

## **Interactive Multimedia Learning, Using Social Media for Peer Education in Single-Player Educational Games.**

### **Datenbank**

TEMA, Copyright WTI-Frankfurt eG

### **Deskriptoren**

Social Media; E-Learning; Ausbildung (Bildungswesen); Informationstechnologie; Computer-Spiel; Lernprozess; Lernprogramm; Feldversuch; Deutschland

### **Freie Begriffe**

Ausbildungstechnologie; virtuelle Umgebung

### **Abstract**

Social Media, as an information and communication technology, enables users to exchange information about experiences and insights in easy ways. Such exchange can be used for peer interaction among learners in E-learning scenarios or also to support players of educational computer games. The players profit from social media content interpreted as learning resources that are created, edited, and then shared by peers. Therefore, social media applications and concepts can serve as a way to bring peer education concepts closer to educational games in specific and to systems for technology enhanced learning in general. Appropriate information technology enhances the way learners share hints, assess each others' solutions, and give feedback in the learning and playing process. However, the intersection of serious games and social media appears to be a quite novel field of research with various uncertainties to be addressed by scientists. With his thesis, Dr. Konert defines, to a much larger extent than before, this new research area of social serious games. He integrates the perspectives and findings from didactics, pedagogical psychology, social media, and educational games in order to enhance knowledge exchange among learners in virtual environments. His exceptional interdisciplinary work addresses several core problems of technologyenhanced learning. It includes the integration of user-generated content in learners' interactions, the sophisticated diagnosis of problem solving competency, and a proper assessment of learners' solutions - especially to open-format problems. Additionally, Dr. Konert offers enhanced solutions for algorithmic peer learning group formation based on manifold criteria to improve learning effectiveness as well as quality of feedback among the peers. This is the first time single-player games are enhanced by content integration and game adaptation based on social media interactions. The achievable improvements are shown by a multitude of conducted studies including field tests with pupils of secondary schools, laboratory studies with master's degree students, extensive simulative evaluation, as well as expert interviews with CEOs of video game development studios in Germany. With his findings, Dr. Konert brings the field of serious games and technologyenhanced learning an enormous step forward. His insights allow the use of social media to establish effective circles for knowledge exchange between learners. Core aspects are the integration of user-generated content into the learning process and the algorithmic learning group formation in

the application field of educational games.

Copyright Springer-Verlag. Reproduced with permission.

**Autor**

Konert, Johannes

**Institution**

Department of Electrical Engineering & Information Technology, TU Darmstadt,  
DE

**Quelle**

Springer Theses: Recognizing Outstanding Ph.D. Research \* (2015) Seite 1-159  
(156 Seiten)

**Sprache**

EN Englisch

**Erscheinungsjahr**

2015