EARLI SIG 6 & 7 CONFERENCE

AUGUST 30TH TO SEPTEMBER 1ST 2010 - ULM UNIVERSITY, GERMANY

PROGRAM

Please notice, that the order of presentations within each session may change until the beginning of the conference.

KEYNOTE SPEAKERS

Keynote I

Monday, August 30, 11.15 – 12.00

Paul Kirschner
Open University of the Netherlands, Heerlen, Netherlands
Center for Learning Sciences and Technology, CELSTEC

Educational Urban Legends: Busting Persistent Myths in Education, Educational Innovation and ICT in Education

Mark Twain once said that "In religion and politics, people's beliefs and convictions are in almost every case gotten at second hand and without examination". Unfortunately this appears also to be true in present day education, educational innovation and use of ICT in education. Educational technologists, educational reformers, instructional designers, local and federal politicians, school managers, and advisory groups are all jockeying to show how innovative and up to date they can be, based not upon good science but upon commonly held but often either unproven or untrue beliefs. As a result of this, we now find teachers, parents and students revolting against many of these so called innovations and students becoming the dupes of it all. And what is the root of all of this? The reforms that we often see are most often not based on good science (and specifically the cognitive sciences) and/or good scientific research, but rather upon beliefs, plausible sounding rationale and/or arguments, poorly designed research and the strange idea that 'stagnation means decline'. The reaction to these reforms - though it uses the word evidence - is also based upon beliefs about how education and educational research is and should be carried out. Paul Kirschner will look at a number of these urban legends from the perspective of what cognitive science and good research in the field has to say about them.

Keynote II

Tuesday, August 31, 11.30 – 12.30

Shaaron Ainsworth
University of Nottingham
Learning Sciences Research Institute

Exploring the Roles of Psychology in Technology Enhanced Learning: A Chronological Perspective

Psychologists are often drawn to the area of Technology Enhanced Learning (TEL) as it offers a way to test and refine their theories of learning; I know I was! However, over the last two decades the theories, technologies, methods, and contexts in which I research have all changed, often fairly dramatically. In this talk, I want explore how the field is changing by exploring how my own research has changed: from its beginnings in cognitively inspired individualised learning environments tested in the artificial contexts to today where I work with a plethora of technologies from handhelds to large screen displays, in contexts which range far from the laboratory and explore theories which take into account social, emotional, motivational, personality factors as well as cognitive ones. I want to end by reflecting on how we can manage these complex inter-relating factors (theoretically and methodologically) so that the symbiotic relationship between psychology and TEL can continue to be a relevant and fruitful one.

Peter Gerjets
University of Tübingen
Knowledge Media Research Center

Bridge over troubled water: From Cognitive Science to designing digital instruction

In recent years, research on designing digital instruction (e.g., materials to be used in multimedia or hypermedia environments) has been dominated by theories like the Cognitive Load Theory (Sweller, 1999) or the Cognitive Theory of Multimedia Learning (Mayer, 2002). These theories can be characterized as "framework & principles" approaches as they compile theoretical building blocks from research on memory and mental representation into comprehensive frameworks that are used to derive general and simple instructional-design principles recommended as practical guidelines. Based on examples from our own research program, I will argue that this "framework & principles" approach to designing digital instruction has its limitations and needs theoretical and methodological augmentations at three different levels of explanation in order to be theoretically and practically satisfactory: (1) Augmentations at the "framework level": Causal chains that are specified within the frameworks to explain instructional-design effects need to be substantiated more thoroughly by measuring the postulated processes and mediators and by directly testing the hypothesized relations. (2) Augmentations at the "foundational level": When theoretical or empirical inconsistencies occur that can not be resolved at the framework level, structures and processes at a more fundamental level of explanation than the one used by the framework itself have to be addressed for clarification. (3) Augmentations at the "representations in context level": When realistic materials for authentic instructional contexts are to be designed, the roles of external representations with regard to domain contents and learning objectives need to be specified by means of task analyses at a level of explanation that can be considered "above" the framework level. Based on the structuralist view of theories, a methodological perspective for future research on designing digital instruction will be proposed that allows to integrate these three levels of explanation into a comprehensive approach.

