

Digitalisation of Apprenticeship Training

Problem Statement

Use Case: A network of Styrian companies in metal and electrical engineering need an online learning platform for their apprentices.

Research opportunities:

- Apprentices as target group are under-researched, therefore highly interesting:
 - Research on working population in the age group 15 – 19 is scarce
 - Workplace learning meets educational setting
- Contributing to ongoing research on reflection guidance technologies

Research Questions

- RQ 1:** How do apprentices use computers?
- RQ 2:** How self-efficacious are apprentices with regard to ICT?
- RQ 3:** How does naming or not naming themselves learners contribute to the apprentices' construction of identity?
- RQ 4:** What characterises apprentices as a community of practice?
- RQ 5:** How can reflective learning be effectively promoted via an online learning platform?

Method RQ 1 & RQ 2

Mixed-method approach

Quantitative method:

- Questionnaire
- Participants: 72 apprentices

Qualitative method:

- Semi-structured in-depth interviews
- Participants: six apprentices

Evaluation:

- Analysis of questionnaires with IBM SPSS
- Descriptive statistics
- Corelative analysis with Mann-Whitney Hugh and Kruskar Wallis tests

Results RQ 1 & RQ 2

- Primary ICT tool is the smartphone (100%)
- Apprentices use ICT every day
 - average: 2-3 hours
 - 76 % until they fall asleep (weekdays)
- Most important activity: communication
- High level of ICT self-efficacy
- Positive attitude towards computers
- Problem-solving strategies
- No significant gender differences

Design implications for computer-mediated learning interventions:

- Communicative aspect to capture interest
- Mobile technologies recommended

What's coming next:

Method RQ 3 & RQ 4

Method:

- Semi-structured in-depth interviews

Approach:

- Critical Discourse Analysis

Participants:

- Eight apprentices
- Three supervisors
- Three trainers

Method RQ 5

Research through design

- Design of *Rebo* – the chatbot that guides reflection

Evaluation phase

- Analysis of reflective dialogues from learning platform with WordSmith Tools
- Feedback on learning experience and reflection