

I Like to Log: A Questionnaire Study towards Accessible Lifelogging for Older Users

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ABSTRACT

Lifelogging is the capture and storage of everyday experiences and the act of reviewing lifelog data can significantly support episodic memory, which is particularly vulnerable to the effects of ageing. To design an accessible lifelogging application for older users we firstly need to explore what lifelogging features the application should include. We carried out a questionnaire study to investigate what lifelogging items people from different age groups are currently collecting. Also of interest to us was what items the participants would like to collect and the differences in lifelogging choices between age groups. The results from this questionnaire will contribute to the design of a lifelogging application which focuses on older users' preferences, motivations and abilities.

Categories and Subject Descriptors

H5.m. Information interfaces and presentation (e.g., HCI):
Miscellaneous.

General Terms

Design, Human Factors.

Keywords

Older adults, lifelogging, questionnaire.

1. INTRODUCTION

Lifelogging systems aim to automatically record and store the events and experiences of a person's life. Lifelogging tools such as the SenseCam, a small wearable camera with integrated environmental sensors that captures thousands of images passively each day, are capable of recording and identifying, not only what the wearer sees but also whether they were with anyone, what the temperature was or whether they had eaten that day [1]. Episodic memory is the ability to recollect specific events and is particularly vulnerable to the effects of ageing [2]. Reviewing lifelog data, such as SenseCam images, has shown to significantly benefit the recall of past events, even for individuals with severe memory impairments [3]. Reflecting and reminiscing on personal lifelogs has also shown to increase an individual's sense of well-being [4, 5]. Although much of this

research has focused on either healthy younger adults or cognitively impaired individuals, there is also a clear benefit for older users who experience episodic memory problems as an effect of normal aging. This research aims to design a lifelogging application that older adults would enjoy using, providing psychosocial benefits in conjunction with the benefits to episodic memory. We envisage that older users would be more likely to lifelog if family members are also involved, logging their own lives also, so that experiences can be created, shared and passed on through to younger generations.

As a first step, this questionnaire study aimed to identify what items people in different age groups are collecting throughout their lives and what items they would like to collect.

2. METHOD

2.1 Questionnaire Design

The questionnaire was designed to elicit information about people's lifelogging preferences. This related to the types of items that people collect, whether they have them saved on a computer or whether there are items that they would like to collect. The 20 items included Personal Photos, Videos, Music, Newspaper Clippings, Personal Letters, Emails, Cards, Diary, Public Diary, School Reports, Education Certificates, Tickets for Entertainment (theatre etc.), Tickets for Trips (flights etc.), Notes from Trips, Medical History, Bills, Bank Statements, Recipes, Knitting Patterns, Family Tree/Stories and a choice to add additional items. We were interested in finding out whether there were any differences between the age groups for the types of items being logged and whether items are more likely to be logged if they can be saved to a computer.

2.2 Questionnaire Distribution

Questionnaires were distributed to people from the age of 18+ years across Ireland. Snowball sampling was used to recruit participants through university staff and students. Older participants (65+ years) were mostly recruited from organizations that work with older people, either as volunteers or members.

2.3 Sample

There were in total 237 responses to the questionnaire. 35% of these were male and 65% female. 26.6% of respondents were aged 18-29 years, 27.4% aged 30-49 years, 25.7% aged 50-64 years and 20.3% aged 65+ years. Participants over 65 years

were grouped together because of the lower number of respondents.

3. RESULTS & DISCUSSION

3.1 Frequency of Lifelogging

In total, 99% of participants reported to collect at least 2 of the 20 lifelog items listed in the questionnaire (see section 2.1 for list). The most popular items to collect for all age groups were Personal Photographs, Music, Bank Statements and Education Certificates (see Figure 1). The most popular items that participants said that they don't collect but would like to were Family Tree/Stories, Medical History, and Personal Videos. Additional items that were included by participants included books, comics, magazine articles and health/household tips.

