Improving Conversations: Lessons Learnt from Manual Analysis of Chatbot Dialogues

Telmi – Telenor Norway’s chatbot for customer support

Telmi introduced in January 2019, as a parallel option to chat with human agents.

Telmi has handled about 175,000 conversations with customers in the first half of 2019.

The Telmi users:

- Smart phones: 60%
- Computers: 35%
- Tablets: 5%
Telmi – Telenor Norway’s chatbot for customer support
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How may we help you?

Welcome to chat

“The longest waiting time is 3 minutes”
“How can a service provider better understand and improve the conversational capabilities of a chatbot for customer service by analysis of chatbot dialogues?”
Sampling and analysis process

- For each workshop around 50 dialogues were randomly chosen from all chatbot dialogues following the previous workshop.
- Analysis by three analysts with different roles in the company
Categorization of chatbot dialogues is a hard task

- A set of common conventions for categorization was developed
- Still, there were surprisingly many cases of doubt
- Always another way of expressing a meaning
Characteristics of Successful Dialogues

Customer characteristics for successful conversations:
• One concrete need
• Formulated this need at the right level of abstraction.

Chatbot characteristics for successful conversations:
• Vocabulary reflected the actual customer vocabulary
• Interpreted customer input forgivingly
• Provided a good customer journey
Characteristics of Unsuccessful Dialogues

Can’t you do anything right?
Characteristics of Unsuccessful Dialogues

User behaviour causing problems:
• Expressing dislike of the correct answer and attempted to negotiate (e.g. price)
• Fail to read instructions provided by the chatbot
• Fail to understand interaction mechanisms (e.g. Press “Return” after each line. Do not use the links or buttons).
• Have too high expectations to the chatbot (e.g. asking too complex questions or phrased the questions in ways difficult for any machine to interpret).
• Don’t know how to express their problem
• Don’t know the correct word of the product or service (Ex: “I want more 4G”)
• Miss-spelling and language problems
• Has an exploratory approach (e.g. starts with a statement instead of a question. Ex.: “I have bought a new TV”)
• Do not stick to one topic
Characteristics of Unsuccessful Dialogues

Chatbot issues causing problems:
• Failing to identify existing intents (false negatives)
• Identifying wrong intents (false positives)
• Missing needed intents
• Missing needed content
• Lacking needed functionality or integration with backbone IT-systems.

Service provider issues causing problems:
• Complex services or products
• Use of ordinary dictionary words as product names
Lessons learned

Customers are not looking for answers, but for solutions.

**Ideally:** “I have a problem – someone fix it for me”

**Real world:** “I have a problem...

• I have to find out what the problem actually is.
• I have to contact the service provider who owns the product or service (not always easy: PC, router, modem, Play Station).
• I have to find the contact information for this service provider.
• I have to formulate the problem with the vocabulary of the service provider.
• I have to understand the answers provided.
I have to fix the problem my-self based on the information given...”
Customers expect that the company know them and provide them with personalized help

When customers ask a chatbot they want *their unique* problem solved, not some general information
Lessons learned

Chatbots well suited for Do-It-Yourself

H₀: Customers contacting a chatbot want to fix the problem themselves - if they get proper guiding from the chatbot.
Lessons learned

Trace the customers context.
A question may have different interpretations and solutions depending on the context
Thanks!!

Knut Kvale
Telenor Research

Olay Alexander Sell
Telenor Norway

Chatbot at Telenor.no

Stig Hodnebrog
Telenor Norway

Asbjørn Følstad
SINTEF