How and Why Teenagers Use Video Chat

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# ABSTRACT

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Teenagers are increasingly using video chat systems to communicate with others, however, little research has been conducted to explore how and why they use the technology.  To better understand this design space, we present the results of a study of twenty teenagers and their use of video chat systems such as Skype, FaceTime, and Google Hangouts. Our results show that video chat plays an important role in helping teenagers socialize with their friends after school and on weekends where it allows them to see emotional reactions and participate in activities like shared homework sessions, show and tell, and performances over distance. Yet video chat is also used to engage in more private activities such as gossiping, flirting, and even the viewing of sexual acts. This presents an interesting design challenge of supporting teen use of video chat while mitigating privacy and parental concerns.

## Author Keywords

Teenagers; video chat; video conferencing; social media

## ACM Classification Keywords

H.5.3 [Information interfaces and presentation]: Group and Organization Interfaces - *Computer Supported Cooperative Work;*

# INTRODUCTION

For many adolescents, connection with friends for socialization, relationship-building, and ‘hanging out’ now takes place online [4,22]. The social expectations and pressures that are created by constant connectivity are also evident amongst teens [19]. Given this, a large amount of research has focused on how teenagers make use of a variety of communication technologies. This includes text messaging [8], instant messaging [9,10], and social networking sites such as Facebook [1,4,22].

Over the last several years, we have seen the use of video chat for communication amongst family and friends rapidly proliferate with the availability of free video conferencing systems like Skype, Apple FaceTime, and Google Hangouts. This has resulted in studies exploring the ways in which video chat is used by families with children [2,13,16], grandparents and grandchildren [25], long distance partners [24], etc. In 2012, a study showed that 37% of teenagers aged 12 to 17 used video chat [17]; however, we have yet to see any studies that specifically document *how* and *why* teenagers use such systems. Without this, we do not know how video chat supports (or does not) the needs of this unique demographic and how such systems could be better designed.

For this reason, we have conducted a study with twenty teenagers—between thirteen and eighteen years of age—who use video chat to communicate with their friends or family at varying frequencies. Our results outline the ways in which video chat is used by teenagers, when and why teenagers choose to use video chat over other technologies, and what challenges they face in using the technology. To foreshadow, like prior studies of adult use of video chat [2,6,13,16,24], teenagers valued being able to *see* their friends, they engaged in open connections in order to share activities longer term, and some teenagers even engaged in sexually explicit activities over video chat. Like pre-teens’ usage of asynchronous video [12], teenagers also engaged in ‘Show and Tell’ sessions and ‘Performing Acts’.

Beyond this, teens also showed new and different patterns of usage. Video calls were most often spontaneous, multi-person calls were more frequent, and, most fundamental, teenagers had a more localized sense of distance than adults. That is, video chat was about ‘hanging out’ with neighborhood friends, rather than trying to feel closer to people across long distances (as found for adults [2,6,16]). Overall, our results point to interesting challenges focused on designing video chat systems to better support the needs of teenagers while also mitigating parental concerns

First, we outline the related work on video chat and teenagers’ use of technology for communication. Second, we describe our interview study methodology. Third, we outline our results. We conclude by discussing our results and what they mean for the design of future video communication systems for teenagers.

# RELATED WORK

To ground our study, we outline the related literature on studies of teenagers’ use of technology. Some of these studies are several years old and, given the rapidly changing use of technology, practices may have changed since then. Following this, we describe studies of video chat systems.

