Service encounters and user experience (UX) using traditional interfaces and chatbots

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Content

- Introduction: exploratory research-defining the basic terms
- Measurement of DV and IV
- Research question and hypothesis
- Research design
- Sampling strategy
- Data analysis/Statistical test

Introduction: from traditional interfaces to conversational interfaces

Traditional interfaces*- Human2Human service encounters, search engines, mobile apps*

Conversational interfaces- Chatbots *(virtual-assistant that allows consumers to communicate with it*

Introduction: Service encounters and UX

Service encounters-

We focus on **pre-core SE**

and within it on

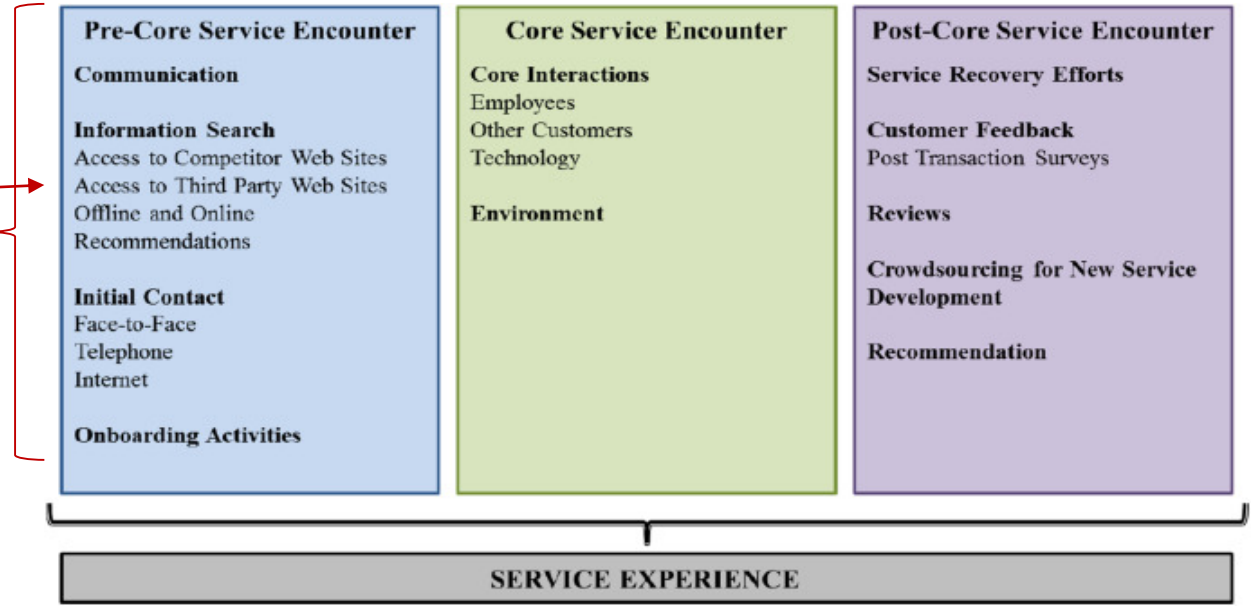
information search

(access to third part web sites)

User Experience (UX)-

the experience that a user has

while interacting with a product



Measurement in the context of an experiment

Dependent variable (DV): UX concepts defined by 3 dimensions:

Effectiveness (being able to complete the task)

Efficiency (the amount of effort to complete the task)

Satisfaction (the degree to which the user was satisfied or dissatisfied with his or her experience while performing the task)

(Source: Measuring the user experience: Collecting, analysing and presenting Usability Metrics; Tullis Albert)

Independent variable (IV): Type of interface:

Google Search Engine

Chatbots: Siri (Apple) or Google Assistant (Android)

Contolled variables: language used (English), tasks to be performed, operating system

Research question and hypotheses

Do the chatbot users (EG) have higher UX during the first stage of the service encounters than when using the traditional interfaces (CG) ?

Hypothesis 1. Chatbots UX shows higher scores on effectiveness

Hypothesis 2. Chatbots UX shows higher efficiency

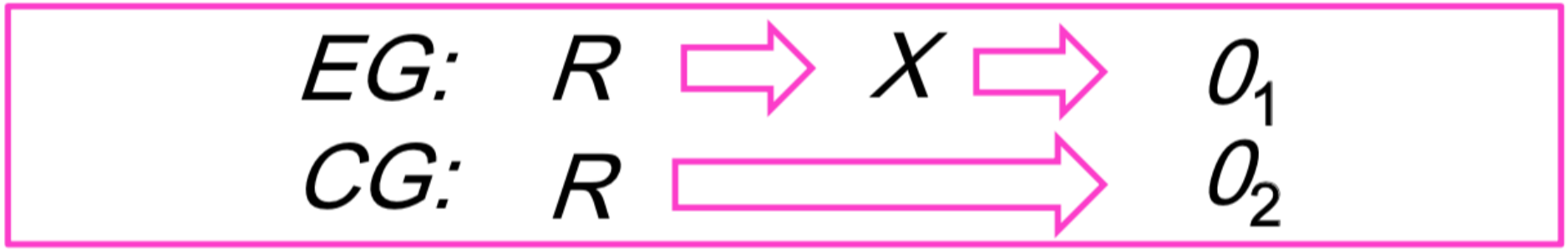
Hypothesis 3. Chatbots UX shows higher satisfaction rate

Research Design

1. Exploratory:

to find out term definitions and how to measure the concepts

2. Experimental design: **Posttest-Only Control Group**



Source: Prof. Dr. Christian Hildebrand – Web-Based Data Collection course slides

- EG: CHATBOT stimulus
- CG: GOOGLE SEARCH ENGINE stimulus

Research Design

EXPERIMENTAL GROUP (CHATBOT SURVEY)	**CONTROL GROUP (GOOGLE SEARCH ENGINE)**
First step: iOS users/Android users: ask following questions to Siri/Google Assistant:	First step: Type the following questions on Google search engine:
• Which restaurant is closest to the Geneva airport? • Where can I eat japanese food in Geneva? • Where can I find a Mc Donald's in Geneva? • What is the cheapest restaurant in Geneva? • Is the Kraken bar open on Thursday evening?	

Last step: After getting the answers to their search, both groups are getting asked the same questions to assess UX.

SAMPLING STRATEGY

Main study

Convenience sampling : list of GSEM (Geneva School of Economics and Management) students with their email addresses

We randomly select participants from the list

Random assignment to EG and CG

Pilot study

Students pre-tested our experiment

minor changes to instructions on how to approach the tasks were made

DATA ANALYSIS / STATISTICAL TEST

Data Analysis
-software: Unipark
-data cleaning: all questions are mandatory so we do not expect item non-response; unit non-response may happen as a result of break-off
-data manipulation: for each dimension of UX concept, one value will be presented

Statistical Test
-software: JMP SAS
-MANOVA
-means of each UX concept dimension will be separately analysed

Limitations

- Sampling bias: low generalizability to population outside the sampling frame
- Small number of participants
- Only two types of interfaces were manipulated
- Online experiment: no direct observation by researcher but paradata can be tracked in Unipark
- No incentives were provided