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The 'trust-bot': designing the conversational style of a chatbot in a medical context

Trust is the cornerstone of human interaction. But how to build trust when interacting with technology? The answer to this question is highly relevant in a world in which technology is taking a more prominent role every day and in which, at the same time, many people experience technophobia. Specifically where users of technology can be characterized as vulnerable, such as in the domains of education and health, it is important that users experience trust. The central question of this research paper is: can we design a chatbot-conversation in the context of Ehealth in such a way that patients experience trust when interacting with that chatbot? For this research, which is based on the Design Science Research methodology, we transformed the universal dimensions of social cognition, warmth and competence, into ingredients of a conversational style. By using the World Café Method with a group of 25 researchers and professionals, we created a list of ingredients of a warm and a competent conversational style (study 1). To test these ingredients, a warm and a competent chatbot was programmed by using Dialogflow (study 2) and both were tested with users (n=115). We have managed to design chatbots that were above average recognized by users as being either warm or competent and found that within this medical context a competent conversation style by a chatbot is more helpful in building trust. We conclude with an ethics perspective on designing a 'trust-bot'.