages that define that development process. It will be argued that it is not only from this perspective of natural development that the above-mentioned factors are described, but that they should primarily be seen as necessary conditions for the application of learning analytics. Learning analytics ideally requires rich data that documents the individual student's learning process in detail and provides insight into the learning approaches that students apply. With that rich data, learning analytics can become a valuable source of learning feedback for the student as well as provide clues for course redesign. Without that rich data, it is primarily the digital version of a study progress registration system.

Keywords Learning analytics, learning dispositions, blended learning, formative assessment, feedback

Tinne De Laet, A critical constructive perspective on Learning Analytics

Abstract This discussion contribution provides a critical constructive perspective on the research, development and use of Learning Analytics. To this end, I place the various contributions in this theme issue in a broader framework and relate them to evolutions within the Learning Analytics domain. My own research and implementation experiences, situated in the first years of university education, enrich the perspective and give rise to a critical constructive look at not only the contributions in this issue, but also the Learning Analytics domain and the researchers and developers active within it. In this way, I try to provide some guidance to benevolent researchers, educational developers, educational support staff, users, education directors, heads of programmes or managers who want to use Learning Analytics as a support tool within a broader teaching and guidance framework.

Keywords Learning analytics, feedback, dashboards, assessment, machine learning