## Text Messaging

As of 2008, 71% of American youth aged 12-17 had a mobile phone where 85% used their mobile phones to send text messages or ‘text’ [19]. Texting is very popular among teenagers because it is fast and efficient, convenient, and private [10]. That is, teenagers feel they can communicate with friends without the eyes and ears of parents, siblings, or classmates knowing about their activities [8,22], though there is care to ensure texts do not always remain on one’s phone for surreptitious browsing [20]. Texting most commonly occurs between people who know each other, while messages from advertising companies and strangers were seen as intrusive and unwelcome [10]. Studies of teenagers’ texting habits revealed that they used texting to coordinate activities with others, initiate communication, and simply to chat [8,10,20]; however, within this, they experienced challenges in understanding the intent behind messages as well as an evolving ‘texting language’ [8,10]. Texting was also highly valued because teenagers could perform multiple tasks while communicating with friends [1,8]. In addition to this, we also now see reports of teenagers ‘sexting’ where they text sexually explicit messages or revealing photos of themselves to others [27].

## Instant Messaging

Instant messaging (IM) is another popular communication medium amongst teenagers. Studies have shown that, as of 2007, 82% of the teenagers who used the Internet also used an IM client to communicate with friends [19]. Teenagers’ typically used IM with their school friends (as opposed to people they might meet online) and it allowed them communicate at nearly all hours of the day [9,11]. IM was used for socializing, event planning, and joint schoolwork from home [9]. Within these activities, teenagers would multi-task what they were doing, and also multi-task their conversation [9]. While using IM, teenagers were concerned about others looking over their shoulder because they often used computers in public home locations [20]. They also expressed privacy concerns about messages being saved on the computer and read by others and would carefully use IM status indicators and messages to enforce their autonomy and provide awareness of presence [9].

## Social Media and Social Networking Sites

Teenagers also make heavy use of social networking sites such as Facebook. Again, they are primarily used by teens to connect with friends whom they already know as opposed to strangers [1,4,22].  Social networking sites were found to be used by teens to build stronger connections, express one’s self, participate in work, care for others, gain knowledge on social contacts, and maintain their existing relationships [1,4,10,18]. For many teenagers, the benefits of social networking sites were deemed to be so strong that they often outweighed privacy concerns [4]. Benefits include building reputation, popularity, social status, and connection [4]. According to studies by boyd in 2007, teenagers who do not participate in social networking sites can be divided into two categories: disenfranchised teens and conscientious objectors [4]. Marwick and boyd discuss how teenagers use social media to engage in discussions of “drama,” interpersonal conflicts similar in nature to bullying, gossip, and relational aggression but with their own distinct connotation [21]. In a study of parents in 2011, Yardi and Bruckman found that parents try to create rules about computer and social media usage but it can be hard to enforce them [27]. Parents worry their children are going to say something or get involved in a conversation that can have devastating consequences, especially because of the permanency of some communications [27]. Parents typically want visibility in the technology their children use: some parents want their children to know their online behavior is being watched and other parents want to watch surreptitiously, waiting for children to make a mistake and expose a “teachable moment” [27].

## Video Chat

Several studies have investigated how adults and children (non-teenagers) use video chat to connect with family and friends. These have shown that it is often challenging to maintain calls long term because of infrastructure issues and software crashes [2] but many people “put up” with these because of the benefits of video chat. There are also challenges in knowing when people are available and willing to use video chat as opposed to other technologies like the phone [2,13,16]. Despite these issues, people find great value in video chat systems because they allow them to feel more ‘present’ with their remote family or friends [6,24] and they are able to see body language and other visual cues depicting emotion [6,16,24]. Because of the unique benefits of video chat, people are more likely to accommodate distance in their personal relationships [6]. Many people are concerned about their appearance over a video link [7], yet this diminishes with usage [6].

There also exists a phenomenon where people will leave video connections open for longer periods of time and focus on sharing activities over distance rather than just conversation [6,13,16,24]. This may occur in a single location, but many people prefer to move around their home [6,24]. Grandparents watch their grandchildren play for long periods of time [13], parents and their adult children perform activities together such as cooking [6], adults may watch television together [6,24], and some long distance partners engage in sexual acts over the video link [24]. Given the trend of people using open video connections, several systems have been designed to better support these needs and the sharing of activities rather than just conversation. These have included always-on video links between one or more households [14,15] and even mobile devices [23]. We have also seen the design of systems targeted for specific activity or life situations such as reading between grandparents/children [25,26] or shared activities between divorced parents and their children [28].

