

## **Abstract**

This dissertation considers digital games and simulations as complex systems of information representation and explores their specific aspects influencing the process of knowledge acquisition. It focuses on process of mental model creation, information behavior and situational emotional and cognitive engagement. The methodological approach is grounded in variety of disciplines including information science, educational science, new media studies and computer science. The main method used is educational experiment. The use of digital game-based and non-digital game-based educational intervention is compared to similar program based on traditional schooling methods and classic lectures. The experiment outcomes are divided into four large segments exploring influence of digital games on process of mental models creation, motivation for future information behavior, situational emotional experience and social interaction.