

# Proceedings of the 4th Workshop on Awareness and Reflection in Technology-Enhanced Learning

In conjunction with the 9th European Conference on Technology-Enhanced Learning: Open Learning and Teaching in Educational Communities

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Milos Kravcik  
Alexander Mikroyannidis  
Viktoria Pammer

Michael Prilla  
Thomas Ullmann  
Fridolin Wild  
(Eds.)

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*Addresses of the editors:*

**Thomas Daniel Ullmann**  
Knowledge Media Institute  
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

**Michael Prilla**  
Institute for Applied Work Science  
Ruhr University of Bochum  
Universitaetsstr. 150  
44780 Bochum  
Germany  
michael.prilla@rub.de

**Alexander Mikroyannidis**  
Knowledge Media Institute  
The Open University  
Walton Hall  
Milton Keynes  
MK7 6AA  
United Kingdom  
alexander.mikroyannidis@open.ac.uk

**Fridolin Wild**  
Knowledge Media Institute  
The Open University  
Milton Keynes  
MK7 6AA  
United Kingdom  
fridolin.wild@open.ac.uk

**Milos Kravcik**  
RWTH Aachen University  
Advanced Community Information Systems (ACIS)  
Ahornstr. 55  
52056 Aachen  
Germany  
kravcik@dbis.rwth-aachen.de

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## **Awareness and reflection in technology enhanced learning**

Awareness and reflection can be viewed from the differing perspectives of the disciplines informing Technology-Enhanced Learning, such as Psychology, Educational and Learning Sciences, or Computer Science.

A common denominator can be identified, though, and enhancing 'awareness' of learners and other participants involved in learning processes by technology means augmenting formal or informal learning experiences, typically in real-time, with information on progress, presence, outcomes, workspace, and the like. Supporting 'reflection' then means enabling learners to capture, adapt, re-evaluate, and share experience in anticipation of future situations it will prove relevant to. Reflection supported digitally is a creative act, adding sense and meaning to experiences made.

Combining support for "awareness" and "reflection" bears huge potential for improving the learning and training with respect to utility, self-regulation, usability, and user experience.

The ARTEL workshop series brings - for the 4th time in 2014 - together researchers and professionals from different backgrounds to provide a forum for discussing the multi-faceted area of awareness and reflection.

For this year 2014, the workshop organizes discussion and meta-reflection amongst researchers around the application of awareness and reflection in practice, its impact on learners and questions of feasibility, and sustainability for awareness and reflection in education and work. This year's workshop theme is:

How does computer-support for awareness and reflection need to be embedded into practical (working or learning) contexts in order for learners to benefit from such computer support?

### **Summary of the contributions**

The #ARTEL14 workshop accepted 4 full papers, 1 short paper, and 4 demo papers. The accepted papers discuss awareness and reflection in diverse settings, such as blue-collar jobs and white-collar jobs, working in small enterprises, or learning at university level.

As for the full papers, Maurizio Megliola, Gianluigi Di Vito, Roberto Sanguini, Fridolin Wild, and Paul Lefrere discuss in "Creating awareness of kinaesthetic learning using the Experience API: current practices, emerging challenges, possible solutions" an interface specification for capturing in particular kinaesthetic learning experiences. The authors also discuss a taxonomy of verbs describing handling and motion. Kinaesthetic skills are in demand for instance in the manufacturing or maintenance sectors. The captured learning experiences can be utilised to generate feedback to the learner.

Fridolin Wild, Peter Scott, Paul Lefrere, Jaakko Karjalainen, Kaj Helin, Ambjorn Naeve, and Erik Isaksson situate their work "Towards data exchange formats for learning expe-

periences in manufacturing workplaces” in the manufacturing sector. This work models the experiential and reflective learning process with a view on creating data exchange formats, also discussing the necessity to - formally - talk about actions in the real world as a complement to actions performed in virtual environments.

Andreas Janson, Sissy-Josefina Ernst, Katja Lehmann, and Jan Marco Leimeister have as background for their work in ”Creating awareness and reflection in a large-scale IS lecture - the application of a peer assessment in a flipped classroom scenario” university learning in large-scale lectures (much more learners than instructors). They discuss computer-supported peer assessment as possibility to induce reflection on learning content. In contrast to the previous two works, this contributions focusses mostly on cognitive instead of motoric competences.

Angela Fessel, Gudrun Wesiak, and Granit Luzhnica showcase in ”Application overlapping user profiles to foster reflective learning at work” the potential benefits of collecting activity logging data from multiple applications in a single user profile application. This work is set on the background of white-collar knowledge workers, with desktop- and web-based activity logging.

In their short paper, Michael Prilla, Oliver Blunk, Jenny Bimrose, and Alan Brown discuss in ”Reflection as support for career adaptability: A concept for reflective learning in public administration” reflection as learning mechanism to support professional identity change as a means for organisational change in the context of public employment services.

The four demo papers are started off by the contribution by Milos Kravcik, Kateryna Neulinger, and Ralf Klamma, in which the authors showcase widget-based personal learning environments for ”Boosting informal workplace learning in small enterprises”.

Nils Faltin, Simon Schwantzer, and Margret Jung present the ”Activity recommendation app - software to evaluate the usefulness of improvement recommendations created in a team”.

Min Ji, Christine Michel, Elise Lavoue, and Sebastien George demonstrate the ”DDART: an awareness system to favor reflection during project-based learning”.

Last, but not least, Sven Charleer, Jose Luis Santos, Joris Klerkx, and Erik Duval present the ”LARAe: Learning Analytics Reflection & Awareness environment”.

### **Awareness and reflection workshop series**

The official workshop webpage can be found at <http://teleurope.eu/artel14>

The 4th Workshop on Awareness and Reflection in Technology-Enhanced Learning (AR-TEL 2014) is part of a successful series of previous workshops.

- 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 (ARNets11). Workshop homepage: <http://teleurope.eu/arnets11>. Proceedings: <http://ceur-ws.org/Vol-790/>
- Augmenting the Learning Experience with Collaborative 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](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.

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

**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 Bochum, Germany  
Thomas Ullmann, The Open University, United Kingdom  
Fridolin Wild, The Open University, United Kingdom

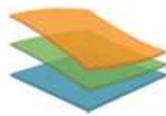
**Program committee**

Alexander Nussbaumer, Graz University of Technology, Austria  
Carsten Ullrich, DFKI, Germany  
Denis Gillet, EPFL, Switzerland  
Ines Di Loreto, Université de Technologie de Troyes, France  
Jaakko Karjalainen, VTT, Finland  
John Cook, University of West of England, United Kingdom  
Joris Klerkx, Katholieke Universiteit Leuven, Belgium  
Kaj Helin, VTT, Finland  
Kinshuk, Athabasca University, Canada  
Marcus Specht, Open University, the Netherlands  
Monica Divitini, IDI-NTNU, Norway  
Paul Lefrere, CCA, United Kingdom  
Peter Kraker, Know-Center, Austria  
Peter Sloep, Open University, the Netherlands  
Philippe Dessus, Université Pierre-Mendes-France, France  
Riina Vuorikari, European Commission JRC IPTS, Spain  
Simon Knight, The Open University, United Kingdom  
Stefan Trausan-Matu, University Politehnica of Bucharest, Romania  
Stefano Bianchi, SOFTECO, Italy  
Xavier Ochoa, Escuela Superior Politecnica del Litoral, Ecuador

**Supporting FP7 projects**



<http://www.mirror-project.eu>



<http://learning-layers.eu>



<http://www.tellme-ip.eu>



<http://wespot-project.eu>



<http://employid.eu>



<http://www.boost-project.eu>





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