

Research Assistant / Thesis-Project

Concepts of Gamification to Educate on Technical Principles

In the context of a mobile app for digital academic credentials in cooperation with **TU-Munich**

Background

Today, electronic games are more than just a pastime - they are platforms on which we experience virtual situations, try out strategies and develop or simulate new ideas. Game-based learning will grow rapidly in the near future. In this context, teaching approaches from games are particularly successful when aimed at strengthening self-directed, personalized learning. Gamification has already permeated many (teaching) fields. In some cases, entire courses and fields of study rely on gamification to support learners.

As part of the BMBF-funded research project “Digitale Bildungsnachweise für Hochschulen” (DiBiHo), TUM, HPI and DAAD are researching in the field of digital credentials. Similar to OpenBadges, digital proofs of education (digital credentials) are a topic of increasing importance. Not only for student mobility, but also for subsequent processes at the processing level, for example, when verifying and displaying curricula. Based on the whitepaper "Building the digital credential infrastructure for the future" (2020) of the Digital Credentials Consortium (DCC), a proof of concept (PoC) for various use cases at German universities is being created in the project.

A central component of the ecosystem for digital education credentials and other credentials is the so-called wallet, in which the user stores his credentials - analogous to a wallet. As part of the work, your task is to combine approaches of gamification with Digital Education Credentials and to incorporate them into the Wallet. You will explore what different approaches there can be for Gamification and bring your creativity to implement them in our context. A work product may be a POC on how gamification can be incorporated into a mobile application to understand the underlying technologies. Your insights could further be brought to the wallet of the DCC and possibly provide a framework or blueprint for many other apps and applications which are not understood by users

Problem

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Goal

As part of the work you will explore:

- Definition and domain overview of gamification and state of the art for the implementation of gamification methods in mobile applications (apps).
- Requirements analysis for user interface for gamification when using an app.
- Creation of a concept for teaching technical understanding integrated into the user interface of an app.
- Evaluation of suitable learning content and teaching methods for users.
- Evaluate the prototype against your requirements solicitation

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