



Web surveys

Nejc Berzelak and Vasja Vehovar



EMOS Webinar, 7 February 2018

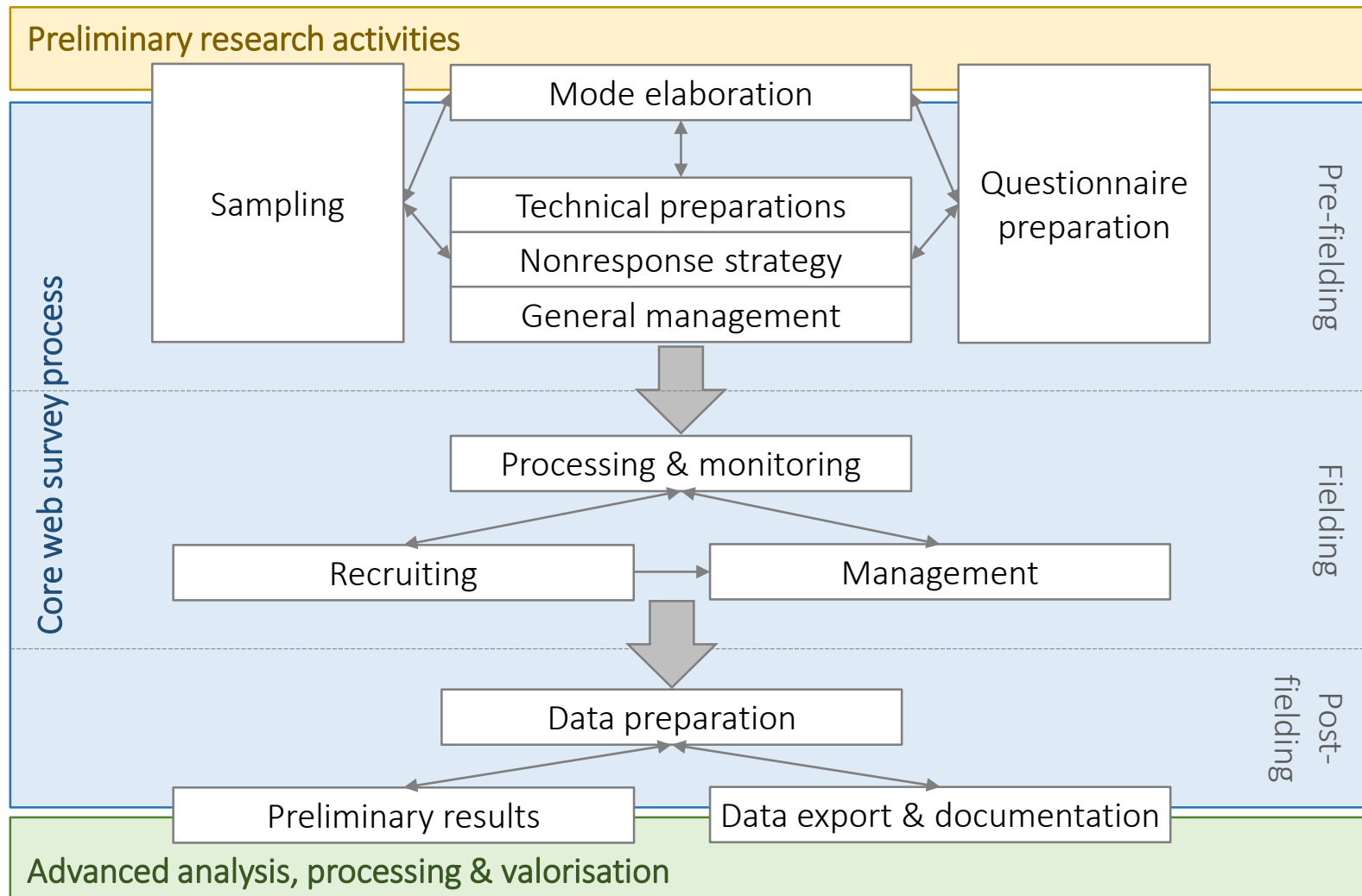
Introduction

Understanding web surveys to assess their feasibility for various research purposes



Introduction

The web survey process



Introduction

Defining characteristics of web surveys

<p>Medium</p> <p>in person</p> <p>phone</p> <p>physical delivery</p> <p>Internet</p>	<p>Interviewer</p> <p>administers</p> <p>just present</p> <p>no interviewer</p>
<p>ICT devices</p> <p>not used</p> <p>used by interviewer</p> <p>used by respondents</p>	<p>Presentation</p> <p>visual</p> <p>auditory</p>



Characteristics, pros and cons

Main advantages and limitations

Self-administration

- + No costs of interviewers
- + No interviewer effects
- + Time and pace of completion left to respondents
- Less possibilities to motivate respondents
- Limited help and explanations for respondents
- Lack of control over the survey situation



Characteristics, pros and cons

Main advantages and limitations

Visual presentation of computerised questionnaires

- + Easier comprehension of longer and complex questions
- + Interaction and dynamics to improve response quality
- + Extended data collection possibilities by including graphics and multimedia
- Basic reading and ICT skills needed by respondents
- Attention to visual design of the questionnaire needed



