

Technological Developments of Augmented Reality and their Use to Support Learning Location Cooperation in Work-Integrated Studies

Kevin Adamy (M.Sc.), DHBW Heidenheim

Project Description

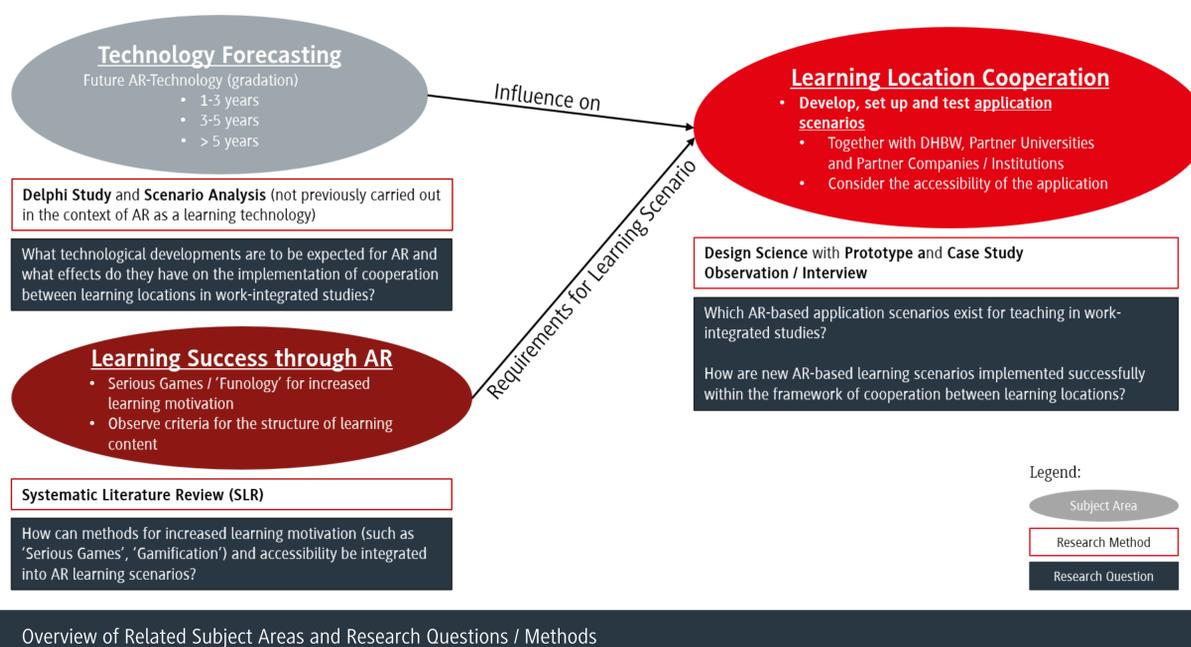
This research project is related to the 'Education Competence Network (EdCoN)' project and aims to integrate Augmented Reality (AR) as a learning technology in work-integrated studies. For this purpose, application scenarios in various courses are collected, implemented and evaluated, taking into account the technological development of AR. In particular, the implementation of the AR-based learning scenarios should take place between the DHBW locations, the partner colleges / universities and partner companies in order to strengthen the learning location cooperation.



Application Scenarios of Augmented Reality in Education

Objectives

- » Identification of technological developments and application scenarios of Augmented Reality as a learning technology
- » Implementation of AR-based learning content in cooperation with DHBW locations, partner universities and partner companies
- » Evaluation of the learning success in AR-based learning scenarios compared to the course without the use of Augmented Reality
- » Support project results of EdCoN with well-founded scientific evidence



Expected Results

- » This research will collect the technological developments of Augmented Reality and put them in the context of technology-supported learning in work-integrated studies.
- » AR-based learning content is created in cooperation with DHBW partners and used in DHBW courses.
- » The results from the creation of AR learning scenarios as its use in work-integrated studies will generate empirical evidence for AR in teaching and its learning success.

Outlook

As a learning technology, AR has great potential for promoting cooperation between learning locations and strengthening distance-based learning, which is becoming increasingly important. We are therefore very interested in working on the implementation with our partner companies, partner universities and DHBW locations.

Cooperation Partners



References

- » Akçayır, M. & Akçayır, G. (2017). Advantages and challenges associated with augmented reality for education: A systematic review of the literature. *Educational Research Review*, 20(3), 1–11.
- » Altinpulluk, H., Kesim, M. & Kurubacak, G. (2020). The usability of augmented reality in open and distance learning systems: A qualitative Delphi study. *Open Praxis*, 12(2), 283.
- » Evangelista, A., Ardito, L., Boccaccio, A., Fiorentino, M., Messeni Petruzzelli, A. & Uva, A. E. (2020). Unveiling the technological trends of augmented reality: A patent analysis. *Computers in Industry*, 118, 103221.
- » Langfeldt, B. (2018). Lernortkooperation im dualen Studium – zu viel oder zu wenig Einfluss der Hochschulen auf die betrieblichen Praxisphasen?
- » Petrolito, A. (2021). Effects of Augmented Reality technology in a mobile touring system on university students learning performance and interest. *Australasian Journal of Educational Technology*, 37(1), 27–42.

Contact

Duale Hochschule Baden-Württemberg Heidenheim

Prof. Dr. Sabine Möbs
sabine.moeb@dhbw-heidenheim.de
Kevin Adamy, M.Sc.
kevin.adamy@dhbw-heidenheim.de