Author(s): Pörhölä, Maili; Lahti, Henna

Title: The use of interpersonal communication technologies to establish and maintain peer relationships

Year: 2012

Version:

Please cite the original version:

Pörhölä, M., & Lahti, H. (2012). The use of interpersonal communication technologies to establish and maintain peer relationships. In A. Costabile, & B. Spears (Eds.), The impact of technology on relationships in educational settings (pp. 55-65). Lontoo: Routledge.

The use of interpersonal communication technologies to establish and maintain peer relationships

Maili Pörhölä & Henna Lahti

University of Jyväskylä, Finland

1. Introduction

Today, both children and adolescents establish and maintain peer relationships in real (physical) and virtual rooms. The majority of children and adolescents in Western societies have daily access to at least one of the various applications of information and communication technology (ICT). Via mobile phones and the Internet, they are able to communicate with their friends and unknown peers at any time of day and night. Indeed, social interaction with peers appears to be the most important function of ICT for children and adolescents (Kaare, Brandtzæg, Heim, Endestad 2007; Pelastakaa lapset ry 2009; Subrahmanyam, Greenfield, Kraut, Gross 2002), suggesting that a substantial part of their cognitive and emotional experiences, learning, seeking play and having fun, and relationship and identity building takes place online, in virtual rooms.

Kaare et al. (2007) note, children in Norway at the ages of 10–12 years use ICTs in their peer relationships for several constructive purposes including: (1) mediating practical information and messages; (2) mediating interests and hobbies; (3) seeking to establish contact with others; (4) mediating either or both strong symbolic and emotional contents (e.g. pictures as symbolic gift-giving, ritualized greetings, 'I like you' messages); (5) communicating with or about the opposite sex; but unfortunately, also for (6) bullying and harassing their peers. However, although the rapid development of ICT has given new tools for causing harm to peers, for example cyber bullying (e.g. Beran, Li 2007; Juvonen,

Gross 2008; Pure 2009; Smith et al. 2008), a great number of children and adolescents frequently use this technology for promoting positive peer interaction and successful social networking.

How do children and adolescents use ICT in their daily life for peer networking and facilitating their peer relationships? Based on our examination of approximately 150 articles and book chapters, we outline in this chapter the main findings of research conducted on the positive uses of ICT in children's and adolescents' peer relationships. This corpus of this research represents a variety of disciplines including communication, psychology, sociology, social psychology and education. Because of the space limits, we selected a reasonable number of literatures to be reviewed in this chapter. The chapter focuses on: the ways in which children and adolescents use various applications of communication technology (e.g. instant messaging, chat rooms, online games, Internet galleries, mobile telephones and email) in establishing and maintaining peer relationships; gender specific differences in usage; and Internet communities to which they join. The chapter presents two applications to illustrate the kinds of Internet-based social forums that have been developed in Finland for children and adolescents to promote their peer networking in positive ways and to provide support for their peer relationships.

2. Maintenance of peer relationships

As several studies indicate, the most important function of online communication for children and adolescents is maintaining and improving their existing peer relationships. Kaare et al. (2007) found that children in Norway, at the age of 10–12 years, mostly used mobile phones, and particularly text messaging, as a less expensive tool than phone calls, for keeping in contact and sharing practical every-day information with their friends.

However, they also used instant messaging, email, and chat rooms for interaction with their friends, unknown peers and family members.

Kaare et al. (2007) conclude that children, once mobile phones became common tools for them, seem to have adopted a communication culture in which they feel they should be available for their peers all the time. They keep their mobiles constantly at hand, and respond immediately to any messages they receive. Mobile phones also seem to provide youth with a social meaning for insignificant times, such as moving between home and a bus stop, as they can spend this time communicating with their friends (Caron, Caronia 2007). Furthermore, as Kasesniemi and Rautiainen (2001) note, a friend group can by means of their online interaction practices create a unique communication culture, which outsiders cannot easily access.

For maintaining peer relationships, online communication appears to be an important tool for adolescents and teens as the Internet enables contacts to be made with short and long-distance peers (Subrahmanyam et al. 2002). Blais, Craig, Pepler, and Connolly (2008) found that instant messaging is positively associated with most aspects of relationship quality in adolescents' best friendships and romantic relationships. Similarly, Valkenburg and Peter (2007) found that adolescents who often communicated online with their known-peers felt more closeness with their friends compared to those who communicated online less often with their friends. Furthermore, in a national survey in the United States, Lenhart, Rainie, and Lewis (2001), found that approximately half of the adolescent respondents felt the Internet had improved their friendships. American adolescents also reported the Internet had enabled them to keep in contact with long-distance peers. However, these adolescents did state the Internet was not the best channel for establishing close friendships, unless the partner was already known.