Characteristics, pros and cons

Main advantages and limitations

Internet as a medium

- + Reduced constraints of time and place of surveying
- + Real-time data transfer and storage
- + Broad range of supported ICT devices to participate
- Access to the Internet needed
- Concerns of respondents regarding legitimacy, privacy and data protection



Deciding for a web survey

Suitability for a research purpose

Some factors for assessment of suitability

- Level of Internet use and specifics of Internet non-users
- Questionnaire length or complexity that may benefit from interviewer assistance and motivation
- Expected lower response rates, especially compared to face-to-face surveys
- Lack of control over who completes the questionnaire
- Privacy concerns by research participants, especially compared to paper questionnaires



Coverage and response

Selected considerations for overcoming the coverage issues and improving response rates



Two types of coverage problems

Two largely separate types of problems related to coverage in web surveys:

1. **Sampling (non-)coverage**

probability and non-probability samples of different performance in target population coverage

2. **Internet (non-)coverage**

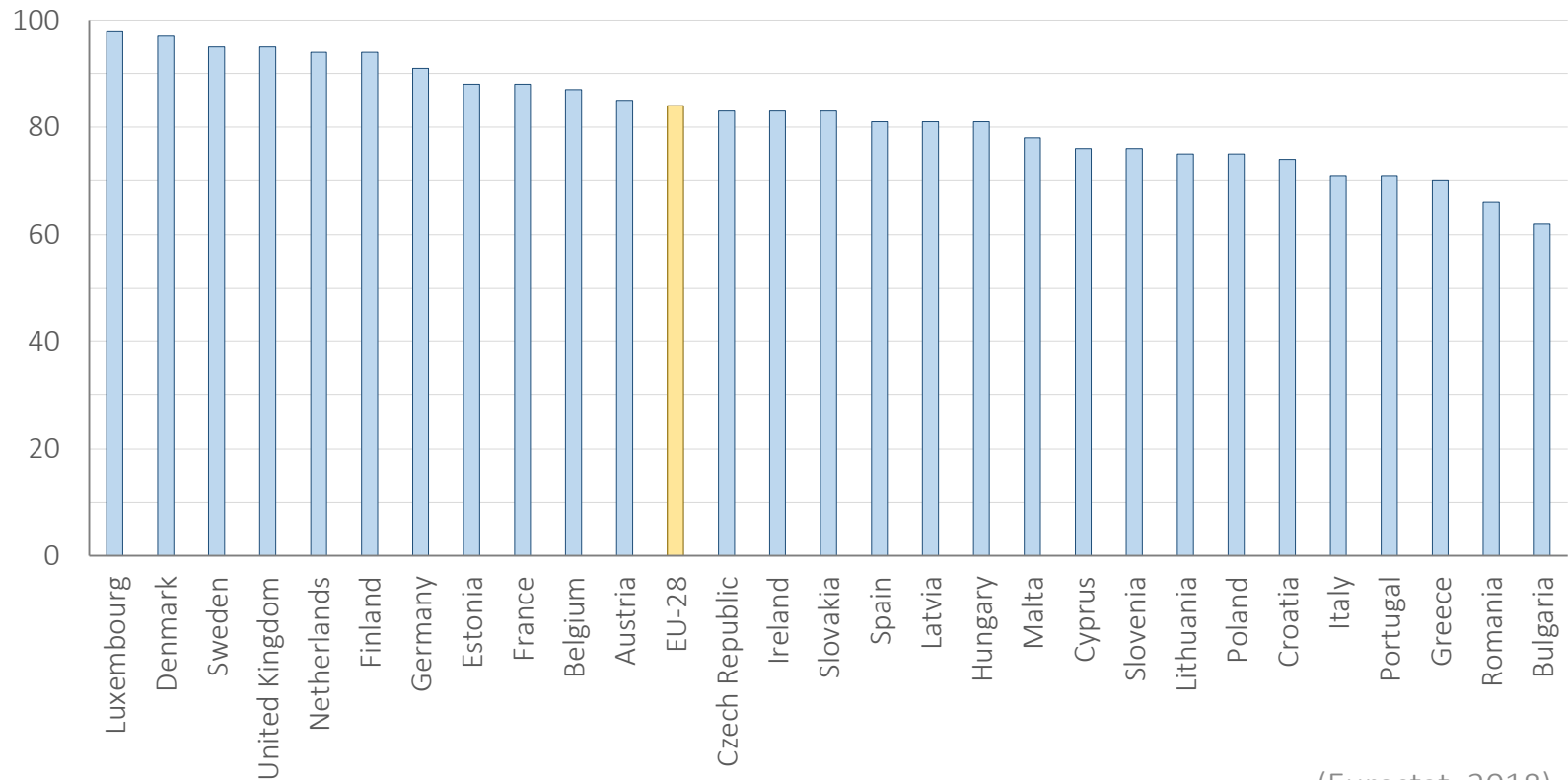
non-response error due to sampled Internet non-users unable to participate in the survey

More specific to web surveys

Samples and Internet non-coverage

Internet non-coverage

Share of Internet users in the EU general population



(Eurostat, 2018)

Proportion of individuals 15–74 years old using the Internet in last 12 months (data for 2016).



