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Explain with, rather than explain to: How explainees shape their learning

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Abstract

Research about explanation processes is gaining relevance because of the increased popularity of artificial systems required to explain their function or outcome. Following an interactive approach, not only explainers but also explainees contribute to successful interactions. However, little is known about how explainees actively guide explanation processes and how their involvement relates to learning. We explored the occurrence and type of explainees' questions in 20 adult–adult explanation dialogues about unknown present and absent objects. Crucially, we related the question types to the explainees' subsequent recall of the unknown object labels. We found that explainees asked different types of questions, especially about the object's label and facts. Questions about the object's function were asked more when objects were present. In addition, requests for labeling were linked to better recall. The results contribute to designing explainable AI that aim to provide relevant explanations and to further experimental approaches to study explanations.