

N9 Stuetzer, C., Diesner, J., Carley, K.M., Koehler, T., & Thiem, G. (2010). Social and structural roles at web based learning: Network-based identifying and integrating social roles and structural for the case of collaborative e-learning environments and the effects of embeddedness for knowledge transfer process.

As people adopt life-long learning as a strategy to succeed in modern societies and as traditional forms of face-to-face modes of instruction are supplemented by e-learning opportunities, traditional roles of learners and educators may change. The identification of actor roles and their embeddedness in social systems have a long tradition in social sciences. In education science, learning has traditionally been conceptualized as an adaptive knowledge construction process. This view has started to be extended by also taking the network structure and dynamics of interacting groups of learners and educators into account. We present a case study in which we leverage social network analysis in combination with relational text analysis to investigate emerging roles of actors within the social network of a remote learning community. We analyze the communication infrastructure of tutors and learners in web based learning to find generalizable learning roles. The data comes from e-learning forums that are actively used by eleven universities located in the state of Saxony, Germany. We use the relational text analysis tool AutoMap to examine the flow of information through the network of learners and educators and to represent these data as semantic networks. The semantic networks are then combined with social network data that denote the collaboration between individuals. By performing structural analysis on these rich relational data we identify roles of actors in the given e-learning environment as well as the relationship between network structure and learning processes. With this research we ultimately aim to contribute to a better understanding of the relationship between theories about socio-technical networks, communications, and learning in humans.