

Please refer to these proceedings as:

Daniele Di Mitri, Alejandro Ortega-Arranz, Oleksandra Poquet (eds.): Proceedings of the Doctoral Consortium of the 18th European Conference on Technology Enhanced Learning co-located with the 18th European Conference on Technology Enhanced Learning (EC-TEL 2023). Aveiro, Portugal. September 04, 2023, CEUR-WS.org/Vol-XXX.

© 2023 for the individual papers by the papers' authors. Copying is permitted for private and academic purposes. Re-publication of material from this volume requires permission from the copyright owners.

Address of first editor:

Daniele Di Mitri

DIPF | Leibniz Institute for Research and Information in Education

Rostocker Str. 6, 60323 Frankfurt am Main, Germany.

d.dimitri@dipf.de

Preface

The EC-TEL Doctoral Consortium has been part of the EC-TEL since its beginning in 2005. It is part of the European Association of Technology Enhanced Learning (EA-TEL) doctoral program. Besides the Doctoral Consortium, this program includes the JTEL Summer School. Together, these two events have been shaping and enriching the experiences of many young researchers on their PhD journey. These scientific gatherings create and support new entrants as they join the EATEL community that addresses transdisciplinary challenges related to the TEL field.

This volume contains papers presented at the Doctoral Consortium of the Eighteenth European Conference on Technology Enhanced Learning (EC-TEL 2023) held on September 4, 2023, in Aveiro, Portugal. There were 19 proposals submitted and reviewed by at least two doctoral consortium program committee members (see the complete list in the following section). At least three doctoral candidates also reviewed each proposal as a part of the peer evaluation experience. A final 13 proposals were found eligible and were selected for presentation at the Doctoral Consortium event. These were the submissions that were published as full papers in these Doctoral Consortium proceedings.

Publication of the papers in this volume completes the cycle of feedback offered prior to and during the EC-TEL Doctoral Consortium event. In itself, the EC-TEL Doctoral Consortium is designed as a training event for PhD candidates. Junior research students are offered a networking space to present advances in their doctoral studies, discuss their research plans with peers and more experienced researchers, and improve their writing and presentation skills. Besides the emphasis on constructive feedback, the Doctoral Consortium provides a platform to discuss issues regarding methodology, supervision and career-related aspirations. The Doctoral Consortium event was structured into four thematic sessions, with presentations from three candidates and breakout groups where each candidate received detailed feedback. Some participants also presented their work published in these proceedings as a poster at the leading EATEL conference. As the last step in this formative experience, all papers in these proceedings have been reworked to address the reviewers' and peers' comments.

The EC-TEL Doctoral Consortium continues to show its international relevance and impact by receiving submissions from countries across and beyond Europe. The variety of topics with both technological and educational focus represented at the doctoral consortium highlights once again the highly multidisciplinary nature of the TEL field. EATEL's activities for community-building complement the effort to create a network of doctoral students through the series of webinars organised by the DETEL EU project.

We express our gratitude to the EATEL association and all senior researchers involved in the reviewing process who continue supporting feedback experiences for future EATEL researchers. Their input and that of the conference organisers remain key in supporting this event and its logistics. We wish all PhD candidates a rewarding and productive continuation of their PhD journey.

October 2023
Daniele Di Mitri,
Alejandro Ortega-Arranz,
Oleksandra Poquet

Committee

- Daniele Di Mitri, DIPF | Leibniz Institute for Research and Information in Education
- Oleksandra Poquet, Technical University of Munich
- Alejandro Ortega-Arranz, Universidad de Valladolid
- Pedro J. Muñoz-Merino, Universidad Carlos III de Madrid
- Bruce McLaren, Carnegie Mellon University
- Monica Divitini, Norwegian University of Science and Technology
- Mutlu Cukurova, University College London
- Luis P. Prieto, Universidad de Valladolid
- Tobias Ley, University for Continuing Education Krems
- Luke LeFebvre, University of Kentucky
- Manuel Caeiro-Rodríguez, University of Vigo
- Olga Viberg, KTH Royal Institute of Technology
- Gerti Pishtari, University for Continuing Education Krems
- Mar Perez-Sanagustin, Université Paul Sabatier Toulouse III
- Mikhail Fominykh, Norwegian University of Science and Technology
- Geraldine Gray, Technological University Dublin
- Eyal Rabin, The Open University of Israel
- Derek Lomas, Carnegie Mellon University
- Patricia Santos, Universitat Pompeu Fabra
- Ryan Baker, University of Pennsylvania
- Sonsoles López-Pernas, University of Eastern Finland
- Jelena Jovanovic, University of Belgrade

Contents

1	Developing Students' Self-regulated Learning Skills with Teacher Classroom Analytics Enhancing Teachers' Direct Instruction of Self-regulated Learning Strategies – Melis Dülger	5
2	Towards a Teacher-Oriented Framework of Visual Learning Analytics by Scenario-Based Development – Zeynab(Artemis) Mohseni, Italo Masiello and Rafael M. Martins	11
3	An Empathic Pedagogical Conversational Agent for Development of Computer and Research Competencies: A Research Plan – Elvis Ortega-Ochoa	17
4	Developing an Automated Evaluation Tool for Multiple-Choice Questions – Steven Moore	25
5	Supporting HE Students' Competence in Using SFLA for SRL – Theo C.C. Nelissen	30
6	Smart Assistant for MOOCs: Enhancing Learner Support and Accessibility – Theresa Zobel	35
7	Towards a Skill-based Self-Regulated Learning Recommendation System – Amine Boulahmel	40
8	Participatory Design of an Application for Training Message Composition Skills for Public Speaking – Nina Mouhammad	49
9	Learning Sequence Analytics for Support in Learning Tasks – Manuel Valle Torre	56
10	Supporting Teachers in the Generation of Ubiquitous Learning Situations Across Multiple Domains and Spaces Based on Linked Open Data – Pablo García-Zarza	62
11	Self-Directed Workplace Learning in Transfer from Education and Training to Workplace – Jaanika Hirv-Biene	72
12	Explaining the Influence of Learning Design on Students' Motivational Beliefs Using Learning Analytics – Jelena N. Larsen	78
13	Studying the Impact of Orchestrating Intelligent Technologies in Hybrid Learning Spaces for Teacher Agency – Víctor Alonso-Prieto	86