

Call for Papers

Journal of Educational Technology & Society

(ISSN: 1436-4522 (online) and 1176-3647 (print))

Special Issue on

“Learning and Knowledge Analytics”

The growth of digital data creates unprecedented opportunities for analysis. This is particularly evident in teaching, training and development, and learning. Learning institutions and corporations make little use of the data learners generate in the process of accessing and using learning materials, interacting with educators and peers, and creating new content. Learning analytics are an important lens through which to view and plan for change at individual learning paths and educational institutions' courses. Furthermore, in corporate settings, learning analytics can play a role in highlighting the development of employees through their learning. Information flow and social interactions can yield novel insights into organizational effectiveness and capacity to address new challenges or adapt rapidly when unanticipated events arise.

Advances in knowledge modeling and representation, the semantic web, data mining, analytics, and open data and processes form a foundation for new models of knowledge development and analysis. The advances also create new opportunities for interaction, collaboration, and sharing in learning, but those advances need to be used in a pedagogically sound manner. Pedagogical and social impact of the advances can only be understood if new and/or appropriate research methods and instruments are used. These technical, pedagogical, and social domains of analytics and interventions must be brought into dialogue with each other to ensure that interventions and organizational systems serve the needs of all stakeholders.

Learning analytics is the measurement, collection, analysis and reporting of data about learners and their contexts, for purposes of understanding and optimizing learning and the environments in which it occurs. **Knowledge analytics** is the utilization of advanced approaches (e.g., text/data mining, information retrieval machine learning, or linked data) to processing data to provide representations in forms from which conclusions can be drawn in an automated and domain-aware way.

When integrated, **learning and knowledge analytics** form the foundation for adaptive and personal learning by providing learners with relevant learning choices to address gaps between existing knowledge and knowledge needed within a field or domain. Through the use of analytics, organizations also stand to gain new insights into how the work of individuals contributes to organizational capacity for change and innovation.

Although the importance of learning analytics is increasingly recognized by governments, educators, and funding agencies, research into practical applications in learning settings, needed software, and methods of deployment at a systems level are still largely lacking. This special issue is dedicated to trends and innovations in learning and knowledge analytics. We invite original RESEARCH articles in relevant topics, which include but are not limited to:

Technical:

- Software development for use in analytics
- The role of knowledge representation and ontologies in learning analytics
- The semantic web and linked data: meaning in connections
- Data mining in education
- Artificial intelligence & tutors in learning analytics
- Internet of things (sensors) and learning analytics
- "Big Data" applications and opportunities in learning and education
- Latent semantic analysis/natural language processing
- Attention metadata
- Software needed to advance adoption of learning analytics

Application:

- Visualization: data, learner networks, conceptual knowledge
- Predictive applications of data
- Interventions based on analytics
- Social and technical systems to manage information abundance
- Personalization and adaptivity in the learning process
- Corporate and higher education case studies of learning analytics
- Learning analytics for intelligent tutoring systems
- Open data: data access for learners
- Harmonizing individual learning with organizational learning
- Importing insights for existing analytics
- Use of learning analytics in centralized (learning management systems) and decentralized (personal learning environments) settings

- Models of corporate adoption of learning and knowledge analytics
- The benefit and impact of organizational adoption of learning and knowledge analytics

Conceptual & Pedagogical:

- The relationship between learning analytics and existing theories and approaches (such as pedagogical models and learning sciences)
- Social network analysis
- Harnessing the power of context and location aware systems
- Informal learning: integrating learning and knowledge systems
- Privacy & ethics in learning analytics
- The influence of analytics on designing for learning
- The influence of analytics on delivery and support of learning
- New research instruments and methods for use in analytics-intensive learning environments

Special Issue Guest Editors

George Siemens, Technology Enhanced Knowledge Research Institute, Athabasca University (gsiemens@athabascau.ca)

Dragan Gašević, School of Computing and Information Systems, Athabasca University (dragang@athabascau.ca)

Important dates

Submissions due:	10 August 2011
First decision:	10 October 2011
Revised manuscripts due:	15 November 2011
Feedback on revised manuscripts:	20 December 2011
Final manuscript due:	30 January 2012

Submission guideline

The manuscripts should be original, unpublished, and not in consideration for publication elsewhere at the time of submission to Educational Technology & Society and during the review process.

The manuscripts must be within 7000 words (including everything - title, author names, affiliations, abstract, keywords, main body, references, appendices - everything).

Please carefully follow the author guidelines at <http://www.ifets.info/rev.php?pub=true> while preparing your manuscript. To get familiarity with the style of the journal, please see a previous issue at <http://www.ifets.info/>

All manuscripts will be subject to the usual high standards of peer review at ETS Journal. Each paper will undergo double blind review.

All manuscripts should be in WORD format and submitted via email to the Guest Editors (George Siemens: gsiemens@athabascau.ca, Dragan Gašević: dragang@athabascau.ca).

The Educational Technology & Society Journal is included in the Thomson Scientific Social Sciences Citation Index (SSCI) **with impact factor of 1.067** according to Thomson Scientific 2009 Journal Citations Report.