# Serious Games

**Overview**

- Description: “Serious Games” are a special type of games which beside mere entertainment are designed to share and teach specific knowledge or train specific skills; an early example are flight simulators. Sometimes the main purpose of such games is also to foster a discussion on a complex subject to gain new insights. Typical application areas for training games are e. g. security, military, economic and science education or for health related topics.[1]
- State of research: Currently, digital games dominate the field in contrast to table top approaches. Beside flight simulations and military motivated games, health related gaming is of huge interest especially for preventive patient training. Games including augmented or virtual reality (VR) are of increasing interest in the area of emergency drills.
- Capabilities: Serious games are an addition to conventional training methods. Due to their highly engaging nature participant motivation is typically boosted. The incorporation of VR elements could enhance perceptual and physiological responses.
- Limits: Heterogeneous study designs and small sample sizes so far make it difficult to estimate the success of such training methods. Knowledge gain - apart from achieving predefined training and education goals - is typically limited.

**Further Information**

- Key player: Companies e.g. IBM[2] or Serious Games Solutions [3]; Universities e.g. Coventry University[4]
- Readiness: The technology is quite advanced and is commonly used. Nevertheless the technology is in constant further development.
- Users: Serious games are used for education purposes in public institutions such as schools and universities, health related institutions, emergency services and the military. Additionally, serious games are used in public relations and marketing strategies.
- Future outlook and foresight: Although the effectiveness of serious games is not jet proven, in future the advancements in augmented and virtual reality as well as artificial intelligence could enhance the overall experience of serious games. Hence an improvement in training outcomes and further usage of such games in the area of safety and security can be anticipated.
- Related Technologies: Artificial Intelligence, Virtual Reality, Augmented Reality
- Links: [1] http://journal.seriousgamessociety.org/index.php?journal=IJSG&page=article&op=view&path[]=11&path[]=pdf_64; [2] http://www-935.ibm.com/services/us/gbs/gaming/; [3] http://www.serious-games-solutions.de/en/; [4] http://www.seriousgamesinstitute.co.uk/;