Istat | Istituto Nazionale di Statistica

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UNECE

Expert Meeting on Statistical Data Collection

THE ONLINE COGNITIVE INTERVIEW WITH ENTERPRISES AND INSTITUTIONS

GABRIELLA FAZZI AND SERENA LIANI

Istat | Data Collection Central Directorate

Cognitive interview

Cognitive interviewing entails administering draft survey questions while collecting additional verbal information about survey responses, which is used to evaluate the quality of the response or to help determine whether the question is generating the information that its author intends
(Beatty and Willis 2007)

It is typically conducted **in-person,** as a part of the questionnaire evaluation process for **household or individual surveys**

Online cognitive interview of business or establishment surveys introduces challenges but may also be promising

Online cognitive interview

Web probing: open or closed probes are embedded into a self-administered web questionnaire. After answering a survey question, respondents receive one or more probes and have to write their responses. Some tools could record the verbal response to online probes as well as the think aloud protocols. It is an **asynchronous mode** to test survey questions.

✔ Recruitment of large sample sizes

✔ Access to geographically diverse respondents

✔ Elimination of any interviewer effect

❌ Only online population can be reached

❌ The absence of the interviewer

No one can ask for information or clarification of incomplete answers, nor provide clarification of tasks. Probing is limited to the questions already planned and implemented in the web survey. Moreover, during the web survey no one can motivate respondents to answer probing questions carefully and elaborately

(Lenzner and Neuert, 2017, p.2)

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Online cognitive interview

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> *Technological advances have allowed researchers to conduct remote or virtual cognitive interviews using videoconferencing software. Virtual methods also allow for a more **geographically disperse sample** since participants do not have to be in the same physical location as the cognitive interviewer. In addition, remote cognitive interviewing allows participants to complete the study in a **more natural setting** (compared with traditional lab-based cognitive testing) and frequently relies on participants using their own devices*
>
> (Geisen and Murphy 2020)
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> "

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Testing for businesses and establishments surveys

Establishment and establishment surveys have specific characteristics that considerably influence the response process (Bavdaž et al. 2019).
Sudman *et al*. (2000) propose a **response process model for establishment surveys** that adds four steps to the classic Tourangeau model (1984).

1 Encoding of information in company records

2 Selection and identification of the respondent or respondents

3 Assessment of priorities

Comprehension of the data request
Retrieval of relevant information from memory and/or existing company records
Judgement of the adequacy of the response
Communication of the response

4 Release of the data

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Testing for businesses and establishments surveys

Respondents answer not about themselves, but on behalf of the organization
Are policies on surveys in place within the organization?
Is the response task an organization priority?

Respondent selection is under the control of the organization
Does the respondent have knowledge of the data?
Does the respondent have the authority to release the data?

Multiple respondents may be needed
Does the questionnaire work for all respondents?

Retrieval of the requested data from organizational records
Does the data already exist in organization records?
Are the existing data available to the respondent?
Does the existing data meet the survey request?

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Online cognitive interview on enterprises and institutions at Istat

	Survey	Goal	Target	Instrument
A	Census of Public Institutions	Testing a new section	Institution, experts 3 cognitive interviews	Google Meet, Word questionnaire, interviewer screen sharing
B	ICT Usage in Enterprises	Testing a new unit of analysis	Enterprises ICT and accounting experts 5 cognitive interviews	Whereby, Ppt questionnaire, interviewer screen sharing
C	Maritime Transport	Testing a new questionnaire structure	Maritime agents 5 cognitive interviews	Whereby, Web questionnaire, interviewee screen sharing

GOALS

Testing a new questionnaire section

Is questions wording awkward?

Are questions understood as intended?

Is it easy for respondents to answer questions?