Although only a small proportion of participants collected Knitting Patterns (19%), Family Tree/Stories (35%) and Newspaper Clippings (34%), more 65+ participants logged these items compared to younger age groups. Observations for the other age groups were that 30-49 years olds were more interested in logging Notes from Trips abroad, Personal Videos, Personal Letters and their Medical History compared to the other age groups, and 50-64 year olds more frequently collected Recipes, Bills and had a Personal Diary. Although there was no significant difference, 18-29 year olds showed slightly more interest in logging Cards, Photographs and Music compared to the other age groups. This information highlights the differences in lifestyle and interests for the different age groups.

3.2 Computer Use in Lifelogging

It was previously noted that items such as photographs and bank statements were popular lifelogging items for all age groups. However, the method of logging is very different. Using the example of photographs from Figure 2 we can see that while a high proportion of 50-64 and 65+ year olds collect photographs in their printed form, a significantly lower proportion of these age groups log their photographs on a computer. It may not come as a surprise that the 65+ age group was the least likely to log their personal items via computer compared to younger groups. However there was less difference between the 30-49 and 50-64 age groups. We asked our participants if they owned a computer or whether they would like to own one. 95% of people aged 18-29 years, 98% aged 30-49 years and 80% aged 50-64 years said that they owned a computer. Only 50% aged

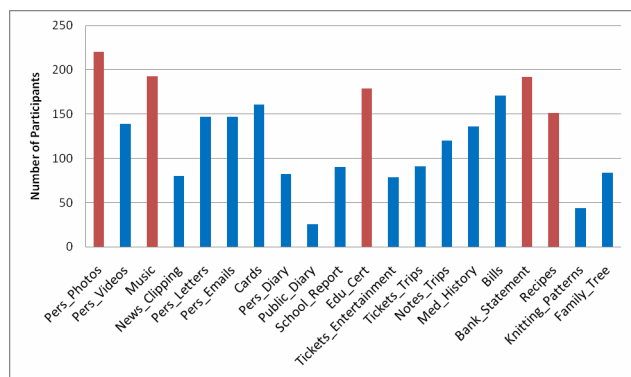


Figure 1: Frequency of collected items for all ages.

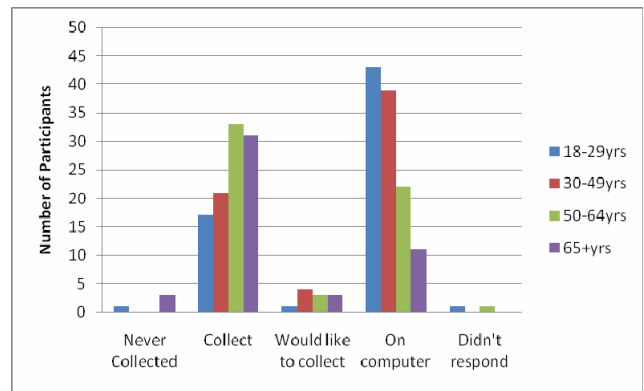


Figure 2: Differences in photo logs for age groups

65+ said that they owned a computer, however almost half (23%) of those who didn't own one said that they would like to. These figures indicate the growing interest in computer usage for all ages.

4. CONCLUSIONS & FUTURE WORK

We believe that the age differences identified concerning lifelogging preferences is key to successful lifelong use. We conclude that a lifelogging application should adapt with the ageing user, providing lifelogging facilities that compliment their current preferences and abilities, such as those we have just described. We believe that by designing for both older and younger user's lifelogging preferences it would encourage all family members to create and share their lifelogs.

The next step of this research will be to investigate the motivations behind people's lifelogging behaviours and explore how we can design an application that inspires this motivation. These requirements gathering methods lay the groundwork for the future design of a lifelogging application that is relevant to the lifestyles and abilities of all users, particularly older people.

5. ACKNOWLEDGMENTS

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