Monday, August 30	09.00 – 11.00	Ph.D. Workshop	
	09.00 – 10.30	**Work in Progress Session I** **Computer-based Learning and Instruction**	Elena Svirko & Jane Mellanby *Approach to Learning and Enjoyment as Factors in Learning from an Online Course* Nicolae Nistor, Tina Busche, Jan Oliver Heymann & Marius Ciprian Ceobanu *Verifying the Unified Theory of Acceptance and Use of Technology: The Influence of Culture, Computer Literacy, Age and Sex on the Acceptance Mechanisms* Steven Bruneel, Kurt De Wit, Jef Verhoeven & Jan Elen *Study and Non-Study Related ICT Use of Flemish Students in Higher Education* Shannon Kennedy-Clark *MUVEing Slowly - Inquiry Learning in a Scenario-Based Multi-User Virtual Environment*
		Work in Progress Session II **Instructional Design**	Anna Escofet, Francesc Balagué Puxán, Guillermo Bautista Pérez, Josep M Duart Montoliu, Anna Forés Miravalles, Iolanda Gracia González, Begoña Gros Salvat, Marta Marimon Martí & Artur Parcerisa Aran *Uses of ICT Among University Students: An Academic and Social Perspective of Technology-Mediated Learning Pocesses* Griet Lust, Norma A. Juarez Collazo, Jan Elen & Geraldine Clarebout *Tool Use in Content Management Systems: Analysis of Blackboard Log Files* Maria Opfermann, Katharina Scheiter & Peter Gerjets *Can Representational Fading Enhance Multimedia Learning?* Wendy Kicken & Slavi Stoyanov *Effects of a Mobile Performance Support System on Students' Learning Outcomes*
	10.30 – 11.00	Coffee break	
	11.00 – 11.15	Remembrance for Roxana Moreno	
	11.00 – 12.00	**Keynote I**	Paul Kirschner *Educational Urban Legends: Busting Persistent Myths in Education, Educational Innovation and ICT in Education (see abstract on page 2)*
	12.00 – 13.00	Lunch	
	13.00 – 14.00	**Paper Session 1a** **Self-regulated Learning**	Martine Baars, Tamara van Gog & Fred Paas *Accuracy of Immediate and Delayed Judgments of Learning during Problem Solving and Worked Example Study* Inga Glogger, Julian Kappich, Rolf Schwonke, Lars Holzäpfel, Matthias Nückles & Alexander Renkl *Inventing Prepares Learning not only Cognitively, but also Motivationally* Silja-Susann Taxis, Cornelia Gutmann & Tina Seufert *Effects of a Learning Strategy Training for Children*
	14.00 – 14.15	Short break	
	14.15 – 15.15	**Paper Session 1b** **Teacher Education**	Zvia Fund *On-Line Forums in Teacher Education: Does it Effect Pedagogical Knowledge and Self-Regulation in Lesson Planning?* Jan Zottmann, Annika Goeze, Frank Fischer & Josef Schrader *Facilitating the Analytical Competency of Pre-Service Teachers with Digital Video Cases: Effects of Hyperlinks to Conceptual Knowledge and Multiple Perspectives* Martin Merkt, Sonja Weigand, Anke Heier & Stephan Schwan *Learning with Interactive Videos in History Education*

