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Rebo at Work



Reflecting on Working, Learning, and Learning Goals with the Reflection Guidance Chatbot for Apprentices

MOTIVATION

- Reflection is a core process of self-regulated learning.
- Guiding apprentices to reflect on their work practice improves their learning and trains reflection as an important skill for future lifelong learning.
- Reflection fosters organizational learning and establishes expansive learning environments for employees.

RESEARCH QUESTIONS

- RQ1: How do apprentices interact with Rebo at Work? picking a fitting work task; identification of task as learning opportunity & verbalization of the reflection process; picking a learning objective they think relates to it
- RQ2: How do apprentices reflect with Rebo at Work? Qualitative evaluation of reflection dialogues

EVALUATION - FIELD STUDY

Part of a 9-month-field study in an ongoing research project with 6 companies and 72 apprentices.

Research setting and study participants

- 6 months
- 51 apprentices
- 2 companies
- 90 interactions with Rebo at Work

Analysis

- Coding of chatbot interactions
- Kuckartz's content structuring qualitative content analysis

interviews

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RESULTS

Interaction with Rebo at Work

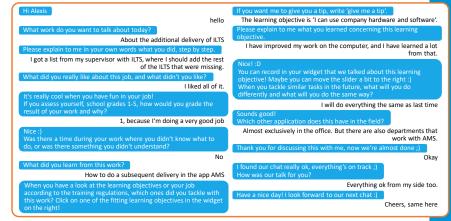
- 1. Apprentices pick a work task they attribute importance to
- 2. Rebo guides reflection on different aspects:
 - (1) description (of work experience)
 - (2) emotions (experienced while working)
 - (3) judgement (of outcome)
 - (4) learning (framing as learning opportunity)
 - (5) planning (intended future behavior change)
- Rebo helps to associate a learning objective and reflect on it
 Apprentices self-assess their competencies with the learning goals rainbow widget

RQ1 - How do apprentices interact with Rebo at Work?

- 1. Reflection object specified in all interactions
- 2. Identification of work as learning opportunity and verbalization of the reflection process: 98% of interactions
- 3. Picking a learning objective and associating it with the learning experience: 83% of interactions

RQ2 - How do apprentices reflect with Rebo at Work?

Individual and varied reflections: analytic reflection, emotional reflection, self-reflection, various learning insights



Translated (average) example interaction: first interaction of an apprentice with Rebo at Work



¹ activities with trainers only, ² activities with apprentices only, ³ activities with both trainers and apprentice

REFERENCES

¹ I. Wolfbauer, V. Pammer-Schindler, and C. Rose, "Rebo Junior: Analysis of Dialogue Structure Quality for a Reflection Guidance Chatbot", In *Proceedings of the Impact Papers at EC-TEL* (2020)

² I. Wolfbauer, V. Pammer-Schindler, K. Maitz, and C. Rose, "A Script for Conversational Reflection Guidance: A Field Study on Developing Reflection Competence with Apprentices", *IEEE Trans. on Learning Technologies* (2022)