

# Proceedings of the 6th Workshop on Awareness and Reflection in Technology Enhanced Learning

In conjunction with the 11th European Conference on Technology Enhanced Learning: Adaptive and Adaptable Learning

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Milos Kravcik Alexander Mikroyannidis Viktoria Pammer

Michael Prilla Thomas Ullmann (Eds.)

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#### Addresses of the editors:

#### Thomas Daniel Ullmann

Institute of Educational Technology The Open University Walton Hall Milton Keynes MK7 6AA

United Kingdom t.ullmann@open.ac.uk

#### Viktoria Pammer

Knowledge Technologies Institute Graz University of Technology Inffeldgasse 21A 8010 Graz

Austria

viktoria.pammer@tugraz.at

#### Milos Kravcik

RWTH Aachen University Advanced Community Information Systems (ACIS) Ahornstr. 55

52056 Aachen Germany

kravcik@dbis.rwth-aachen.de

#### Alexander Mikroyannidis

Knowledge Media Institute The Open University Walton Hall Milton Keynes MK7 6AA

United Kingdom

alexander.mikroyannidis@open.ac.uk

#### Michael Prilla

Human Centered Information Systems Clausthal University of Technology Julius-Albert-Str. 4 38678 Clausthal-Zellerfeld

Germany

michael.prilla@tu-clausthal.de

# **Learning Analytics for Awareness and Reflection**

Awareness and reflection are viewed differently across the disciplines informing Technology-Enhanced Learning (CSCW, psychology, educational sciences, computer science and others). The ARTEL workshop series brings together researchers and professionals from different backgrounds to provide a forum for discussing the multi-faceted area of awareness and reflection. 2016 was the 6th workshop in this series.

Through the last ARTEL workshops at EC-TEL the topic has gained maturity and questions addresses are converging towards the usage of awareness and reflection in practice, its implementation in modern organisations, its impact on learners and questions of feasibility and sustainability for awareness and reflection in education and work. To reflect the growing maturity of research in ARTEL over the years in conjunction with the latest trends in TEL, this year's topic particularly invited contributions that deal with the contribution and impact of Learning Analytics on awareness and reflection. The motto of the workshop this year was:

'Learning Analytics for Awareness and Reflection: How can Learning Analytics methodologies and tools support awareness and reflection in different learning contexts?'

#### Summary of the contributions

The #ARTEL16 workshop accepted two full papers, and four short papers. The accepted papers discuss awareness and reflection according to three themes.

Three papers focused on the theme learning analytics, visualisation and dashboards for awareness and reflection.

The full paper 'Designing Generic Visualisations for Activity Log Data' written by Granit Luzhnica, Angela Fessl, Eduardo Veas, Belgin Mutlu, and Viktoria Pammer aims at an important issue in lifelong and professional learning that is how to visualize log data from various resources in a generic way without knowing in advance concrete analytic tasks. The authors have implemented a tool, called Vis-Tool. The presented evaluation compares Vis-Tool with three specific applications, considering ten evaluation tasks. The results show possible benefits of Vis-Tool.

The short paper 'Reflection Analytics in Online Communities: Guiding Users to become active in Collaborative Reflection' of Oliver Blunk, Michael Prilla, and Graham Attwell describes a prototype visualisation that aims at supporting the awareness of students about group activity in the context of reflective online group collaborative work.

The short paper Visualizing Online (Social) Learning Processes - Designing a Dashboard to Support Reflection' co-authored by Darya Hayit, Tobias Hölterhof, Martin Rehm, Oskar Carl, and Michael Kerres provides an overview of a prototype dashboard for visualising social learning processes.

Two papers were accepted that provide a perspective on collaborative/social reflection and reflection in the workplace.

The short paper 'E-portfolio for Awareness and Reflection in a Blended Learning Environment' written by Morin Roa, Eliana Scheihing, Julio Daniel Guerra, and Carlos Blaña presents research about an e-portfolio used for awareness and reflection within a blended learning community. The e-portfolio has been evaluated by members of this community in terms of its usability and usefulness.

Tracie Farrell Frey, George Gkotsis, and Alexander Mikroyannidis present in their short paper 'Are you Thinking what I'm Thinking? Representing Metacognition with Question-based Dialogue' an early prototype and background literature for a tool to create representational artefacts of metacognitive thinking in a collaborative, social environment.

