Older Adults' Need for Feedback within the Historytelling Platform

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Abstract

This paper briefly describes the Historytelling project, a cooperative interactive website for older adults to share life experiences. It focuses on the evaluation (N=10 people aged 57 to 70 years) of age appropriate feedback within a high-fidelity prototype created in the human centered design process.

1 Introduction

With the well-known demographic changes, the number of older adults steadily increase (Preißing, 2014). This should be considered when designing new information and communication technology (ICT), because it can offer great benefits to older users if done right. Thus, human centered design for aging (HCD+) gains importance in the design of useful and usable products (Jochems & Sengpiel, 2016). One such project addressing older adults strengths (and limitations) is the Historytelling project, which develops a social platform for older adults to share their life experiences (see Figure 1 for an overview of the HCD+ process used). As stated by Volkmann, Sengpiel and Jochems (2016), The following scenario describes a potential future use of the platform:

"Carol Mayer has been retired for five years and lives by herself since her husband has died two years ago. She has experienced a lot in her lifetime and likes telling her grandchildren about it: the time after the war, her youth, holidays with her husband and children. Sadly, there seems never enough time to tell them when they visit. Her friend told her about "Historytelling" and she decided to give it a try. Here she can write down her stories and pinpoint the exact time and place on a map. She really likes the fact that she can also discover other people's stories attached to that place or time and that it is so easy to use – it really seems to be made for her! And if she wants, she can add her old pictures and unlock the stories for her grandchildren only. After her grandchildren liked some of her stories and left enthusiastic comments, she realized that as witness to history as she has experienced it, she can provide an important contribution to her family and to society. This has really boosted her

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participation in the "Historytelling" platform and she now has more meaningful contact to her own biography, to her grandchildren, and even to other people she meets on the website."

This paper describes the development of a suitable feedback component within a high-fidelity prototype for the Historytelling project, focusing on the evaluation with older adults to answer research questions that had emerged from earlier interview and workshop sessions: Which kind of feedback motivates older people to post more stories? How will older users feel appreciated after contributing a personal story (Volkmann et al., 2016)?

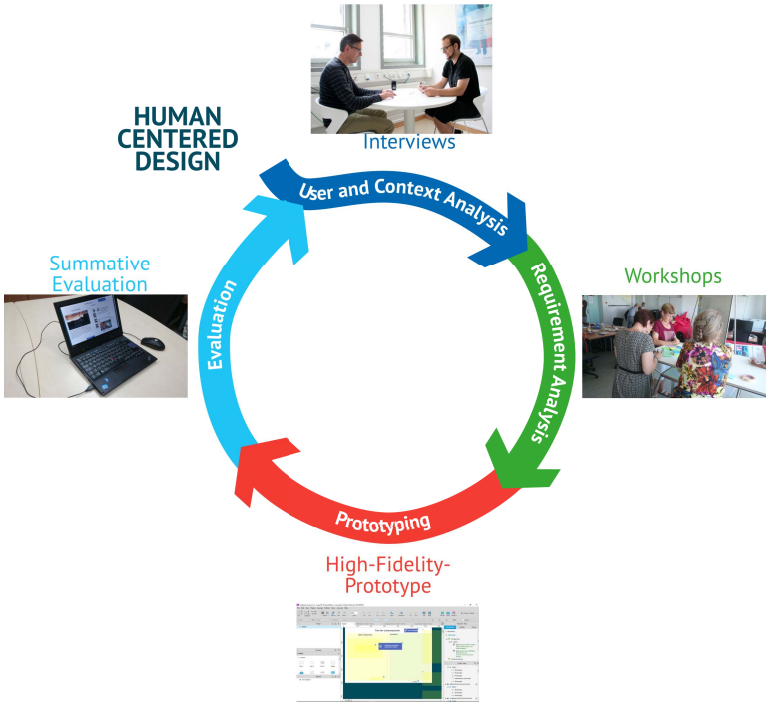

Figure 1: Overview of the Human centered design for aging (HCD+) process in the development of the Historytelling project

2 Evaluation of feedback components

A total of 10 people aged 57 to 70 (M=66.8, SD=4,8) participated in the evaluation. Using two more questionnaires, the System Usability Scale (Brooke, 1996) and one created by the author for that purpose, four feedback components were evaluated in the study: (1) Emoticons (Pick-A Mood, Desmet, Vastenburg, & Romero, 2016), (2) written, (3) auditory, and (4) video feedback. Also, demographic data was gathered and questions regarding potential use and design of the Historytelling project were discussed in a semi structered interview.

