Collaborative Problem Solving Supported through Data Analytics

The Technology, Knowledge and Learning (TKNL) journal invites submissions for a special issue "Collaborative Problem Solving Supported through Data Analytics" organized in partnership with the UNESCO Chair of Data Science in Higher Education Learning and Teaching. Collaboration is understood as a continuous group activity addressing a mutually constructed problem or challenge and data analytics is understood as exploratory and confirmatory machine learning methods applied to dynamic data from learning and teaching activities. A group's ability to collaboratively solve a problem is more than the sum of the individual member contributions, because unique synergies and added values emerge during the group's social learning processes. However, if the problem or challenge does not hold the mutual interests of the parties, if the group cannot build a common understanding of the problem, or take appropriate action, then collaboration is impossible. Utilising data analytics for insights to improve education enables a new level of evidence-based research into learning and teaching. Hence, due to the fine-grained data captured during digital learning, it is possible to gain detailed insight into collaborative problem solving and learning trajectories of individuals and groups.

This special issue on "Collaborative Problem Solving Supported through Data Analytics" seeks contributions in the form of original research, work-in-progress, or integrative review articles (see http://www.springer.com/10758?detailsPage=societies for description of article types). Topics for this special issue may include, but are not limited to:

- Identifying patterns of collaborative problem solving
- Formative assessment of collaborative problem-solving performance
- Group formation supported through data analytics
- Design frameworks for implementing collaborative problem solving and data analytics
- Case studies showing evidence of collaborative problem solving using data analytics

Interested scholars should submit a **1-page proposal** including a tentative title, information about contributing author(s), abstract, article type, keywords, and key references to Dirk Ifenthaler (dirk@ifenthaler.info) by **15 May 2018** - early submissions are encouraged. All proposals will be reviewed by the special issue review board who will recommend full submissions from among the proposals. All full manuscript submissions will undergo rigorous double-blind peer review by at least three reviewers of the special issue review board and regular TKNL reviewers who will recommend revisions or acceptance.

Important dates

Proposal submission: 15 May 2018
Full manuscript invitation: 01 June 2018
Deadline for full manuscript submissions: 30 November 2018
Manuscripts returned to authors for revision: 15 January 2019
Final manuscripts due: 01 March 2019
Publication of the Special Issue (TKNL 24/2):   15 June 2018

To learn more about the general scope of the journal, please visit the Springer website:
www.springer.com/10758

We look forward to your proposals!

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