TECHNIQUES

Think-aloud

Concurrent probes

Retrospective probes

Some thematic insights

Clarify the meaning of some questions

"Smart working initiatives" is not clear

Specify the reference period

"Covid-19 emergency period" is too vague

Simplify the response task and rule out redundant questions

It is not easy to provide the maximum number of employees in smart working during the lockdown
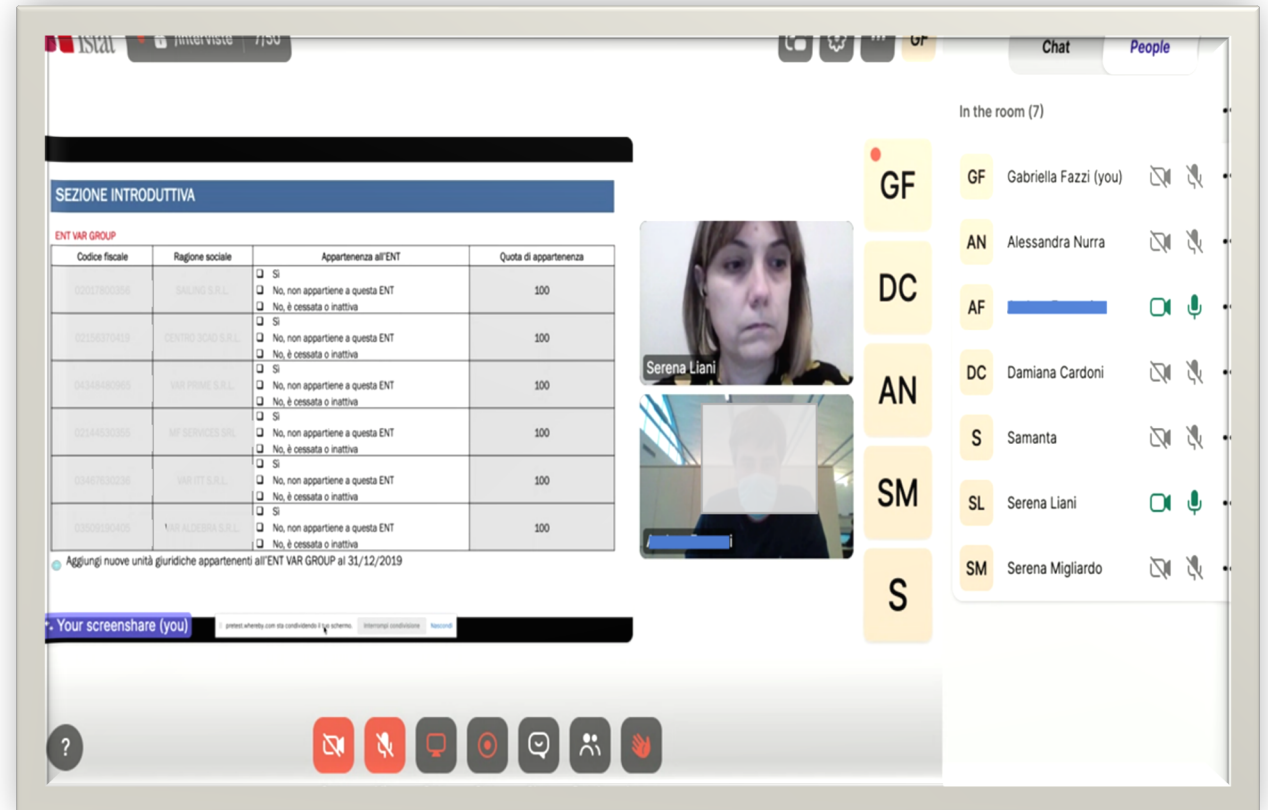
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GOALS

Testing a new statistical unit

Can respondents provide the data required for all legal units of the enterprises?
Are the data required available to all respondents?

TECHNIQUES

Think-aloud
Concurrent probes
Retrospective probes

Some thematic insights

Clarify the meaning of some questions

The definition of Enterprise is not always clear and appropriate to the different situations of the groups interviewed

Change the criteria for defining the most knowledgeable respondent

Some respondent did not know the data for all enterprises

Reduce the response burden

It is not easy to provide the sum of the employees of all legal units of the Enterprise