4

Girls tend to use ICT for social interaction, sharing concerns and emotions, giving and asking for social support (Joensuu 2007; McKay, Thurlow, Zimmerman 2005; Oksanen, Näre 2006; Stern 2007), and for building their identity by uploading photos and different kinds of texts in web galleries (Joensuu 2007). Boys use the Internet for social interaction in playing online games and sharing files, e.g. music, movies, software (Joensuu 2007) and their ICT messages are characterized by informativeness and brevity of expressions (Kasesniemi, Rautiainen 2001; Livingstone, Bovill 2001). Blais et al. (2008) argue the Internet probably adds to girls' already higher levels of relationship quality and enables them to further expand their socialization. Girls, compared to boys, would be more likely to benefit from the positive effects that Internet communication has on their relationships.

3. Establishment of new peer relationships

Children and adolescents also use ICTs to establish new peer relationships. Web sites that focus on various hobbies and fan sites of music bands provide a wide variety of virtual rooms for meeting new peers with similar interests (Sjöberg 2002). While boys are more engaged in sharing experiences of computer games and visiting the fan sites of well-known films, girls show more interest in specific pop stars and films, or visit specific pet sites (Kaare et al. 2007).

Every second adolescent has used some form of ICT (e.g. instant messaging, email, or chat rooms) for interaction with a person they have never met face-to-face (Lenhart et al. 2001; Wolak, Mitchell, Finkelhor 2002). Wolak et al. studied adolescents aged 10 to 17 years, 25 per cent of whom reported having casual online friendships, and 17 per cent as having formed at least one close online relationship (a close relationship, romantic relationship, or a relationship leading to face-to-face meeting) during the past year. A further 5 per cent claimed to have established more than one type of close online

relationship in the past year. An online relationship most typically starts in a chat room or in an online game or role play and interaction is then transformed into a more interpersonal level by continuing communication via instant messaging, email, text-messaging, or phone calls (Caron, Caronia 2007; Joensuu 2007; Wolak et al. 2002). More than two-thirds of adolescents' online relationships are cross-gender relationships (Wolak et al. 2002).

Quite often the partners of an online relationship eventually end up in a face-to-face meeting. An Internet survey conducted in Finland reveals that four out of ten adolescents had met their internet partners face-to-face (Pelastakaa Lapset ry 2009). Wolak et al. (2002) found that adolescent Internet partners in the United States who had actually met were mostly living in close proximity and their parents knew about the new relationship. Face-to-face rendezvous were mostly set in public places and the new peer was met in the presence of a friend. Hence, the relationships which start in the Internet seem to develop in a safe manner for most adolescents.

However, the Internet also provides children and adolescents with an arena for identity building, concealing their real identity and even for adopting a false identity. Participants in a chat room or in an online game can, for example, reveal their age and gender without revealing their identity; they can give false information about some of their characteristics such as age or home town; or they can pretend to be someone else (Kaare et al. 2007; Sjöberg 2002; Smith, Curtin 2001). Lenhart et al. (2001) found that one third of teenagers have sometimes pretended to be someone else in their emails or instant messages. The Internet also enables users to search for sexual identity, as anonymity provides the opportunity to pretend to be a representative of the opposite sex (Kaare et al. 2007).

Adolescents also use ICTs for different purposes in their romantic relationships. For example, children at the age 10–12 years use text messaging by mobile phone to exchange love messages (Kaare et al. 2007). Lenhart et al. (2001) found that 17 per cent

of the adolescents used instant messaging when starting a dating relationship by, for example, asking the person for a date. Furthermore, these adolescents felt that the confession of love was easier to make online than face-to-face. On the other hand, 13 per cent reported having used the same tool for breaking up with their romantic partner. A breaking-up the relationship text-message can also be sent by mobile phone (Kasesniemi, Rautiainen 2001). Hence, ICT is used by youth for both establishing and ending of peer relationships.

4. Applications of virtual rooms for children and adolescents

Habbo Hotel

Habbo Hotel, the world's largest virtual world for teenagers, is based on social interaction and meeting other people online via their avatars (Habbos). The Finnish Sulake Corporation describes this product in their web pages:

> Habbo Hotel is a place to meet new and existing friends, play games and simply have fun. It is a richly colorful, multi-dimensional virtual community and game environment to which users join by creating a fully customized online character called a Habbo. From there, Habbos can explore many public spaces in the virtual environment, play a variety of games, train pets, connect with friends, decorate their own rooms and Habbo homepages, and have fun through creativity and self expression. The Habbo experience consists of many parts, which are all inextricably linked.
>
> (Sulake Corporation Oy n.d.)

The core of the experience is the virtual world called Habbo Hotel. Millions of teenagers around the world meet each other every day in Habbo's cafés, clubs, at the pool area or in the millions of private rooms created by the Habbos themselves. Entering the Habbo world is free, but to access premium services users need to buy Habbo credits, which is the

virtual world's currency. Credits are used to pay, for example, for virtual furniture and elements of the user's homepage. In addition to the actual virtual world, all community members have their own Habbo home pages where they can present their virtual life. These pages are highly customizable and can be used, for example, for sharing content or forming different kinds of groups (Sulake Corporation Oy n.d.).

