Investigations of E-Learning Patterns: Context Factors, Problems and Solutions

Christian Kohls (Knowledge Media Research Center, Germany) and Joachim Wedekind (Knowledge Media Research Center, Germany)

Design patterns have become popular in the domains of architecture, software design, human computer interaction, Web 2.0, organizational structures, and pedagogy as a way to communicate successful practical knowledge. Patterns capture proven solutions for recurrent problems with respect to fitting contexts.

Investigations of E-Learning Patterns: Context Factors, Problems and Solutions poses the question: Will e-learning patterns be equally successful as their pendant in software development or is the remake doomed to failure? This comprehensive publication addresses both e-learning practitioners and researchers, using an accessible language to communicate sophisticated knowledge and important research methods and results. It is a valuable addition to any research collection.

Topics Covered:

- Computer Assisted Assessment Patterns
- Didactic Process Map Language
- Empirical Navigational Paths
- Essential Structure of Teaching Method Descriptions
- Linking CSCL Script Design Patterns
- Patterns and Instructional Methods
- Patterns as an Analysis Framework
- Pedagogical Patterns, Scripts, and Learnflows
- Social Web Environment
- VideoClipQuests

Market: This premier publication is essential for all academic and research library reference collections. It is a crucial tool for academicians, researchers, and practitioners and is ideal for classroom use.

Christian Kohls is member of the research unit “Design and Implementation of Integrative Learning Environments” at the Knowledge Media Research Center, Tübingen. Christian Kohls has been working at the Knowledge Media Research Center since 2005. His job is the technical development of the German information and qualification portal e-teaching.org. He is also responsible for editing the content section “media technology” and gives frequently online trainings in e-learning software. He studied media and computer science and received a M.Sc. He worked in the e-learning team of the University of Applied Sciences Wedel/Hamburg and as consultant at pharusS3 software solutions where he implemented multilingual WBT solutions and software tutorials. He is inventor and development coordinator of moowinx, an end user tool to create interactive graphics. His research interests include information visualization and the mining of design patterns. He is writing his PhD thesis about mental and conceptual representations of patterns.
Section 1: Introduction

Chapter 1  
Perpectives on Patterns  
Kohls Christian (Knowledge Media Research Center, Germany)  
Weickgen Joachim (Knowledge Media Research Center, Germany)

Chapter 2  
Patterns as an Analysis Framework to Document and Foster Excellent E-Learning Designs  
Kohls Christian (Knowledge Media Research Center, Germany)

Chapter 3  
The Essential Structure of Teaching-METHOD Descriptions  
Neumann Susanne (University of Vienna, Austria)  
Derrell Michael (University of Vienna, Austria)  
Oberhaumer Petra (University of Vienna, Austria)

Section 2: Patterns and Their Relations to Other Approaches

Chapter 4  
Patterns and Instructional Methods  
Weickgen Joachim (Knowledge Media Research Center, Germany)

Chapter 5  
Linking CICL, Script Design Patterns  
Villanas-Fernández Eloy D. (University of Valladolid, Spain)  
Hernández-Leo Davinia (Pompeu Fabra University, Spain)  
Pérez Juan I. Asensiós (University of Valladolid, Spain)  
Dimirradis Yannis (University of Valladolid, Spain)  
Martínez-Monés Alejandra (University of Valladolid, Spain)

Chapter 6  
Evaluating Learning Designs through the Formal Representation of Pedagogical Patterns  
Laurillard Diana (London Knowledge Lab, UK)  
Ljubojevic Dejan (London Knowledge Lab, UK)

Section 3: Finding Patterns: Theory and Methodology

Chapter 7  
Embedding Design Patterns in a Methodology for a Design Science of E-Learning  
Mor Yishay (London Knowledge Lab, UK)

Chapter 8  
Visualizing Learning Processes Using Didactic Process Maps  
Honegger Beat Döbeli (University of Teacher Education Central Switzerland, Switzerland)  
Notari Michele (Berno University of Teacher Education, Switzerland)

Chapter 9  
On the Implications of the Social Web Environment for Pedagogical Patterns  
Kamthan Pankaj (Concordia University, Canada)

Chapter 10  
Navigational Paths and Didactical Patterns  
Iske Stefan (University of Cologne, Germany)

Section 4: Pattern Examples

Chapter 11  
Towards Pedagogical Patterns on Feedback  
Schmelzitzky Axel W. (University of Hamburg, Germany)  
Schümer Till (FernUniversität Hagen, Germany)

Chapter 12  
Didactic Design Patterns  
Wippermann Sven (University of Education Ludwigshurg, Germany)

Chapter 13  
Formative E-Assessment  
Mor Yishay (London Knowledge Lab, UK)  
Mellar Harvey (London Knowledge Lab, UK)  
Pachler Norbert (Institute of Education, UK)  
Daly Caroline (Institute of Education, UK)

Chapter 14  
Computer-Assisted Assessment Patterns for Different Target Users  
Santos Patricia (Universitat Pompeu Fabra, Spain)  
Hernández-Leo Davinia (Universitat Pompeu Fabra, Spain)  
Navarrete Toni (Universitat Pompeu Fabra, Spain)  
Blat Josep (Universitat Pompeu Fabra, Spain)

Chapter 15  
VideoClipQuests as an E-Learning Pattern  
Kortenkamp Ulrich (University of Education Karlsruhe, Germany)  
Blessing Axel M. (University of Education Schwäbisch Gmünd, Germany)

Chapter 16  
Design Patterns as Guidance for Designers of Groupware used by Teams for the Development of Innovative Products  
Georgiakakis Petros (University of Piraeus, Greece)  
Retalis Simos (University of Piraeus, Greece)  
Bitter-Rijpkema Marlies (Open Universiteit, The Netherlands)  
Pannekeet Kees (Open Universiteit, The Netherlands)  
Rutjens Marijo (Open Universiteit, The Netherlands)  
Stolp Peter (Open Universiteit, The Netherlands)

Section 5: Reflections

Chapter 17  
Patterns of Social Practice  
Wodzicki Katrin (Knowledge Media Research Center, Germany)  
Moskaluk Johannes (University of Tuebingen, Germany)  
Cress Ulrike (Knowledge Media Research Center, Germany)

Chapter 18  
A First Glimpse at the Whole  
Bauer Reinhard (Danube University Krems, Austria)  
Baumgartner Peter (Danube University Krems, Austria)