

Personalization in Technology Enhanced Learning: A Social Software Perspective

Von der Fakultät für Mathematik, Informatik und
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**Diplom-Informatiker
Mohamed Amine Chatti**

aus Sfax (Tunesien)

Berichter: Universitätsprofessor Dr. rer. pol. Matthias Jarke
Prof. Dr. Marcus Specht

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Mohamed Amine Chatti

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Abstract

There is a wide agreement that traditional Technology Enhanced Learning (TEL) models have failed to cope with the fast-paced change and critical challenges of the new knowledge era. In this thesis, the *Learning as a Network (LaaN)* theory is introduced as a response to the increasing complexity of the new learning environments. LaaN draws upon connectivism, complexity theory, and double-loop learning. It views knowledge as a personal network and represents a knowledge ecological approach to learning.

Based on the LaaN theory, the *3P Learning Model* is discussed as an alternative TEL model that represents a fundamental shift toward a more personalized, social, open, dynamic, emergent and knowledge-pull model for learning, as opposed to the one-size-fits-all, centralized, static, top-down, and knowledge-push paradigms of traditional TEL models.

Finally, the *Social Software Supported Learning Framework* is presented as a TEL information system that illustrates the 3P learning model in action, by implementing the main ideas underpinning the 3P learning model, based on Web 2.0 concepts and social software technologies.



Kurzfassung

Traditionelle *Technology Enhanced Learning (TEL)* Modelle sind, wie heute allgemein anerkannt, nicht geeignet, um mit den rasanten Änderungen und den kritischen Herausforderungen der neuen Wissensära mithalten zu können. Als Antwort auf die steigende Komplexität von Lernumgebungen wird in der vorliegenden Dissertation die Theorie *Learning as a Network (LaaN)* vorgestellt, die auf Connectivism, Komplexitätstheorie und Double-Loop-Lernen basiert. Die LaaN-Theorie begreift Wissen als persönliches Netzwerk und zeigt einen wissenschaftlichen Ansatz zum Lernen auf.

Basierend auf der LaaN-Theorie wird das *3P-Lernmodell* als ein alternatives TEL-Modell vorgestellt, das einen Wechsel zu einem personalisierten, sozialen, offenen, dynamischen, aufstrebenden Knowledge-Pull-Modell fürs Lernen darstellt, im Gegensatz zu traditionellen, allgemeingültigen, zentralisierten, statischen, von oben herab definierten Knowledge-Push-TEL-Modellen. Abschließend wird das *Social-Software-Supported-Learning-Rahmenwerk* vorgestellt, welches die Anwendung des 3P-Lernmodells illustriert. Hierzu werden die Grundideen des Modells mit Hilfe von Social-Software-Technologien und Konzepten aus dem Web 2.0 umgesetzt.

This dissertation is dedicated to my mother and my father,
my wife Ramla,
Mohamed Amir and Rima,
the *noor* of my eyes.



Keep away from those who try to belittle your ambitions. Small people always do that, but the really great make you believe that you too can become great.

Mark Twain

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Aachen,
5th October, 2010

Mohamed Amine Chatti

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