Contact strategy

- Multiple contact attempts: pre-notification, main invitation, two reminders (“the tailored design method approach”)

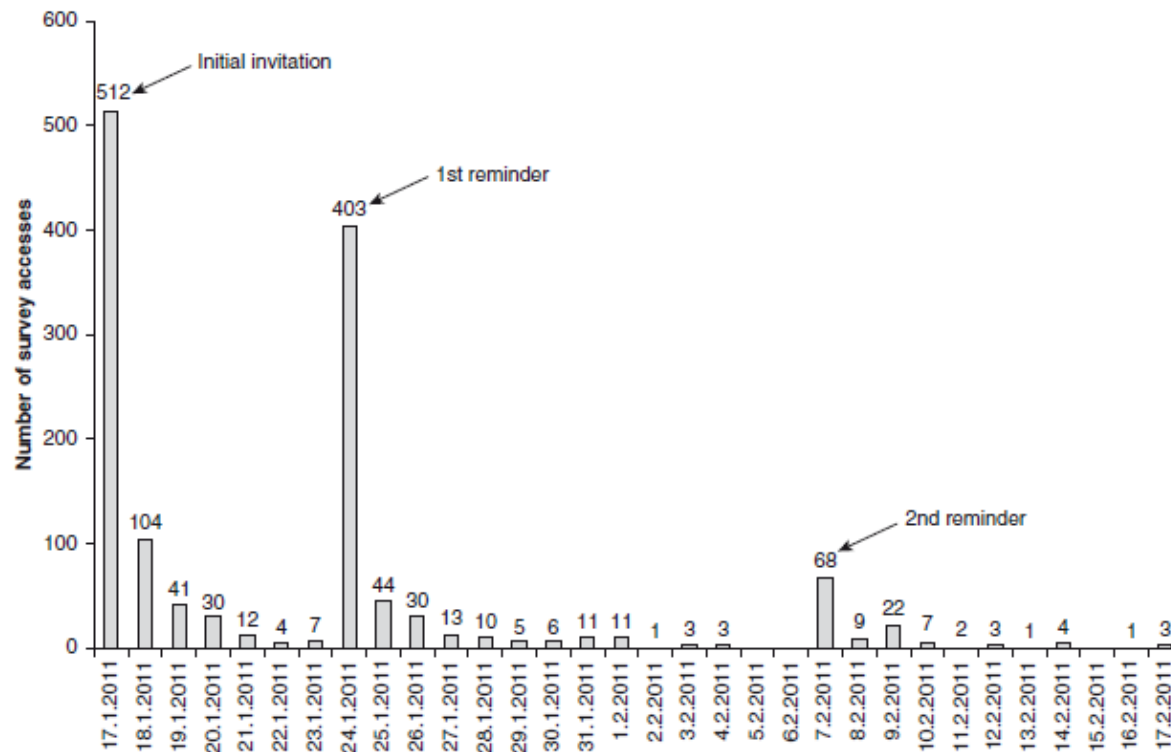
(Dillman et al., 2014)

- Mail instead of or in addition to e-mail invitations
- Professional design of invitation letters
- Clearly communicated aims and benefits of the study
- Assurance of privacy and confidentiality
- Contact information and signature of the responsible person

Improving response rates

Contact strategy

Importance of multiple contacts (example)



(Callegaro et al., 2015)



Improving response rates

Contact strategy

Mail web survey invitation letter (example)



Translated from an original invitation letter in Slovenian language.



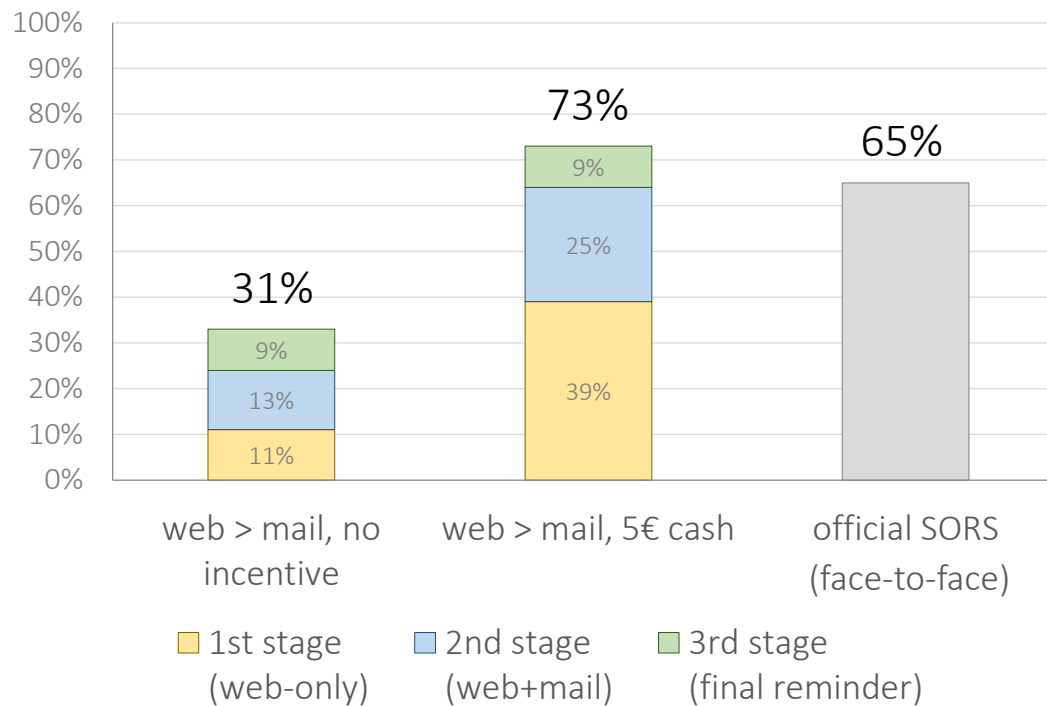
Incentives

- **Prepaid cash** works best, even with small amounts
- Mixed results with **non-monetary** and **promised incentives**, especially with lotteries
- Increase in the amount of incentive does not necessarily increase the response rate
- Effectiveness in general quite variable