The third theme of the workshops was about literature reviews and theoretical contributions to awareness and reflection.

The short paper 'Considering Self-Efficacy in Reflection' by Birgit Krogstie and John Krogstie discusses the relationship between self-efficacy and reflective learning. The authors argue that as self-efficacy is instrumental in shaping the experiences a person actually generates, and experience is the 'object' of reflective learning, self efficacy needs to be considered in designing the reflection activity.

# Awareness and reflection workshop series

The official workshop webpage can be found at http://teleurope.eu/artel16 The 6th Workshop on Awareness and Reflection in Technology Enhanced Learning (ARTEL 2016) is part of a successful series of workshops.

- 5th Workshop on Awareness and Reflection in Technology Enhanced Learning (ARTEL15). Workshop homepage: http://teleurope.eu/artel15. Proceedings: http://ceur-ws.org/Vol-1465/.
- 4th Workshop on Awareness and Reflection in Technology Enhanced Learning (AR-TEL14). Workshop homepage: http://teleurope.eu/artel14. Proceedings: http://ceur-ws.org/Vol-1238/.
- 3rd Workshop on Awareness and Reflection in Technology Enhanced Learning (AR-TEL13). Workshop homepage: http://teleurope.eu/artel13. Proceedings: http://ceur-ws.org/Vol-1103/.
- 2nd Workshop on Awareness and Reflection in Technology Enhanced Learning (ARTEL12). Workshop homepage: http://www.teleurope.eu/artel12. Proceedings: http://ceur-ws.org/Vol-931/.
- 1st European Workshop on Awareness and Reflection in Learning Networks (AR-Nets11). Workshop homepage: http://teleurope.eu/arnets11. Proceedings: http://ceur-ws.org/Vol-790/

- Augmenting the Learning Experience with Collaboratice Reflection (ALECR11).
   Workshop homepage: http://www.i-maginary.it/ectel2011/index.html
- 1st Workshop on Awareness and Reflection in Personal Learning Environments (ARPLE11). Workshop homepage: http://teleurope.eu/arple11. Proceedings: http://journal.webscience.org/view/events/The\_PLE\_Conference\_2011/paper.html#group\_Proceedings\_of\_the\_1st\_Workshop\_on\_Awareness\_and\_Reflection\_in\_Personal\_Learning\_Environments

To stay updated about future events, to share your research, or simple to participate with other researchers, consider joining the group about Awareness and Reflection in Technology Enhanced Learning:

http://teleurope.eu/artel

We especially would like to thank the members of the programme committee for their invaluable work in scoping and promoting the workshop and quality assuring the contributions with their peer reviews.

November 2016

Milos Kravcik, Alexander Mikroyannidis, Viktoria Pammer, Michael Prilla, Thomas Ullmann

# Organisation committee

Milos Kravcik, RWTH Aachen University, Germany Alexander Mikroyannidis, The Open University, United Kingdom Viktoria Pammer, Graz University of Technology, Austria Michael Prilla, University of Clausthal, Germany Thomas Ullmann, The Open University, United Kingdom

### **Program committee**

Eva Durall, Aalto University, Finland
Elvira Popescu, University of Craiova, Romania
Angela Fessl, Know-Center, Austria
Dominique Verpoorten, University of Liege, Belgium
Effie Lai-Chong, University of Leicester, United Kingdom
Michael, Kickmeier-Rust, Graz University of Technology, Austria
Sven Charleer, KU Leuven, Belgium
Ines Di Loreto, UTT - Universite de Technologie de Troyes, France
Simon Knight, University of Technology Sydney, Australia
Philippe Dessus, Universite Pierre-Mendes-France, France
Yiwei Cao, imc information multimedia communication AG, Germany
Maria Jesus Rodriguez-Triana, Swiss Federal Institute of Technology in Lausanne (EPFL),
Switzerland
Denis Gillet, Swiss Federal Institute of Technology in Lausanne (EPFL), Switzerland

Riina Vuorikari, European Commission JRC IPTS, Spain

# **Supporting projects**



http://employid.eu



http://learning-layers.eu



http://ict-forge.eu



http://www.laceproject.eu



http://wekit.eu



http://virtus-project.eu

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