

Conducting thinking-aloud tests and focus groups with the young elderly

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This short paper reports on initial requirements for adapting thinking-aloud tests and focus groups to the young elderly, and alternative methods have initially been evaluated. Although thinking-aloud tests are a valuable and widely used method, little research has been carried out with the elderly so far. The need of adaptation stems from the fact that elderly people make the most of using computers in groups due to their negative attitudes towards ICT and learning style. Some of the difficulties stated in literature on running focus groups with the elderly seem to overcome by contextual focus groups. Both real working settings and the presence of computers help the elderly bring back their memories, express their views without relying on computer jargon and concentrate on the discussion.

Thinking-aloud tests; contextual focus groups; young elderly people; group interaction; adult children.

1. INTRODUCTION

Whereas some efforts have been undertaken in order to improve hardware and software accessibility for the elderly, little research has been carried out on usability and design methods so far. Nevertheless, these methods play a central role in both classical [8] and novel user-centred design approaches, such as Inclusive Design (Designing for Dynamic Diversity [5], User Sensitivity inclusive Design [7]) or Universal Design.

Nowadays, questionnaires, structured interviews and focus groups appear to be the only methods used in ICT developments with the elderly. Despite the small number of studies carried out, literature shows that these methods have to be adapted in order to meet the special needs of the elderly. The requirement of adaptation seems to stem from age-related reductions in functional abilities, such as memory, attention and communicative abilities; a lack of experience with ICT, and sociological aspects of the aging process, such as isolation.

This short paper aims to report on initial requirements for adapting thinking-aloud tests and focus groups to the young elderly¹. Even though thinking-aloud tests are a widely used method [9], little research has been done with the elderly so far. With respect to focus groups, some of the difficulties stated in literature seem to be overcome by contextual focus groups. As detailed later on, contextual focus groups are carried out with computers in real working settings.

We build on research carried out at an old-age pensioner association in Molins de Rei², where we designed and evaluated a simple multimodal website for elderly Spanish adults. In addition, we draw on ongoing ethnographical research (6 months) at La Escola de Persones Adultes La Verneda Sant Martí (La Verneda)³, where we are currently researching on usability and design methods with the young elderly.

2. CONDUCTING THINKING-ALoud TESTS WITH THE YOUNG ELDERLY

Thinking-aloud tests conforming to the traditional Ericsson and Simon (E&S) model [4] need to be adapted when carried out with the young elderly. Within the context of designing a website for elderly Spanish adults, we carried out a number of thinking-aloud tests conforming to the E&S model. Seven young elderly adults with little experience with ICT took part in the evaluations. All the users had great difficulties thinking-aloud individually while they were carrying out the test tasks. They were uptight, made many mistakes and most of them were not able to finish the tasks. Nevertheless, under group thinking-aloud conditions, all the users felt much more comfortable and the evaluation sessions went smoothly. In group or collaborative thinking-aloud tests, one user is interacting with the system while two or more are guiding him or her by thinking-aloud⁴.

The Boren and Ramey (B&R) model also seems to improve the E&S protocol. As pointed out in [2], there is ample anecdotal evidence that thinking-aloud procedures widely vary among practitioners. The most cited reference supporting the theoretical framework of the thinking-aloud protocol is the E&S work. Nevertheless, the main defining principles of the E&S model are not fully articulated in the published literature. The B&R model aims to solve this situation by defining the application as the topic of the communication and the participant or user as the work domain expert and the main speaker. The model also defines the experimenter or usability practitioner as the

¹ Young elderly people = adults ranging in age from 65 to 74 with or without experience with ICT and with minor age-related changes in functional abilities.

² It is a little town near Barcelona (Spain). The prototype is available at: <http://www.tecn.upf.edu/~ssayag/casal/index.html>

³ La Verneda is an adult school in Barcelona. Further information about the school at: <http://www.elaverneda.org>

⁴ It is worth noting that this method slightly differs from participative thinking-aloud tests, the co-discovery learning or the coaching method.

learner and the primary listener. Furthermore, it allows interaction between experimenters and participants by means of acknowledgement tokens (e.g.; 'mm-hmm').

Two young elderly adults at La Verneda with little experience with computers were asked to think-aloud according to the E&S and the B&R model while they were conducting a typical task, i.e. downloading a picture from a website. The mere fact of talking to us in a more natural way than "keep talking" made both users feel more comfortable under the B&R condition than in the E&S model. In addition to this, the users were not worried about the possibility of making a mistake or breaking the computer.

3. RUNNING CONTEXTUAL FOCUS GROUPS WITH YOUNG ELDERLY ADULTS

Currently, age-related changes in hearing, memory, attention and the ability of elderly people to follow discussions are factors with an impact on the need of adapting focus groups to the elderly ([1], [3], [6]). Contextual focus groups seem to overcome some of these difficulties. By contextual focus groups we refer to focus groups carried out at the room where elderly people use computers and access the Web on a daily basis.

Two contextual focus groups were conducted with both young elderly and middle-aged people (30 – 45) in the computer room at La Verneda. 14 users took part (10 elderly people; 4 middle-aged people) in each focus group. Elderly people tended to play a more active role than middle-aged people. The fact that elderly participants outnumbered middle-aged adults 7 to 1 is likely to account for these differences. The active role led to informal discussions which slightly hindered the group discussion. It is similar to running focus groups with ordinary users. Interestingly, elderly participants did not have difficulties either following the general discussion, despite the noise made by computers, or talking about their difficulties accessing the web by using computer jargon, such as windows or links. Indeed, they capitalised on computers to express their views by pointing to the computer screen. In addition, they did not talk about life experiences (reminiscence), unlike unstructured interviews with the elderly.

4. SUMMARY OF FINDINGS, OUTLOOK AND ACKNOWLEDGEMENTS

This paper has aimed to report on initial requirements for adapting thinking-aloud tests and focus groups to the young elderly, and alternative methods have initially been evaluated. The requirement of adaptation mainly stems from the fact that the elderly make the most of using computers in group. Elderly people fear using computers. Adult children tell their grandparents not to use computers because they will break them. Group interaction helps elderly people overcome their fear by talking to peers. In addition to this, many elderly adults are used to learning by asking rather than reading in collaborative environments. As a result, both group thinking-aloud tests and the Boren & Ramey model seems to improve the E&S protocol. Concerning focus groups, some of the difficulties stated in current literature seem to be overcome by contextual focus groups. Both real working settings and computers help the elderly bring back their memories and express their views without relying on computer jargon.

All these methods raise a number of issues which still need to be solved. We are working on these aspects in our ongoing PhD. Group thinking-aloud tests generate vast amounts of data, which are difficult to analyse since more than one user thinks-aloud (sometimes, at the same time). Furthermore, some verbalizations belong to the category of explanations. However, according to the E&S model, they should be avoided as much as possible. In the B&R model, experimenter's interventions (positive and negative feedback) might cause validity problems. Concerning contextual focus groups, compensatory strategies, such as using computers as memory reminders, might play a role in running effective focus groups with the elderly. We would like to thank La Verneda, the local government of Molins de Rei and Fabien Girardin.

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