Improving response rates

Incentives

Response rate improvement with incentives (example)



(Vehovar et al., 2010)



Improving response rates

Questionnaire length

Increased length → Increased non-response and drop-out

General recommendation (rule-of-thumb):

≤ 5 min

Ideal length

15 min

Maximum length

> 15 min

May work with a
careful design



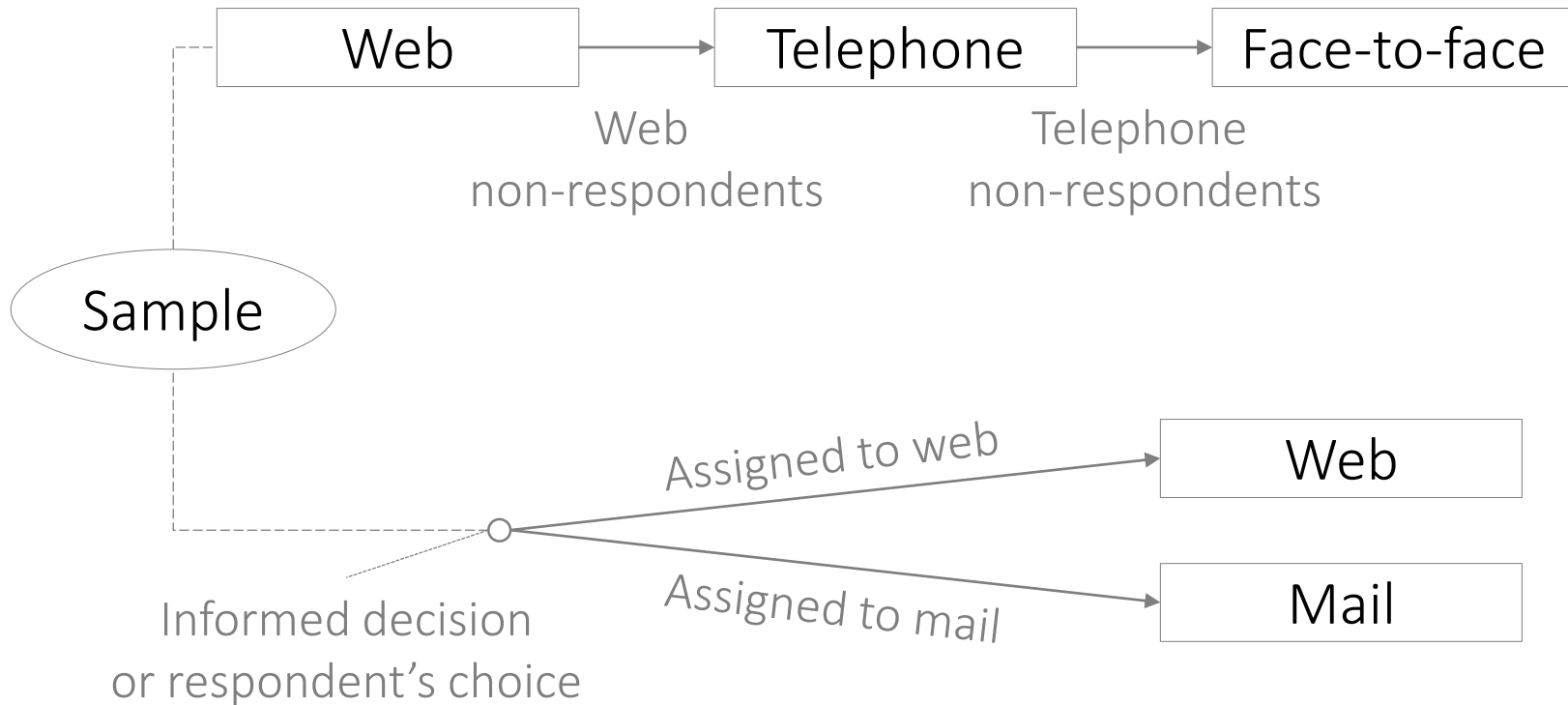
Combining data collection modes

- Using more than one mode to collect the data
- Most often for cost reduction and for overcoming non-response and Internet non-coverage issues
- A number of possible ways to combine modes
- Increasing use trends, promising in many respects

Mixed-mode data collection

Combining data collection modes

Sequential and parallel mixed-mode designs (example)



Troubles with mixed modes

Mode effects

- Sensitive topics especially prone to mode effects
- Lack in understanding of comparability across modes

Response rates

- Commonly lower compared to single-mode face-to-face
- Often reduced when respondents are given a choice

Troubles with mixed modes

Complexity (and costs)

- Tailoring the questionnaires to each mode
- Complex monitoring and administration
- Technical and administrative infrastructure for large projects
- Cost benefits often not that large, especially compared to single-mode telephone and mail surveys

