Effects of motivating question types with graphical support in multi channel design studies

General Online Research 2016 - Dresden, 4th March 2016
Track A9: Paradata and New Developments

Holger Lütters – Hochschule für Technik und Wirtschaft Berlin
Malte Friedrich-Freksa - GapFish GmbH
Sandra Vitt - Mediengruppe RTL Deutschland
Mobile Devices in Questionnaire Research
“unintentional” mobile participation in online surveys changes the market research technology landscape

- The use of mobile devices for surveys is constantly growing
- Research concepts initially designed for desktop usage are answered more and more on smartphones and tablets
- Interview duration on mobile devices around 20% longer compared to desktop interviews with negative impact on willingness to participate and cost
- Technology problems overlay the research questions of effects of different responsive questionnaire designs
- Advances in methodology development specialized on mobile devices
The central question: How to ask questions if people want to take a survey on their preferred channel/device?

Research approach:

• Effects of the use of different invitation channels on interview results
• Testing new types of questions, which target the mobile usage with priority (“mobile first”), but still work on the classic devices
• Background measurements of non-responsive data patterns during participation

Goal:

• Unprejudiced analysis of established and new concepts of questionnaire interaction in terms of validity of the data collection
Empirical study comparing “Classic” and “Next Generation” question types

Study set-up and field report
Joint project of different market research players
interviews n=807 participants on different Channels and Devices

Field Report

- 13 Minutes questionnaire
- October 2015 in Germany
- 1400 contacts
- Random distribution between “classic” or “new” question types
- 807 complete Interviews
  - 216 In-App Interviews
- Quota on device used

Teamwork

Concept of the study

Field Work

questionnaire with

a development of
Random distribution of question types on device categories
Quota 50:50 on device split (Desktop/Laptop vs. Tablet/Smartphone)

Source "I love my media App" or "EntscheiderClub"
Results

Improving survey UX with NXT GEN question types
"Classic" vs. "New" Question Types in comparison
NXT GEN questions in responsive design
Example with graphical and technical support to the answer item

Example Classic Question

Example Next Generation

- The most important result after over 20 questions using the two different designs: The new technology does not affect the answers to standard single choice questions
- Time to answer: 17% faster on average
- Simple graphic support is designed to help, but can also increase complexity
Idea: Graphical support as a means of cognitive discharge for “complex” questions is not always working (here: 20% more time for NXT GEN)

**Example Classic**

Welche Technologie nutzen Sie zur Abgabe Ihrer Antworten jetzt gerade? Also: Womit klicken Sie auf die Antworten?

- Maus mit Kabel
- Trackpoint (rotes Gummi z.B. auf IBM/Lenovo-Geräten)
- Grafiktablet
- Magic Trackpad (Apple)
- Funkmaus
- Finger auf Bildschirm
- Stift auf Bildschirm
- Andere Methode
- Laptop eingebautes Touchpad
- Trackball
- Standard Tastatur

**Example Next Generation**

- Maus mit Kabel
- Trackpoint (rotes Gummi z.B. auf IBM/Lenovo-Geräten)
- Grafiktablet
- Magic Trackpad (Apple)
- Funkmaus
- Finger auf Bildschirm
- Stift auf Bildschirm
- Andere Methode
- Laptop eingebautes Touchpad
- Trackball
- Standard Tastatur
Hypothesis:
A deviant representation of a question can have influence on the results

Example Classic Question
Drop-down list

Example Next Generation
Answer on graphical scale

“How long did your answers to this questionnaire take? Please estimate your answer in minutes.”
The different graphical representation of an estimation question has extreme effects on the response patterns. Drop-down does not seem to provide valid results but device patterns.

