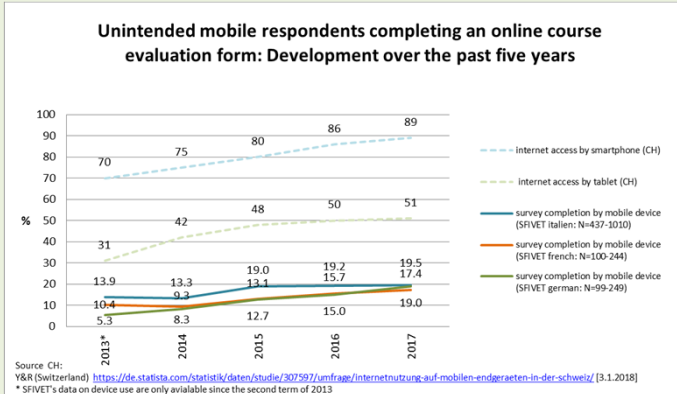


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Starting point



In 2017 almost 90% of the respondents of a representative Swiss survey on the use of media were accessing the internet via smartphone and more than 50% were using a tablet to access the internet.

Over the past five years a steadily growing number of SFIVET's continuing training participants was using a mobile device to complete the organisation's online course evaluation form.

In 2017 nearly a fifth of SFIVET's continuing training participants in all parts of Switzerland (Italian, French, and German) were completing the online course evaluation form using a mobile device.

What we already know...



Selection
 Respondents using their mobile device for completing a web survey spontaneously tend to be younger and female (Couper, Antoun & Mavletova, 2017).

Design
 Scrolling does account for a significant increase in time needed to complete the questionnaire on a mobile device (Couper & Peterson, 2017).

Some of the main mobile friendly questionnaire design strategies identified are minimising scrolling by paging instead (Couper et al., 2017), displaying grid questions in an accordion question format (ibid), and limiting maximal scale length of answering options to 7 (de Bruijn, 2015).

Mobile friendly questionnaire design results in lower completion time, lower drop-out rates and higher satisfaction with survey experience (Lorch & Mitchell, 2014).

Data quality
 Given the smaller screen size, the touch-based interface, its portability and its easy accessibility and readiness for use, it is surprising that, except for longer completion times (Couper & Peterson, 2017) and higher drop-out rates (Sommer et al., 2015), no or small mixed mobile mode effects on data quality indices are found (Antoun et al., 2017; Toepoel & Lugtig, 2015).

Surprisingly, except for completion time and drop-out rate, no or small mixed mobile mode effects on data quality indices are found. One possible explanation identified is the interference between mode-inherent effects with characteristics of the completion situation.

Our study

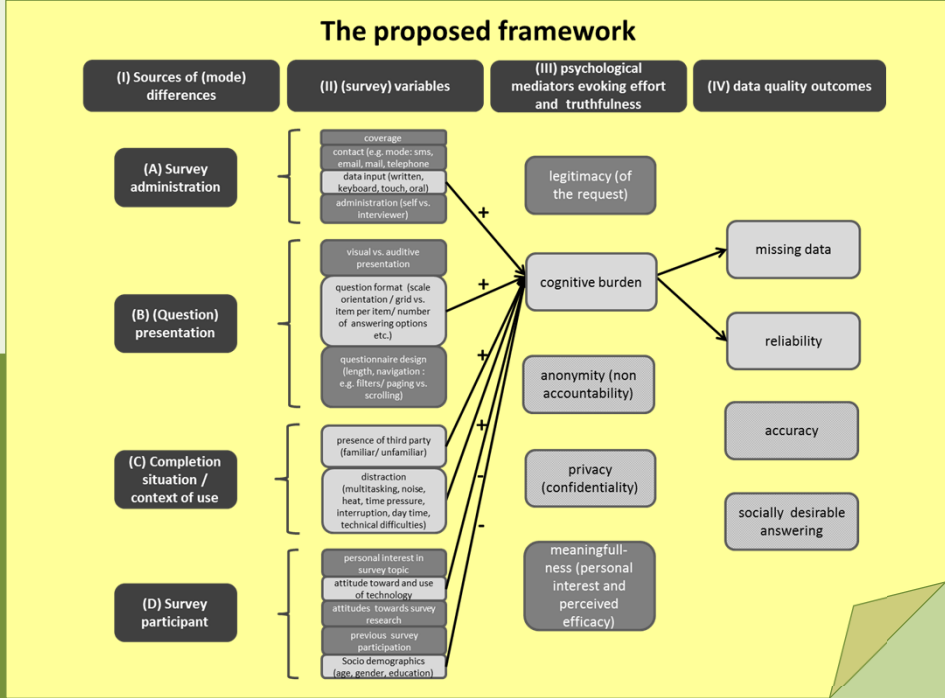
Around 1000 persons, mostly teachers of VET-schools and trainers in host companies around their forties, enroll per semester for SFIVET's continuing training courses.

As a routine process of the institutions' quality development and management, three days after the course has finished a personally addressed invitation email with a link to an online course evaluation questionnaire is sent to all course participants.

With Qualtrics, the institutions online survey software provider, a mobile optimized questionnaire layout was developed.

In order to assess the context of survey completion, an extra questionnaire is enclosed in the mobile optimized, routinely used online course evaluation questionnaire, assessing the key variables identified in the proposed framework (see yellow diagram in the center of the poster): e.g. distraction, multitasking, presence of others, attitude toward course evaluation, prior completion of course evaluation forms, attitude toward new technologies, frequency and duration of access to the internet via a mobile device etc. Additionally, metadata like device type, completion time per page, total completion time and number of clicks per page is gathered.

With the data currently gathered, we will test within a structural equation modeling approach, which of the factors postulated in the proposed model add to cognitive load and how cognitive load is related to several data quality indices.



Theoretical approaches addressing survey (mode) effects
 Total Survey Error Theory TSE is statistically controlling for and estimating errors, which occur in the survey data gathering and analysing process in order to find the true parameter value (Biemer et al., 2017).

Cognitive model of response to survey questions
 By taking into account the cognitive aspects of survey methodology three main psychological dimensions are postulated on which modes may differ in evoking motivation and truthfulness in the respondent and therefore are affecting the data obtained: i.e. impersonality, legitimacy and cognitive burden (Tourangeau et al. (2007) adapted by Lynn & Kaminska (2012) and De Bruijne (2015)).

Reframing the survey taking process as a social situation
 Factors of the situation, characteristics of the person as well as attributes of the survey design influence the survey participation behavior. Several psychological theories can explain some of the effects (Keusch, 2015).

A lot of research on factors influencing survey participation and completion behaviour has already been done and a lot of theories which can explain some of the findings do exist. But, despite this extensive body of knowledge, the integration into a comprehensive theoretical framework is still in a state of draft and the empirical testing of such a framework is practically nonexistent. In order to discuss mode effects more systematically and to disentangle the actual mode effects from situational and selection effects and from there to draw conclusions on how to interpret and prevent resulting data quality differences, such a framework is needed and put to empirical testing. Based on Tourangeau et al.'s Cognitive model of response to survey questions (2007) and its adaptations (De Bruijne, 2015; Lynn & Kaminska, 2012) and taking into account further factors of the situation, characteristics of the person as well as attributes of the survey design which are known to influence the survey completion behaviour (Biemer et al, 2017; Keusch et al., 2015), a framework toward understanding mobile survey mode effects is proposed (see yellow diagram in the center of the poster).

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