Monday, August 30	15.15 – 15.40	Coffee break	
	15.40 – 17.00	**Paper Session 2** **Learning with new Technologies**	Griet Lust, Norma A. Juarez Collazo, Jan Elen & Geraldine Clarebout *Students' Use of Tools in Content Management Systems: Towards a Research Framework* Brigitta Kopp, Heinz Mandl & Laura Gunkel *Which Individual Characteristics Facilitate Knowledge Transfer in E-Learning?* Yvonne Kammerer & Peter Gerjets *Effects of Internet-Specific Epistemic Beliefs and Search Interface Design on the Selection of Web Search Results* Ingo Kollar, Christof Wecker, Sybille Langer & Frank Fischer *Fostering Online Search Competence with Classroom and Small-Group Scripts in Web-Based Inquiry Learning* Taiga Brahm *Designing and Empirically Testing Computer-Supported Collaborative Learning for Vocational Education*
	17.00 – 19.30	**Posters and Reception** **Instructional Design**	Norma A. Juarez Collazo, Griet Lust, Jan Elen & Geraldine Clarebout *Exploring the Functionality of Different Tools in a Learning Environment* Xiaoli Wu, Joost Lowyck, Lies Sercu & Jan Elen *Does Task Complexity affect Task Performance in EFL? The Mediating Role of Self-Efficacy Beliefs and Learning Strategy Use* Markus Deimann & John M. Keller *Basic Principles of Motivation and Volition to Guide the Development and Implementation of Digital Instruction* Astrid Wichmann & Ulrich Hoppe *Towards a Community of Practitioners*
		The Role of Learner Characteristics	Gerhard Schrangl & Joerg Zumbach *Measuring Xenophobic Cognitions after Intercultural Training* Birgit Reisenhofer & Joerg Zumbach *Multimedia Learning and the Appraisal Effect* Mieke Vandewaetere & Geraldine Clarebout *Developing Computer-Based Adaptive Learning Environments: The Role of Learner Characteristics* Ludo W. van Meeuwen, Halszka Jarodzka, Saskia Brand-Gruwel, Jeroen J.G. van Merriënboer, Jeano J.P.R. de Bock & Paul A. Kirschner *Processes mediating expertise in Air Traffic Control* Rosa Hettmannsperger, Wolfgang Schnotz, Andreas Müller, Jochen Kuhn, Wieland Müller & Sibel Telli *How prior knowledge affects students' representational and experimental competence in middle school physics.*

Monday, August 30	17.00 – 19.30	**Game- and Simulation-based Learning**	Joke Coens, Bert Reynvoet & Geraldine Clarebout *Can Students Really Multitask? The Case of Mobile Learning* Daniel T. Hickey, Michael Filsecker & Ellen Jameson *Maximizing Discourse in Educational MUVEs* Günter Daniel Rey *Signaling and Reading Direction in a Simple Computer Simulation* Sabine Seufert & Tanja Fandel-Meyer *More than Fun and Games: Using Computer-Based Simulations to Enhance Change Management Competencies* Sylke Vandercruysse, Mieke Vandewaetere & Geraldine Clarebout *Defining Games-Based Learning: A Review on Gaming Elements in Computer-Based Learning Environments*
		Self-regulated Learning	Ladislao Salmerón, Raquel Cerdán, Pilar Garcia-Carrión, Johannes Naumann, & Gema Tavares *Students' navigation in a Wikipedia reading task* Lena Hofmann, Karsten Stegmann, Frank Fischer & Matthias Siebeck *Effects of self-explanation scaffolds in video-based worked-out examples on emotions and the acquisition of complex skills in medical education* Felix Kapp, Susanne Narciss & Hermann Körndle *The use of interactive learning tasks in a computer-based self-regulated learning environment* Frauke Kämmerer & Helmut M. Niegermann *The impact of a training of questioning on transfer* Cornelia Hauss, Tatjana Ruf & Rolf Ploetzner *Designing multimedia for effective self-regulated learning*
		Collaboration in Online-Learning Environments	Petra Grell & Franco Rau *Participation under Compulsion* Alberto Cattaneo, Elena Boldrini, Elisa Motta & Christoph Arn *Developing Competences in VET through E-Writing Activities* M. Beatrice Ligorio & Roberto Cordeschi *Collaborative and Constructive Participation: A Model for Blended Courses* Crina Damsa, Sten Ludvigsen, Patrick Sins & Bert Reijnen *Collaborative Creation of Shared Knowledge Objects - Process Characteristics and Technological Support*

