# **Evaluation of feedback generated from** agent-based social skills training systems

A qualitative analysis on the comprehensibility, usability, and improvement points of the generated feedback

# **1. INTRODUCTION**

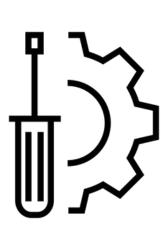
- Chatbots are tools that leverage machine learning to interact with users in a conversational manner [1].
- One special communication case is a child helpline worker.
- Simulation of a child could provide significant improvement in quality of training.

# **6. RESULTS**

# Comprehensibility

FEEDBACK WAS UNDERSTANDABLE TO ALL THE PARTICIPANTS, EVEN WITH MOST OF THEM SKIPPING THE INITIAL INSTRUCTIONS ON HOW TO NAVIGATE IT.

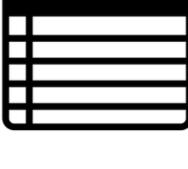
# Usefulness



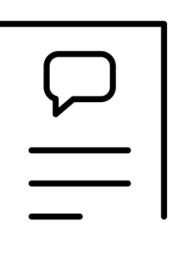
PARTICIPANTS FELT THEY COULD "WORK AROUND" WITH THE MODEL



- [2].



THEY FOUND THE TABLE PARTICULARLY HELPFUL, AS IT GUIDES THEM ON PHASES



THE TRANSCRIPT WAS INFORMATIVE, BUT IT WAS NOT FOUND TO BE CONSTRUCTIVE

# Points of

# Improvement



A MORE REALISTIC **FIVE-PHASE MODEL** 

**2. SUBJECT OF STUDY:** FEEDBACK GENERATED BY SUCH A CHATBOT

• A chatbot who simulates a child being bullied at school

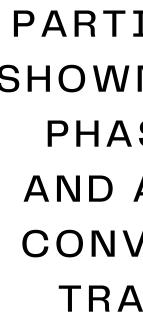
 Bot is based on the Belief-Desire-Intention model [3].

• End goal is gaining a sense of how constructive this feedback is.



- chat based than call based longer [4].
- acquiring counselling skills [5].
- Role playing is effective in • Feedback is vital in this domain [6].





child, due to the chatbot limitations.

[1] Eleni Adamopoulou and Lefteris Moussiades. Chatbots: History, technology, and applications. Machine Learning with Applications, 2:100006, December 2020. [2] Sharon Grundmann and Merijn Bruijnes. "Evaluation of a BDI-based virtual agent for training child helpline counsellors". In: (Aug. 2022). url: https://doi.org/10.17605/0SF.IO/HKXZC [2] Grundmann, S. (2022). A BDI-based Virtual Agent for **Training Child Helpline Counsellors.** [3] T.N. Sindahl and Børns Vilkår. Chat Counselling for Children and Youth: A Handbook. Børns Vilkår, 2011, pp. 55– 77. url: http : / / orgchi –tukhnakal . savviihq . com / wp – content/uploads/2017/05/chat\_counselling\_handbook1.pdf [4] De kindertelefoon | Jaarverslag 2019 , May 2023. [Online; accessed 30. May 2023]. [5] Thomas C Froehle, Sharon E Robinson, and WAYNE J DE KURPIUS. Enhancing the effects of modeling through roleplay practice. Counselor Education and Supervision, 22(3):197–206, 1983. [6] Henry W Maier. Role playing: Structures and educational objectives. The International Child and Youth Care Network 36, 2002.

The table was perceived as being a workaround for the virtual Improved comprehension from the bot and a more realistic Five-Phase Model would resemble a real-life scenario, although this is dependent on the implementation of the virtual agent. **Regarding extra guidance and suggestions, this was due to the** lack of proper training from the participants. Potential future work would include this feedback evaluation

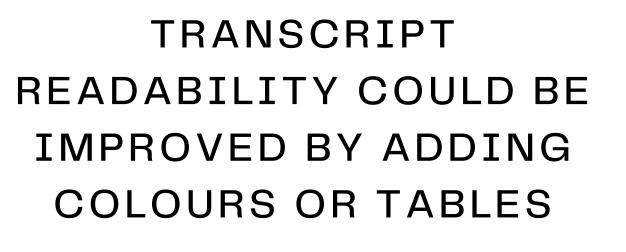
in case of a more advanced virtual child model.



MORE GUIDANCE IS

NEEDED WITH THE

FEEDBACK REPORT





HAVING A GUIDE ON HOW TO PHRASE THEIR PROMPTS

• De Kindertelefoon receives more conversations, with chats lasting 5x

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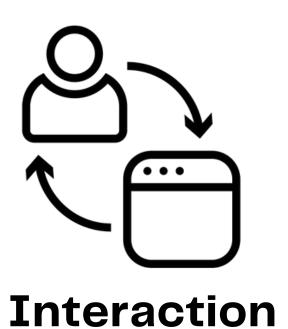
# 4. RESEARCH QUESTIONS

- the feedback?
- feedback even more useful?

# 5. METHODOLOGY

Training

PARTICIPANT IS SHOWN THE FIVE-PHASE MODEL AND A EXAMPLE CONVERSATION TRANSCRIPT



PARTICIPANT INTERACTS WITH THE СНАТВОТ



Formative Assessment

TO WHAT EXTENT FEEDBACK IS UNDERSTANDBALE, THE PARTICIPANT WILL "THINK ALOUD"

# 7. CONCLUSIONS

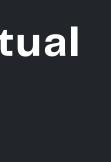
# **TUDelft**

1. To what extent is the feedback understandable? 2. How do participants feel better prepared from reading

3. What other features or aspects would make this



FOR USABILITY AND POINTS OF IMPROVEMENT



REFERENCES