Web questionnaires

Taking advantage and avoiding pitfalls of computerised self-administered questionnaires online

Focusing on the respondent's task

Response process

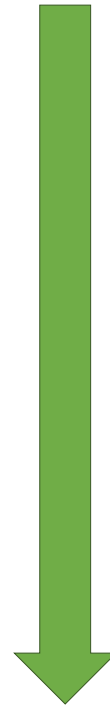
The respondent's task

Tourangeau et al. (2000)

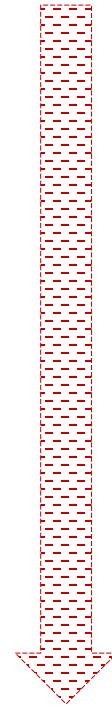
1. Comprehend the question
2. Retrieve the relevant information
3. Judge and integrate the retrieved information
4. Provide the response

The respondent's performance

Krosnick (1991)



Optimising



Satisficing



Focusing on the respondent's task

Focusing on the respondent's task

Probability of satisficing

Krosnick (1991)

$$\frac{\text{task difficulty}}{\text{ability} \times \text{motivation}}$$

Task of researcher: decrease difficulty & increase motivation



Basic principles of questionnaire design

Question types

Selecting a question type that matches the expected response type



What is the main source of income in your household?

- ☒ Wages or salaries
- ☐ Income from self-employment (excluding farming)
- ☐ Income from farming
- ☒ Pensions
- ☒ Unemployment/redundancy benefit
- ☐ Any other social benefits or grants
- ☐ Income from investment, savings, insurance or property
- ☐ Income from other sources



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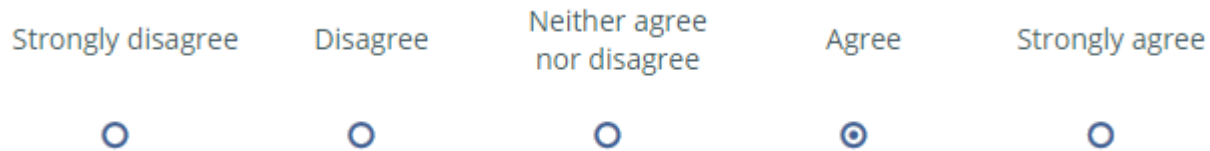


Basic principles of questionnaire design

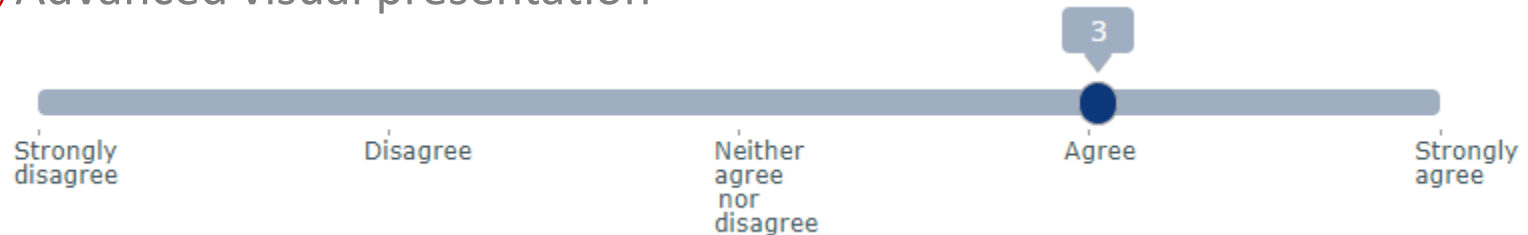
Question types

Standard question types and visual presentations a better choice if there is no need for complex ones

✓ Standard visual presentation



Ⓢ Advanced visual presentation



Basic principles of questionnaire design

Grid questions

Often useful, but should not have too many items and response options

How many years after your PhD did you get...

	0-5 years	6-10 years	11-15 years	16-20 years	21-25 years	more than 25 years	not yet at
the first research assistant?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
the possibility to choose and buy research equipment?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
independently managed national research project?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
laboratory space?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
office for study or computer work?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Too many response option
can reduce clarity and visibility

Long tables are best broken
across several pages

the first research assistant?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
the possibility to choose and buy research equipment?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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independently managed national research project?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



Visual design

Plain and simple design works fine and reduces potential distractions:

- white or lightly shaded background,
- well-contrasting standard fonts,
- logotype for professional look and feel (optional),
- no unnecessary images or other potentially distracting graphical elements,
- single or small number of questions per page.