Actual time as measured: 13 Minutes 47 seconds
Example of an always difficult research question: Ranking and Sorting

Example Classic Ranking Question

Example Next Generation Sorting
2 options of answering

- Time comparable (Classic 2.4% longer)
- Result: 4 of 5 items are sorted "different" when changing the method
- The different question types produce a rank reversal answer pattern
Method using complete pairwise comparisons to create a ranking with the same criteria list

Question: What is personally more important to you when deciding about a survey participation?
5 items (Survey topic, Compensation, Design, Duration, Date of invitation)

Preference measurement in complete pairwise comparisons using the Analytic Hierarchy Process (AHP) method. The review in full paired comparisons requires 10 questions.
All three ranking approaches create different results

Survey Topic
- Classic Rank 1: 37%
- NXT GEN Rank 1: 27%
- AHP: 21%

Compensation for the survey
- Classic Rank 1: 37%
- NXT GEN Rank 1: 31%
- AHP: 34%

Design of the survey
- Classic Rank 1: 9%
- NXT GEN Rank 1: 5%
- AHP: 9%

Duration of the survey
- Classic Rank 1: 16%
- NXT GEN Rank 1: 18%
- AHP: 25%

Date of invitation
- Classic Rank 1: 9%
- NXT GEN Rank 1: 11%
- AHP: 11%
Type-In vs. graphical answers using Van Westendorp’s Price-Sensitivity Meter

Example Classic Question
Type-In

Example Next Generation
Answer on graphical scale
The graphical response generates completely deviant values compared to direct data entry. Result: 44% higher willingness to pay = problem of validity

Type-In Answer Optimal Price Point 2,75€

Graphical Slider Answer Optimal Price Point 4,89€
Next Gen question types took 17% less time to answer. Text type-in answers explain the major differences.
Summary of findings

- Simple questions are not sensitive to design influences
- Overall 17% faster interviews with responsive design
- In-App 25% faster than classic approach
- Drop-out pattern is similar in both approaches (decision to drop-out not necessarily connected to design)
- Graphical approaches interesting, but highly influential
Brand new mobile world in research?
New question types need to be carefully examined before they can be integrated into the research process

- Some of the new question types produce similar responses. Others produce completely different results. Not all good ideas seem to make sense in research.
- Annoying questions cause drop-out and raise the respondent’s burden (text as an example), but the drop-out decision still takes place in the first minute.
- The results represent the fundamental question of the validity of measurements via survey. Have we been asking everything correctly in the (online) past?
- Responsive design as a technical solution is not always adequate for the market research purpose. Simple technical converting of forms to a small screen is not the solution, but may cause deviant data.
- Dual operating concepts are interesting, but could have other effects. Apple 3D Touch will open other options that worth testing in research.
- Graphical question types can stimulate the respondents and keep motivation high, but they can turn out to be manipulative as well.
The search for mobile methods has only just begun

- Responsive adaptations are a must for today’s research.
- Some question types seem to be better suitable for certain devices, but the organisation of device preferences causes additional complexity which does not necessarily pay-off.
- Device agnostic should be the way of thinking about the future of research. We do not believe in devices. Inter Device Reliability is what we are looking for.

- **Mobile surveys are taking place at home.**
  Mobile research still has to become mobile …
Thanks to the supporters of the study

Authors
Holger Lütters – HTW Berlin
Malte Friedrich-Freksa - GapFish GmbH
Sandra Vitt - Mediengruppe RTL Deutschland

Contact

Prof. Dr. Holger Lütters
Hochschule für Technik und Wirtschaft Berlin
Holger.Luetters@htw-berlin.de
www.luetters.com
Twitter @luetters
xing.com/profile/Holger_Luetters
de.linkedin.com/in/luetters/

Thanks to Benjamin Schubert and Ian Thomson for their support during the project

Thanks to

questfox® is a development of pangea labs GmbH
www.pangealabs.com

TinSort Question Example under
https://goo.gl/RbK5Xo
Report under
http://goo.gl/zf8tJp

questionnaire with www.questfox.com
TinSort: Asking Market Research Questions the Tinder Way

New questiontype: TinSort using a “Tinder*” style usability for market research questions.

Friday, 04/Mar/2016: 14:00 - 15:00

*Tinder is a trademark of TINDER, INC.