Tuesday, August 31	09.00 – 10.00	**Paper Session 3a** **Learning with Multiple Representations I**	Christiane Baadte & Wolfgang Schnotz *Feedback Mediated Adaptive Learning with Texts and Pictures* Ingmar Baetge & Tina Seufert *Effects of Support for Coherence Formation in Computer Science Education* Martina Rau, Vincent Aleven & Nikol Rummel *Supporting Learning with Multiple Graphical Representations with Intelligent Tutoring Technology*
	10.00 – 10.20	Coffee Break	
	10.20 – 11.20	**Paper Session 3b** **Learning with Multiple Representations II**	Victoria García & Ladislao Salmerón *Effects of Paper and Navigational Overviews on Sixthgraders' Comprehension* Markus Vogel & Tina Seufert *Computer-Based Support of Graph Interpretation* Felix Wagner & Tina Seufert *Learner Generated Representations as a Strategy for Learning with Text and Pictures*
	11.20 – 11.30	Short break	
	11.30 – 12.30	**Keynote II**	Shaaron Ainsworth *Exploring the Roles of Psychology in Technology Enhanced Learning: A Chronological Perspective (see abstract on page 2)*
	12.30 – 13.30	Lunch	
	13.30 – 14.50	**Paper Session 4a** **Cognitive load – Research on Multimedia Learning**	Babette Park & Roland Brünken *How to Measure Cognitive Load while Learning from Multimedia Instructions? An Experimental Dual-Task Study* Ulrike Magner, Rolf Schwonke, Alexander Renkl, Vincent A. W. M. M. Aleven & Octav Popescu *Seductive Illustrations: Double-Edged Effects?* Paul Ayres *Reducing Intrinsic Cognitive Load: Different Strategies with a Common Explanation* Joerg Zumbach & Andrea Hellmayr *When Non-Linearity Contributes to Germane Cognitive Load: Effects of Content and Task Complexity*
	14.50 – 15.10	Short break	
	15.10 – 16.10	**Paper Session 4b** **Cognitive load – Research on worked Examples**	Tamara van Gog, Liesbeth Kester & Fred Paas *Effects of Worked Examples, Example-Problem Pairs, and Problem-Example Pairs Compared to Problem Solving* Ingrid A. E. Spanjers, Tamara van Gog & Jeroen J. G. van Merriënboer *Segmentation of Worked Examples: Effects on Cognitive Load and Learning* Rolf Schwonke, Alexander Renkl, Ron Salden & Vincent A. W. M. M. Aleven *How Different Ratios of Giving and Withholding Guidance in Computer-Supported Learning Affect Cognitive Load and Learning Outcomes*
	16.10 – 16.30	Short break	
	16.30 – 17.30	**Keynote III**	Peter Gerjets *(more information coming soon)*
	17.30 – 18.15	Business Meeting	
	19.30 – open end	Evening event	

Wednesday, September 01	09.00 – 11.00	**Paper Session 5** **Emotional and motivational Aspects of Learning**	Christine Otieno, Alexander Renkl, Katharina Liebler, Ulrich Deil, Thomas Ludemann & Hans Spada *Leaflets about Climate Change and Invasive Species: The Effects of How Information is Presented on Emotions and Learning* Maria Tulis *Computer-Based Practice in School: Students' State- and Trait Emotions and the Impact of Solving Word Problems on Mathematics Performance* Cornelia Schoor & Maria Bannert *Are Pictures more Motivating than Text? Effects of Presentation Codality on Interest* Kim Stalbovs, Katharina Scheiter & Peter Gerjets *Implementation Intentions on Support Strategy Use in Multimedia Learning* Lai Jiang & Jan Elen *The Impact of Motivation-Related Variables on Scaffold Use* Maria Cristina Matteucci, Carlo Tomasetto & Birgitta Kopp *Motivated (E)-Learning: Results of a European Project as Starting Point to Explore Social-Psychological Dimensions of Effective Social Interaction*
	11.00 – 11.10	Best paper award	
	11.10 – 11.30	Short Break	
	11.30 – 13.30	**Paper Session 6** **Instructional Design – the Role of Cooperation, Explanations and Examples**	Walid El-Refai, Ingo Kollar & Frank Fischer *Supporting Online Design-Based Learning with Collaboration Scripts and Incomplete Concept Maps* Karen Könings & Paul Kirschner *Students' Expectations and Perceptions on Instruction: The Role of Students' Behavior* Michael Filsecker, Daniel T. Hickey & Eun Ju Kwon *Integrating Web 2.0 and Immersive Technologies during Formative Assessment Fosters Knowledge Construction* Kirsten Berthold, Lucie Faulhaber, Talia Guevara & Alexander Renkl *Training Focused Processing of Explanations: How can Transfer Across Domains be Fostered?* Julian Roelle, Kirsten Berthold & Alexander Renkl *Two Instructional Aids to Optimize Processing of Instructional Explanations* H. Jarodzka, T. Balslev, K. Holmqvist, K. Scheiter, M. Nyström, P. Gerjets & B. Eika *Eye Movement Modeling Examples in Medical Education*
	13.30	End of Conference	