Core Research Area: Improve Practices of Formal Education

New technological developments offer the potential for innovative and progressive approaches to teaching that have the power to improve practices in formal education. Future TEL research in this field should enable educators to make the best use of this potential by identifying effective and efficient teaching and learning practices and by developing tools for putting them into practice. Relevant technological developments in this area include computer simulations that enable new forms of inquiry learning, and adaptive learning environments that tailor their support to the individual student's needs. However, new technologies do not automatically yield better knowledge acquisition.

Thus, future TEL research has to explore the potentials and limitations of these technologies and develop guidelines for their implementation. How can new technologies support effective pedagogical methods? How can they help teachers to address school problems such as drop out rates? To ensure effective implementation, research in this area furthermore has to address aspects of teacher education. What forms of professional development best support teachers to use technology enhanced learning? And how can teachers understand the potential of digital technologies for teaching and learning of particular subject disciplines (e.g. history, mathematics)?