Investigating the Communication Patterns and Needs of Distance-Separated Grandparents and Grandchildren

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Abstract

A variety of systems have been designed to support communication between distance-separated grandparents and grandchildren. Yet despite this, there are few studies of the actual communication routines and needs of these groups. To address this, we have conducted a study that explores the existing communication activities as well as the future desired communication patterns between distance-separated grandparents and grandchildren. The main purpose of this study is to investigate the way they currently communicate as well as the expectations, limitations, and challenges that could be used as a basis for future designs to support their needs.

Author Keywords

Grandparent and grandchild communication, family communication, design;

ACM Classification Keywords

H.5.3. Group and Organization Interfaces: Computer-supported cooperative work.

Introduction

The grandparent-grandchild bond is an important emotional relationship in a human's life and very close to the parent-child bond [9]. A strong relationship between grandparents and grandchildren benefit both parties [9]. Yet distance separation and a lack of technological support makes the relationship between grandparents and grandchildren more difficult to build and maintain. Even in cases where grandparents and grandchildren spend time communicating with each other using current technologies such as the phone or video calls, communication still requires extra effort from grandparents or parents to engage young children [2] and maintain their attention. Time zones, busy schedules, cultural differences, and language barriers also add to the communication challenges.

There are several research systems designed to help distance-separated grandparents and grandchildren share fun activities such as playing bored games or reading books (e.g., [3,7,8, 9]). However, they tend not to focus on direct communication where grandparents and grandchildren might talk and share their daily routines, personal stories, achievements and experiences. This is our focus where we seek to understand how we should design communication tools to support grandparent-grandchild communication.

As an initial step, we have conducted a study that explores the communication activities between distance-separated grandparents and grandchildren. Through interview with grandparents and parents of children between the ages of 3 and 10, who are separated by distance, we investigated what interests, daily activities, achievements, experiences, life stories, and cultural knowledge that they already share or would like to share with each other as well as their expectations, challenges and other concerns.

Related Work

The idea of designing communication tools for connecting distance-separated family members has been a focal area in HCI over the past decade and longer. Due to characteristics of younger children, some of these studies have been specifically focused on designing tools to connect children with distance-separated adult family members including their parents, grandparents or their extended families.

Ballagas et. al [2] studied communication methods with an emphasis on phone conversations between children and their remote family members. Through field studies and interviews, the authors found several different challenges and difficulties in grandparents-grandchild communication through the phone, including children being easily distracted, not motivated to talk, and not understanding how to use the technology. They also suggested several strategies to make a phone call more successful such as parental scaffolding, preparing upcoming conversations, and using silliness and attractive gestures to get children's attention.

In order to engage young children in communication with their grandparents, several systems have been proposed. Judge et. al. [4] explored the effect of always-on video connections on creating stronger feelings of connection and togetherness between distance-separated family members. They found children liked such systems because they could easily show their grandparents objects and even participate in shared activities. "Take me with you" is a shared adventure game [5] that promotes social interactions

and physical movements in the real world reflecting an illusion of exploring a virtual world and doing shared activities together. "Families in touch" [5] is an asymmetrical asynchronous device that enables grandparents and grandchildren to share photos, videos and provide narrative for them asynchronously.

In addition to these systems, we also see designs focused on engaging children in video conferencing sessions by enabling them to read story books with their grandparents. These systems explore how shared activities could maintain a meaningful and fun relationship between grandparents and grandchildren. For example, Family Story Play [7] is a tangible collaborative story telling interface that uses an actual physical book coupled with video conferencing and the Sesame Street character, Elmo. A web-based version called "Story Visit" was also created [8]. "People in Books" was been proposed in [3] to establish a sense of togetherness between children and remote loved ones. This system is a shared visual space for story reading which immerses remote readers into online story book illustrations, giving them an illusion that they are part of the magical world. Children and a collocated reader (most often the grandparent) appear in surprising places within the book.

Our work builds on this prior research by taking a step back and further articulating the needs of grandparents and grandchildren for such systems, with a focus on direct communication.

Study Methodology
Our study focused on understanding the existing and desired communication patterns of grandparents and grandchildren living apart.

Participants
Our initial study included nine participants (all female) recruited through snowball sampling, email to teachers and parents of a local school, and ads on Facebook, Twitter, and CraigsList. Half of our participants are grandparents of children between 3 and 10 years old, while the other half are the parents of children in this age range. All participants represented families where the grandparents and grandchildren were separated across cities and countries. We recruited participants with diverse cultural backgrounds. We caution that one caveat of our study is that we did not collect data from children focused on understanding their needs and desires for grandparent communication. Instead, our results describe what the grandchildren desire from their parents' perspective.

Interview Method
We conducted semi-structured interviews with each participant individually. Interviews lasted between 45 and 60 minutes and occurred in person, via Skype, or the phone in the participants' home or location of preference. Interviews contained sets of detailed questions in eight categories where we iteratively learned about the existing and desired communication pattern of grandparents and grandchildren living apart as well as challenges, expectations and concerns. For example, sample questions included: What technology do you use to talk with your grandkids? How frequently do you converse? What do you talk about?

Data Collection and Analysis
We kept handwritten notes along with audio or video recordings for all interviews. Audio recordings were transcribed and then we performed analysis using open, axial, and selective coding. The goal of our

analysis was to understand the communication patterns between remote grandparents and grandchildren in terms of the method, preferred timing, content, remote grandparents involvement, cultural exchange, and concerns that might arise in this communication. We report on our main findings in the next section.