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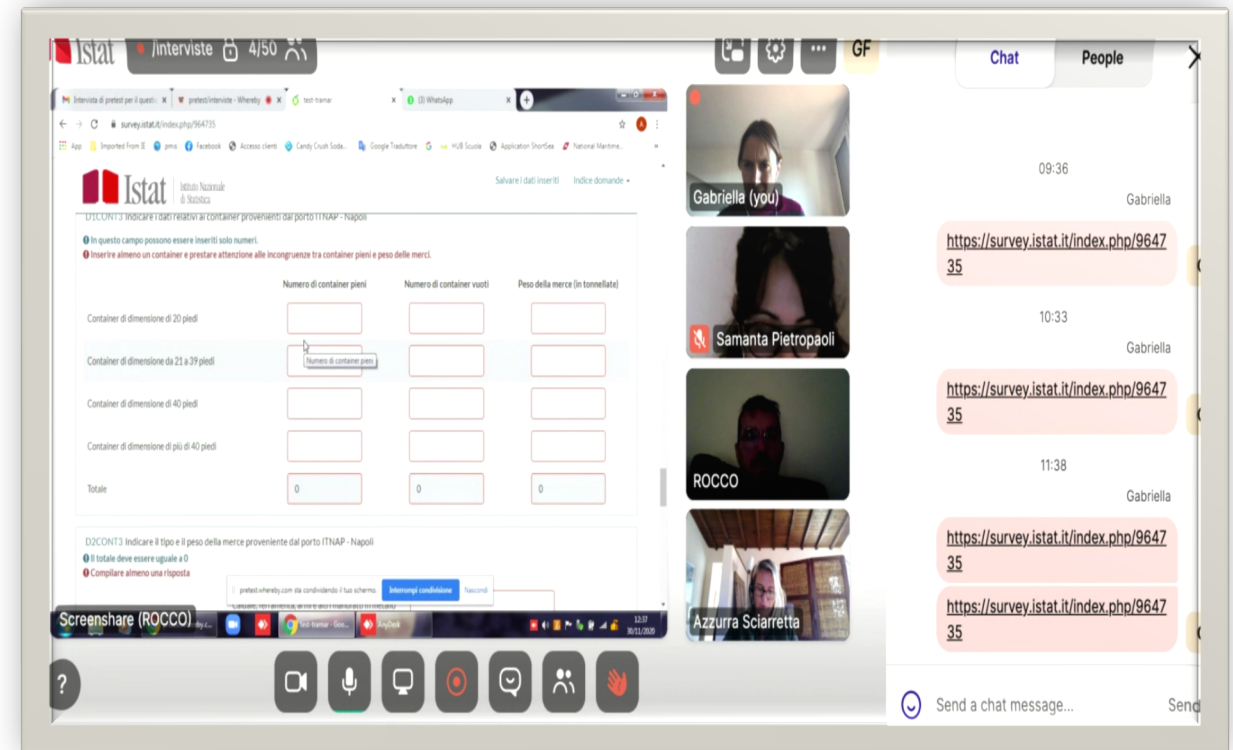
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GOALS

Testing a new questionnaire structure

Does the new questionnaire structure reduce the response burden?
Is the new questionnaire structure usable for the respondents?

TECHNIQUES

Think-aloud
Concurrent probes

Some thematic insights

Clarify the meaning of some questions	port of origin vs port of provenance
Change the question wording	"there are " vs "have been loaded/unloaded"
Change the response format or the layout	Multiresponse vs. yes/no questions

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Lessons learned

Cost and time efficiency
We were able to recruit very busy and difficult to engage respondents
We could interview several enterprises, in different locations, in one day

A neutral yet personal location
More confidence about the privacy and confidentiality of their answers. All the documentation is at hand
Respondents can choose the video-conferencing platform they prefer

Do not involve too many respondents or too many researchers
Best solution: an interviewer with the support of a thematic expert as observer
Building a personal rapport: pro and cons

Screen sharing and usability testing
Better solution: the interviewers share their own screen
How well do they cognitively process information presented visually? How well do they navigate the instrument?

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References

Bavdaz, M., Giesen, D., Moore, D. L., Smith, P. A., & Jones, J. (2019). **Qualitative Testing for Official Establishment Survey Questionnaires**. Survey Research Methods, 13(3), 267-288.

Beatty, P.C. & Willis, G.B. (2007). **Research Synthesis: The Practice of Cognitive Interviewing**, Public Opinion Quarterly, Volume 71, Issue 2, 287–311.

Geisen, E. & Murphy, J. (2020). **A Compendium of Web and Mobile Survey Pretesting Methods**. In Advances in Questionnaire Design, Development, Evaluation and Testing (eds P. Beatty, D. Collins, L. Kaye, J.L. Padilla, G. Willis and A. Wilmot).

Meitinger K. & Behr D. (2016). **Comparing Cognitive Interviewing and Online Probing: Do They Find Similar Results?** Field Methods, 28(4), 363-380.

Mirick, R.G. & Wladkowski, S.P. (2019). **Skype in Qualitative Interviews: Participant and Researcher Perspectives**. The Qualitative Report, 24(12), 3061-3072.

Sudman, S., Willimack, D.K., Nichols, E. & Mesenbourg, T.L. (2000). **Exploratory Research at the U.S. Census Bureau on the Survey Response Process in Large Companies**. Proceedings of the Second International Conference on Establishment Surveys, American Statistical Association, 327–337.

Tourangeau, R. (1984). **Cognitive Sciences and Survey Methods**. In Cognitive Aspects of Survey Methodology: Building a Bridge Between Disciplines (eds. T. Jabine et al).

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thank you

SERENA LIANI| serena.liani@istat.it

GABRIELLA FAZZI| gabriella.fazzi@istat.it

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di Statistica