Basic principles of questionnaire design

Images and multimedia

Sometimes a useful extension, but can affect answers or cause technical problems



Higher rating of own health on
scale 1-5



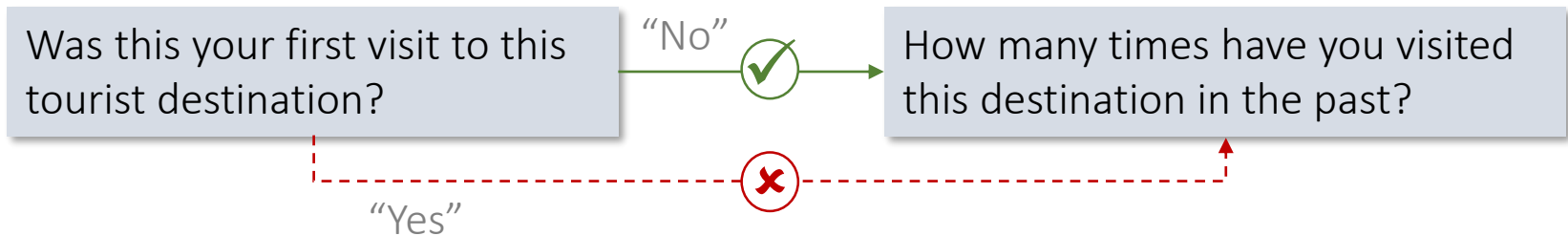
Lower rating of own health on
the same scale

Couper et al. (2007)

Basic principles of questionnaire design

Questionnaire dynamics

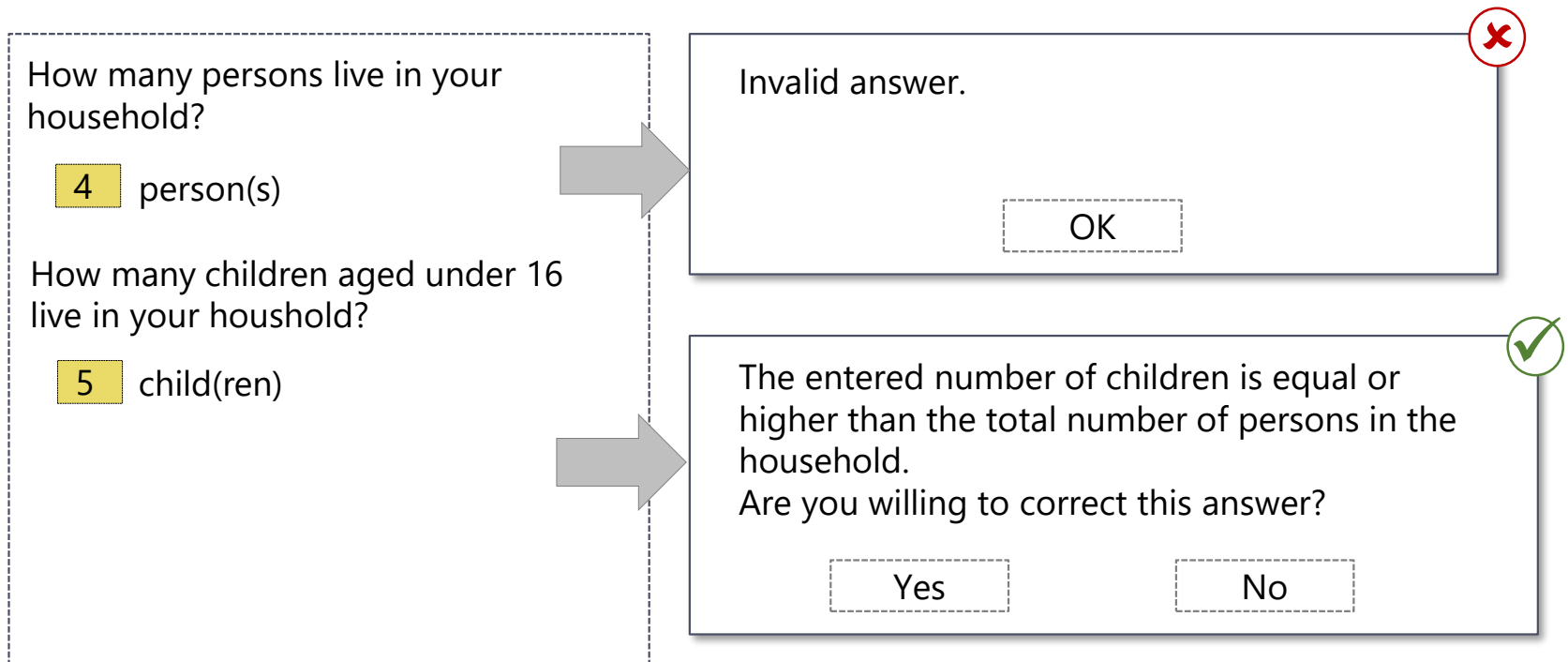
Automatic skips and other dynamic features reduce burden and increase data quality (if correctly done)



Basic principles of questionnaire design

Real-time validation

Checks for unanswered questions or invalid answers can improve quality when not too restrictive, vague and annoying