Results

Our findings showed that grandparents typically try to communicate with their grandchildren on a weekly basis, if possible, though many participants desired to talk with them several times a week. Participants reported primarily using the telephone or video chat (e.g., Skype) to support communication and this usage was based on their technological preference (e.g., comfort, technical abilities). Within this, we found that grandparent-grandchild communication focused on variety of different topics. We outline each of these along with our participants' desires for additional topics.

Learning
First, we found that grandchildren liked to talk with their grandparents about what they learned, given the frequency of this activity. They liked to show their abilities, in particular, new ones, such as singing a song, reading a book, or show their art work and drawings. For example, P5 (Age 40s, Child Aged 3 & 7) said: *"My daughter reasd books for [her grandparents] in English although she knows that they can not understand English at all but the way that the remote grandparents enjoy her reading encourages her to read for them"*. P7 (Age 30s, Child Aged 5) similarly commented: *"My son asks me to put a laptop in a way that remote grandparents can see him while he was playing video games."*

Recent Activities
Second, we found out that children younger than five usually talk to their grandparents about simple things that they are doing at the moment. For example, P5 said: *"My 3 years old son just tell his remote grandparent that he finished his lunch that day"*. In contrast, we found that older children above five years old talk about "every" exciting happening and experience like school activities, occasions, achievements, trips, new places, new movies, etc. For example, P1 (Age 60s, Grandchildren Aged 4, 5, 6, and 6) said that: *"My grandson told me that while they were at their farm, he was towed behind the tractor on ski and then he tried to drive the tractor."*

Unexpected Happenings
Third, we learned that grandchildren like to follow and talk about unexpected and exciting happenings in their grandparents' lives like traveling or visiting new places, For example, P4 (Age 60s, Grandchild Aged 10, 6) who has moved to another country with a 12 hour time difference from her grandchild said: *"My 6 year old grandson asks me whether it is day or night at my side and sometimes reminds me that he knows that although its night for him it is my daytime"*. As another example, P3 (Age 60s, Grandchild Aged 8) who moved to an English speaking country and taken an English class said: *"My grandson keeps asking of my activities and progress in the class since he found the concept of granny going to school so interesting"*

Surprisingly, we found out that although remote grandparents like to know almost everything about their remote grandchildren including their health, social interactions, passions, behaviors, nutrition habits, new abilities, interests, daily activity, school achievements,

progress, and developments stages, they don't push them to talk about these things. They prefer that their remote grandkids direct the conversation and talk about what they want. Grandparents are sensitive about this and don't want to ask "annoying questions." For example, P1 said: *"I would like to talk about whatever their passions are. One of them is hugely interested in animals; one is interested in language, stars, geography and history. One of them is going to a French and Russian school and not really enjoying it, so he doesn't want to talk about or talk in French at this stage. I'm just trying to build relationship with them wherever they are. Not really too subject specific. "*

Grandparents Involvement
Our results also showed that some parents liked to have remote grandparents support them and become more involved in their children's activities. This most often occurred in households with single parents or parents with busy schedules, or when the grandparent's profession related to the support needed (e.g., a school teacher). For example, P5 who is a single mom working full time said that*: "I like my parents to read books for my children over Skype while they want to sleep or help my daughter in her math problems and homework."*

P6 (Age 40s, Children Aged 10, 16) whose husband works abroad explained that her mother was sometimes better at talking with her children about problems such as breaking bad habits: *"It's a bad habit that they need to change it. I might be saying it more than they would like to hear, but my mother in law doesn't tell them directly like I do so. It's more tactful."*

P7 also commented, *"Few months ago my son had some tooth problem and went to dentist. As my father is a dentist too, my son told the story for him and I asked my dad to remind hygienic routine to my son. My son enjoyed this practice and showed his teeth and the way he was brushing in a video chat to my dad."*

In addition, we also found that remote grandparents can become more involved in activities or topics where there is a lack of support or interest from the parents. For example, P1 mentioned: *"Animals. That's a huge, huge thing for one of [my step-grandchildren]. It might be more important to another if mom and dad were into animals, but they were not."*

Cultural exchange
Our analysis also showed that parents and grandparents both liked the grandparents to talk about cultural knowledge with remote grandchildren, providing it was age-appropriate. Surprisingly, grandparents who lived in a different culture (e.g., their children and grandchildren had moved to another country) did not like to talk much about their original and native knowledge with their grandchildren who may be less familiar with it. They felt that remote grandchildren had a lot of other things to deal with already. Instead, grandparents wanted to talk about the new culture of the grandchildren. This included things such as holidays and cultural events.

Discussion and Conclusions
Our study has focused on understanding the communication patterns and needs of distance-separated grandparents and grandchildren. Here we found that communication between grandparents and grandchildren is heavily focused on the grandchildren

and topics of interest to them. For example, grandparents will direct the conversation, or be directed by the grandchildren, to things that the grandchildren have recently learned or done. Grandchildren are also interested in knowing about unexpected things that grandparents do, but are less interesting in their everyday activities. We had anticipated that grandparents who lived in a country far away from their grandchildren would be interested in sharing their native culture with their grandchildren. Yet this was not the case. Instead, grandparents still liked to maintain focus on their grandchildren's lives at the expense of discussing their own. These results suggest that applications for grandparent-grandchild communication would best be designed to continue this child focus and aim to support the communication of the topics we have uncovered.

We also learned that parents sometimes like to have remote grandparents become involved in some parental responsibilities. This includes activities like discussing bad habits or hygiene, helping with homework, reading, etc. This was particularly the case in single parent homes and we would imagine that not all parents would be comfortable with such grandparent help. Nonetheless, it suggests an interesting opportunity for design where applications could be designed to support grandparent help in rearing children.

Acknowledgement

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