AFFECTIVE AND EMOTIONAL ASPECTS OF HUMAN-COMPUTER INTERACTION: Game-Based and Innovative Learning Approaches

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This book was edited by, Maja Pivec, an educator at the University of Applied Sciences, and published by IOS Pres in 2006. The learning process can be seen as an emotional and personal experience that is addictive and leads learners to proactive behavior. New research methods in this field are related to affective and emotional approaches to computer-supported learning and human-computer interactions. Bringing together scientists and research aspects from psychology, educational sciences, cognitive sciences, various aspects of communication and human computer interaction, interface design and computer science on one hand and educators and game industry on the other, this should open gates to evolutionary changes of the learning industry. The major topics discussed are emotions, motivation, games and game-experience.

ORGANIZATION OF THE SESSIONS

The book has eighteen chapters divided into three sections.

Section I, Game-Based Learning, contains eight chapters. This section reflects upon the two-way interaction between games and students, thus enabling the games to react to the student’s emotional state. Having the possibility to detect and steer the emotional state of the student could have a positive impact on using digital games in education. It is claimed that some commercial computer games increase participants’ cognitive skills and may enhance multitasking abilities along with their learning ability.

Section II, Motivation and Learning, presented in five chapters. The section analyses whether the absence or presence of social and personal cues in the communication between tutors and their students influence students’ learning and their satisfaction with the tutor and the course. Previous studies showed that not all types of personal information are equally important. More specifically, pictorial information is considered more important than audible information.
Section III, Emotions and Emotional Agents, consists of five chapters. This section discusses the production of learning environments that enhance the learner’s self esteem. It further ensures that the learner’s best interests are perceived through paying attention to the narrative structures of the learner’s experience. Besides, communication can be enhanced through empathy with the learner.

CONTENTS OF THE BOOK

Foreword
Acknowledgements
Supplementary Material Available via the Internet

GAME-BASED LEARNING

Affective Gaming: Advancing the Argument for Game-Based Learning. Jonathan Sykes

Didactic Analysis of Digital Games and Game-Based Learning. Matthias Bopp


What is a Game Ego? Ulf Wilhelmsson

Multiple Motivations Framework. Hakan Tüzün

An Instructional Design/Development Model for the Creation of Game-Like Learning Environments: The FIDGE Model. Göknur Kaplan Akıllı and Kürşat Çağiltay

Learning When Using Commercial Computer Games as Simulations: A Case Study Using a Simulation Game. Preston P. Parker

Serious Games and ‘Simulation Based E-Learning’ for Infrastructure Management. Igor Mayer and Geertje Bekebrede

MOTIVATION AND LEARNING

Learning and Motivation with Virtual Tutors. Manuela Paechter and Karin Schweizer

Achievement Motivation, Performance Structure, and Adaptive Hypertext Learning. Jürgen Heller, Dietrich Albert, Michael Kickmeier-Rust and Markus Kertz

An Interactive Dictionary of Concepts: An Exploratory Platform for Enhancing Communication Between the Concepts Which Form and Inform Us. Ania Lian

Human-Computer Interaction: Sharing of Intergenerational Wisdom and Cross-Cultural Knowledge. Elspeth McKay

Designing the Stimulation Aspect of Hedonic Quality-An Exploratory Study. Michael Burmester and Annelly Dufner

EMOTIONS AND EMOTIONAL AGENTS

On the Role of Self Esteem, Empathy and Narrative in the Development of Intelligent Learning Environments. Paul Brna
Empathic Characters in Computer-Based Personal and Social Education. João Dias, Ana Paiva, Marco Vala, Ruth Aylett, Sarah Woods, Carsten Zoll and Lynne Hall


A Framework for Emotional Agents as Tutoring Entities. Bogdan Florin Marin, Axel Hunger and Stefan Werner

A Haptic Computing Logic-Agent Planning, Models, and Virtual Trees. Cyrus F. Nourani

ESF SCSS Exploratory Workshop on Affective and Emotional Aspects of Human-Computer Interaction: Emphasis on Game-Based and Innovative Learning Approaches.