Thus, while there has clearly been a large amount of research in the space of video chat, there are no studies specifically targeting teen use. The notable exception comes from Kirk et al.’s study, which contained two teenage participants (of 17 in total) [16]. Here they state that they sensed teenage usage of video chat was very different from adult users, but with the small sample were unable to expand deeply on this. This provides further motivation for our current study. Closely related to our work is a study by Inkpen et al. that describes how pre-teen girls (aged 9 and 10) used an *asynchronous* video messaging system [12]. Uses included conversing, show and tell, sharing activities, and play-acting / performing. Our study illustrates how these and more occur during *synchronous* video exchanges by teenagers.

# STUDY methodology

We conducted an interview study with teenagers who used video chat to understand their usage of the technology.

## Participants

We recruited twenty teenage participants (10 male and 10 female) through snowball sampling, word-of-mouth, and by posting ads on sites such as Facebook and Craigslist. Four teenagers were between the ages of 13 and 15, and sixteen were between the ages of 16 and 18. Participants varied in terms of how frequently they used video chat. Fifteen were frequent users and would use video chat weekly, while five were infrequent users who used video chat every 2-3 months. The frequent users helped us understand the motivating factors behind video chat usage and the ways in which video chat tools were used. The infrequent users gave us insight into why teenagers may *not* use video chat frequently and what technologies were used instead of video chat. Twelve participants had used video chat for over a year and the other participants had all used video chat for several months to a year. All participants lived in a major metropolitan city in North America and were from middle class families of a variety of ethnicities.

## Interview Method

We conducted semi-structured interviews with each participant individually in Spring 2012. Interviews lasted between 60 and 90 minutes. Prior to the interview, each participant was given an outline of what types of questions to expect and were told that data would remain confidential and anonymous. It is our university’s ethical policy to breach confidence in situations involving potential suicide, child abuse or violence; no such situations arose. Parental consent was obtained for all interviews; however, parents were not present during the interviews and they did not see their teenager’s data. We hoped this would allow the participants to openly discuss their technology usage.

Five interviews were conducted in person at local coffee shops, six interviews were conducted in person at the participants’ high schools, and the remaining were conducted at the participants’ homes. Each participant was paid $20 for the interview. Interview questions asked the participants about their communication practices using video chat, the motivation behind these practices, and their preferences on systems and devices for video chat usage. For example, questions included “Which video conferencing tools do you use?” and “When do you use video chat?” We also asked participants to tell us stories about memorable video calls and their more typical calls.

We also had the first seven participants (4 females, 3 males) (3 under 16 years of age) complete a private online diary about their communication routines over a 3-week period where they received $1 per daily diary entry. We had hoped this would provide more ‘in-the-moment’ data, yet we only received 65 entries across the 7 participants (average 8 per person) and the content did little to inform our findings. We suspect that our monetary incentive was not high enough and, perhaps more importantly, the teenagers were less interested in doing a repeated activity over a longer time period. Because of this, we do not report on data from the diaries; we mention it here as a consideration for future studies though.

## Data Collection and Analysis

We kept handwritten notes for all interviews along with audio recordings. We transcribed audio recordings and then performed a thematic analysis on the transcribed data (diaries and interviews). Our analysis revealed several themes that form the focal points of our results and the subsequent sections. In our results, we list representative quotes along with the gender and age group of the participant. ‘Older’ refers to teens 16 years of age and older and ‘Younger’ refers to teens under 16 years of age. We have chosen to not include exact ages next to quotes to further anonymize our results, given the sometimes sensitive nature of participants’ comments.

Our results first discuss the general practices that teens had for video chat, including who they talked with, how video chat compared to their uses of other technologies, and how they initiated video calls. Following this we look at the variety of activities that occurred over video chat including both ‘focused’ and ‘open’ activities. Next we outline privacy and trust issues that arose for the teens.

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