Goals – The evaluation comprised four main aspects, while this paper focuses on the analysis and interpretation of the third aspect:

1. Analyzing the social integration and the current situation of story sharing
2. Evaluation of the developed entry form as an early draft for further research
3. Evaluation of various feedback mechanisms
4. Evaluation of the project idea after using a first test system (prototype)

Methods and Materials – The evaluation was structured into three different segments. The procedure can be found in Figure 2.

PROCEDURE
Segment 1 Questionnaires Semi structured interview (part1): • Passing on stories • Social integration
Segment 2 Task completion and think aloud Evaluation of the input mask and feedback
Segment 3 Semi structured interview (part2): Historytelling

Figure 2: Evaluation procedure

Regarding the interview, the sections and examples for main questions (MQ) and advanced questions (AQ) were as follows:
Passing on stories: MQ: Do you tell other people stories of your life? AQ: How do you pass on stories at the moment? Do you additionally record stories? Which feedback is missing when you pass on stories?

Social integration: MQ: How important is it for you to spend time with friends and family? AQ: How do you spend time with friends and family? How satisfied are you with the frequency of contact?

Results – Especially for older adults, ICT development must have a high priority on usability (Ziefle & Bay, 2005). Participants evaluated the projects complexity particularly positively. Often they did not find any negative aspects. The prototype scored 88,5 points on the SUS scale which translates to an excellent score according to Bangor, Kortum and Miller (2009).

(1) Pick-A-Mood images: Participants responded that the cartoon characters can be used for quick and simple feedback, e.g. to show that a story had been read – It offered readers an easy opportunity for brief feedback without losing contact to the writer. At the same time, participants agreed that this form of feedback alone would not suffice. Also, using emoticons would have the advantage of being well-known from chat apps etc.

(2) Written feedback: Written feedback was considered a good, personal way of getting feedback. Additionally, it served as a dialogue opener because the story writer can see the motivations and opinions of readers and can reply to them directly.

(3) Audio feedback: Participants responded that the benefit of audio feedback depended on the context of use. On one hand, audio is often hard to understand and takes more time because skimming is impossible. On the other hand, hearing somebodies voice easily triggers emotions ("The sound of voice goes a long way. In this case I prefer text.").

(4) Video feedback: Participants judged video feedback similar to audio feedback, yet with greater importance of the emotional closeness to the recipient: If the person is emotionally close, video feedback is better. If not, it can result in discomfort ("For me, that seems too close for a stranger ").

3 Conclusion

The goal of the Historytelling project is the human centered design of a cooperative interactive website for older adults to share life experiences. Interview studies with older adults have shown that story feedback is an important motivational aspect for older adults' use of the Historytelling platform and this article describes the age-specific development and evaluation of feedback mechanisms within the platform. Group discussions in the development process have underpinned the importance of feedback and delivered important insights for age appropriate feedback design that will inform the further development of the Historytelling platform.

Four different feedback mechanisms were developed within a HCD+ cycle: emoticons, written, audio and video feedback. A clear preference in feedback could not be identified. In fact, the context of feedback given and stories published plays an important role. Further research must be conducted to pinpoint the exact variables. Nonetheless, first implications emerged during the evaluations, such as: (1) When stories are provided publically, speech and video feedback intrudes too much into the older user's comfort zone and provides too little anonymity. (2) Not the older adults as content creators but the recipients should decide which feedback is appropriate and respond properly. Thus, the participants prefer a variety of feedback mechanisms for the Historytelling project.

References

Brooke, J. (1996). SUS-A quick and dirty usability scale. *Usability Evaluation in Industry*, *189*(194), 4–7.

Desmet, P., Vastenburg, M. H. & Romero, N. (2016). Mood measurement with Pick-A-Mood: review of current methods and design of a pictorial self-report scale. *Journal of Design Research*, *14*(3), 241–279.

Jochems, N. & Sengpiel, M. (2016). Introduction to the special issue on "Design for Aging." *I-Com*, *15*(1), 1–2.

Karrer, K., Glaser, C., Clemens, C. & Bruder, C. (2009). Technikaffinität erfassen – der Fragebogen TA-EG. *Der Mensch Im Mittelpunkt Technischer Systeme*, *8*, 196–201.

Preißing, D. (2014). Erfolgreiches Personalmanagement im demografischen Wandel. De Gruyter.

Volkmann, T., Sengpiel, M., & Jochems, N. (2016). Historytelling: A Website for the Elderly a Human-Centered Design Approach. *Proceedings of the 9th Nordic Conference on Human-Computer Interaction* (p. 100:1–100:6). New York, NY, USA: ACM.

Ziefle, M., & Bay, S. (2005). How older adults meet complexity: Aging effects on the usability of different mobile phones. *Behaviour & Information Technology*, *24*(5), 375–389.