

The multimodal expression of (non-)understanding in dyadic explanations - some lessons learned

Petra Wagner

University of Bielefeld

`petra.wagner@uni-bielefeld.de`

During an explanation between an explainer (a person who explains) and an explainee (a person something is explained to), explainers crucially rely on the explainee's feedback about their current level of understanding as well as their level of cognitive load or attention. Based on the monitoring of a wide range of verbal and non-verbal feedback cues, an explainer can then dynamically adjust the explanation strategy, e.g., by changing the tempo of the ongoing explanation, repeat or skip parts of the explanation, or even shift the focus of the explanation.

In my talk, I will report first insights from the TRR318 „Constructing Explainability“ (<https://trr318.uni-paderborn.de/en/>) subproject A02 on „Monitoring the understanding of explanations“, in which we gather and investigate multimodal signals of (non-)understanding in explanations, see how they evolve in course of ongoing explanations, and how they are interpreted and reacted to. In particular, I will describe the recording and rich multimodal annotation of a corpus of 87 dyadic board game explanations, provide information about our annotation of different levels of (non-)understanding using a recall task, address the floor management dynamics across different phases of the explanations, present some insights on how explainers adapt their multimodal behavior to different explainees, and show how verbal and non-verbal information combine in a model of classifying (non-)understanding. Throughout, I will also address the various challenges we were faced with.