Emerging advances

Trends advancing the development and extending web survey data collection



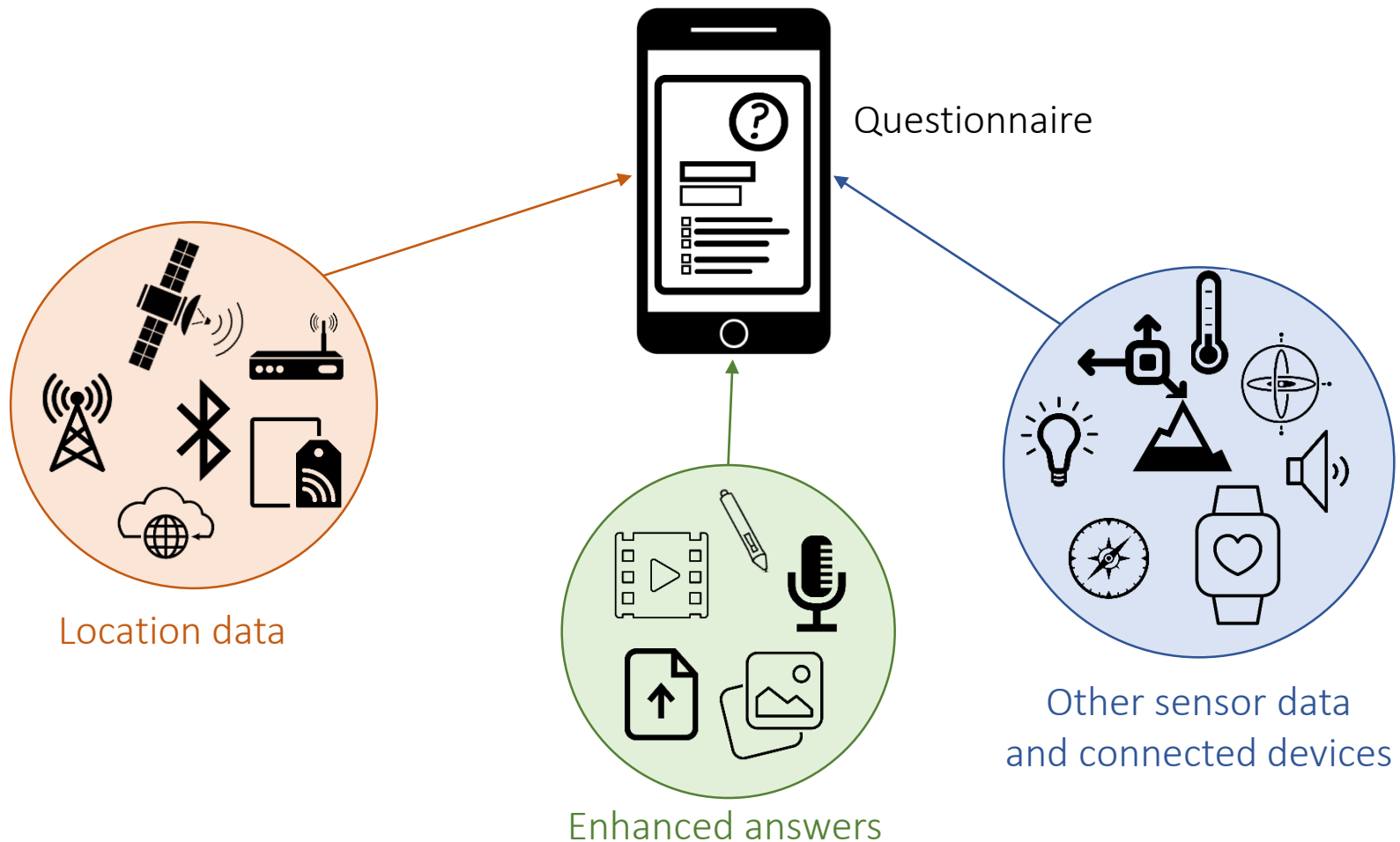
Non-probability online access panels

- Fast growth in recent year, especially in business sector
- Almost always non-probability samples with the quality depending on panel recruitment procedures
- Limited effectiveness of statistical adjustments for non-probability samples
- Non-probability \neq useless

Probability online access panels

- Established using mixed-mode designs or by providing devices and Internet access to non-users
- Examples: LISS panel (NL), Gesis Panel (DE), CRONOS (pilot in EE, SI and UK)
- Better representation of the general population
- (Very) high costs of implementation and maintenance
- Detailed elaboration of feasibility for broader use needed

Smartphones as data collection hubs



Challenges with mobile web surveys

Questionnaire design


- Increasing use of mobile devices to participate in standard web surveys
- Small screens more challenging to display and interact with the questionnaire
- Adaptations needed especially for grid questions, but the optimal approach is still unclear

Challenges with mobile web surveys


Mobile design adaptation (example)

Non-adapted design






























































































































































































0% 100%


Razlike v delov



Koliko let po doktoratu ste dobili...

0-5 let


prvega mladega raziskovalca oz. mlado raziskovalko?	<input type="radio"/>
možnost izbire in nakupa raziskovalne opreme?	<input type="radio"/>
samostojno voden nacionalni raziskovalni projekt?	<input type="radio"/>
prostor za laboratorij?	<input type="radio"/>
pisarno za študij oz. delo z računalnikom?	<input type="radio"/>
zaposlitev za nedoločen čas?	<input type="radio"/>
ustrezno pomoč pri urejanju administrativnih zadev?	<input type="radio"/>

Adapted design




09:26



http://www.1ka.si/a/124...



Razlike v delovnih pogojih v znanosti

Koliko let po doktoratu ste bili prvič izbrani...

za ocenjevalca/ocenjevalko slovenskih znanstvenih projektov?

☐ 0–5 let

☐ 6–10 let

☐ 11–15 let

☐ 16–20 let


☐ 21–25 let

☐ več kot 25 let

☐ se še ni zgodilo

☐ ne velja zame

1 / 6



Prejšnja stran

Naslednja stran

Challenges with mobile web surveys

Engagement

- More breakoffs and unanswered questions
- Potential influence of non-adapted questionnaire design and contextual factors (on-the-go participation)
- Low willingness to consent to sensor and other passive data collection

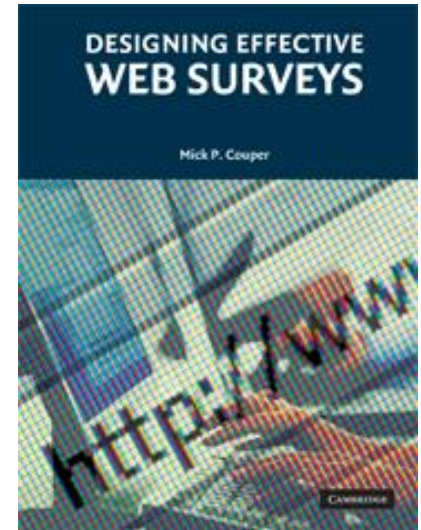
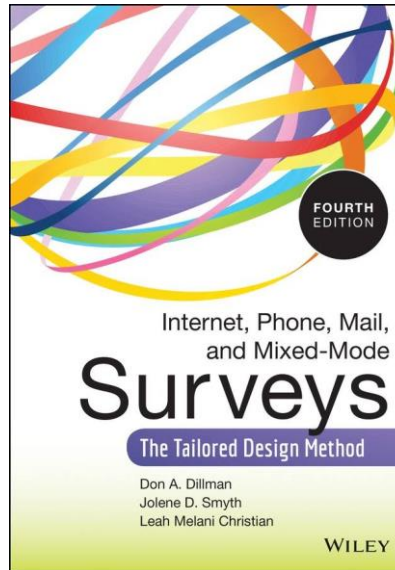
Further reference

Some literature and other sources of information about conducting web surveys



Resources on web surveys

Selected books



Book covers obtained from the publishers websites.



Resources on web surveys

Web Survey Methodology website

The screenshot shows the WebSM website homepage. The header features the WebSM logo and navigation links: HOME, ABOUT, and FAQ. A search bar is located below the navigation links. On the right side of the header, there are links for Login, e-mail, New user, and Google Login. Below the header, there are three main sections: BIBLIOGRAPHY, RESOURCES, and COMMUNITY. The BIBLIOGRAPHY section lists various categories like Basic categories, Data collection, Survey topic, etc. The RESOURCES section lists Codes & standards, Software, WebSM Book, Question types, and Blogs. The COMMUNITY section lists Events, Related websites, and Methodology projects. The main content area is divided into two columns. The left column is titled 'Web survey bibliography' and lists several articles with their titles, authors, and years. The right column is titled 'Internet survey news' and lists recent news items with their dates and titles. Below the bibliography, there is a 'Highlights' section with a list of key resources. At the bottom right, there are links for 'more>>' and 'recent >>'.

WebSM
WebSurveyMethodology

Login
e-mail
New user | Google Login

HOME ABOUT FAQ

search
Advanced search ☐ Scholar only

BIBLIOGRAPHY
Basic categories
Data collection
Survey topic
Related topics
Region/Country
Year of publication
Bibliographic type

RESOURCES
Codes & standards
Software
WebSM Book
Question types
Blogs

COMMUNITY
Events
Related websites
Methodology projects

Web survey bibliography

- Displaying Videos in Web Surveys: Implications for Complete Viewing and Survey Responses; 2017; Mendelson, J.; Lee Gibson, J.; Romano Bergstrom, J. C.
- Using experts' consensus (the Delphi method) to evaluate weighting techniques in web surveys not...; 2017; Toepoel, V.; Emerson, H.
- Mind the Mode: Differences in Paper vs. Web-Based Survey Modes Among Women With Cancer; 2017; Hagan, T. L.; Belcher, S. M.; Donovan, H. S.
- Answering Without Reading: IMCs and Strong Satisficing in Online Surveys; 2017; Anduiza, E.; Galais, C.
- Ideal and maximum length for a web survey; 2017; Revilla, M.; Ochoa, C.

more>> recent >>

Highlights

- Callegaro, Lozar Manfreda, Vehovar (2015): Web Survey Methodology. London: Sage
- COST action WEBDATANET
- Web Surveys for the General Population: a NCRM network
- Top blogs in WebSM database
- AAPOR Warren J. Mitofski Innovators Award 2009 for WebSM site
- Free Web tools for researchers and students
- Courses on web survey methodology
- Comparisons of nonprobability online panels (access panels)
- Probability based panels

Internet survey news

Oct 09 2017 Call for Papers GOR 18, 28 February - 2 March 2018 in Berlin, Germany

Mar 20 2017 GESIS Summer School in Survey Methodology

Mar 20 2017 SRC Summer Institute in Survey Research Techniques

Mar 18 2017 Barcelona Summer School in Survey Methodology 2017

Nov 23 2016 ESRA 2017 Sessions on web surveys

archive>>

Events

Feb 15 2018 2018 ASA Conference on Statistical Practice

Feb 28 2018 General Online Research conference (GOR 18)

May 13 2018 Asia Pacific 2014

May 16 2018 AAPOR 73rd Annual Conference

May 16 2018 2018 Symposium on Data Science and Statistics (SDSS)

more>> past
events>>

www.websm.org





Thank you!

nejc.berzelak@fdv.uni-lj.si
vasja.vehovar@fdv.uni-lj.si