Initially designed in Finland in 2000 as a hobby project by Sampo Karjalainen and Aapo Kyrölä, Habbo Hotel had by 2010 developed into a global application with local communities in 31 countries and in 11 different languages. Habbo has attracted over 168 million registered users around the world, of whom 65 per cent are aged 13–16 years and 65 per cent visit the Habbo Hotel daily with an average visit lasting for 43 minutes (Sulake Corporation Oy n.d.).

Habbo Hotel is really a whole world with its own language and slang and ways of behaving, so it takes a while for users to become integrated. Habbo Hotel is an option for a normal chat because instead of writing comments to anonymous nicknames, a user in Habbo Hotel can see the other Habbos all the time. The avatars (Habbos) always reveal something about the user.

Establishing relationships in Habbo Hotel starts by asking other Habbos to be your friends. Accepted friends can then be seen in the users' profile as a list, so it is easy to contact them later or, for example, follow them into a room where they are staying, or start talking to them in a private messenger window. Habbos also invite their friends to their own rooms, which they may have furnished and decorated nicely.

Young people in Habbo Hotel often discuss their hobbies, school and any kinds of everyday subjects with their virtual friends. Sometimes they can just try to gain others' attention by, for example, writing a pointless series of numbers or letters. In addition to chatting with other children and adolescents, Habbo Hotel provides a way for just spending

time. Indeed, just as in the real world, discussions are sometimes pointless and do not lead to any reasonable outcomes.

Chat rooms in Habbo Hotel are not different to any other chat-rooms in that it is difficult to know when the users are telling the truth about themselves and chatting with a serious attitude. An example of a confusing discussion which we witnessed occurred in a public room where a girl and a boy talked about suicide and how and why they both had tried to commit it. In the middle of the conversation, one of the avatars suddenly disappeared leaving the other alone. After a while the avatar returned and started talking about a totally different topic, no longer answering any of the questions posed by the other participant about the former topic. It seemed obvious that the person behind the avatar who had left and returned to the room had only been making fun, whereas the other participant had been revealing personal issues and was oriented to a serious discussion. This example emphasizes the need to talk with children about how they should act and communicate online, and how they could protect themselves from being hurt by their virtual peers.

IRC-Galleria

Sulake Corporation Oy also own IRC-Galleria, which is the most active social networking service in Finland. Users in IRC-Galleria choose a nickname for themselves, create their own profile and upload pictures. Anyone online can see the uploaded pictures and registered members can comment on others' pictures, which creates an interactional aspect to the service. In addition to commenting on photos, users can publish longer notes and blog texts in their profiles. Comments posted to others' pictures or profiles can be related to photos, or just any comments concerning the users' lives, interests and hobbies. Any time someone posts a comment to another user's profile, the sender's nickname appears and by clicking the name, the user can move to the sender's profile. Using the

service is free, but members can buy special effects to add to their photos or VIP-services that enable some additional functions (Sulake Corporation Oy n.d.).

There were approximately 658,000 young people of 15 to 24 years living in Finland at the end of the year 2008 (Väestörekisterikeskus 2009), of whom almost 76 per cent used IRC-Galleria weekly and 60 per cent of these users were older than18 years. The 500,000 young people registered with IRC-Galleria write 1.4 million comment messages, upload 75,000 photos and write 50,000 blog entries daily. On average, registered individuals spend approximately 30 minutes a day using IRC-Galleria. The minimum age limit for users is 12 years and children under that age cannot be registered even with the permission of their parents (Sulake Corporation Oy n.d.).

According to Oksanen and Näre (2006), IRC-Galleria is particularly popular amongst young girls, who search for their identities online by uploading provocative pictures and maybe also publishing blog-texts. These individuals expose themselves to danger through abusive comments and critiques. Using data from 13 semi-structured interviews and participant observations of IRC-Galleria users, Lehtinen (2007) examined the ways in which young people maintain and extend their social networks in IRC-Galleria. She concluded that the pictures uploaded to users' profiles present teenagers' personal interests and objects which they think are appreciated in their own subculture and social network.

Observations that we conducted in IRC-Galleria indicated that interaction between individuals usually starts tentatively but eventually these interactions also involve becoming acquainted with the friends of this new friend. Getting to know new people usually started with writing a neutral comment like 'nice photo!' or by asking 'how are you?' After a few comments, the participants might continue their interaction by instant messaging. The topics that youth on IRC-Galleria talk about vary widely. An initial

comment may applaud someone's new look and the next comment can be an invitation to a party. Sometimes chatting is just filling in time and then there is no specific or special content in the discussion. Most of the comments seem to be from people users already know. Most are simply one sentence comments 'Oh, you looked really nice today—as always!', or related to former comments and discussions of events that happened in school on an earlier occasion.

Youth work in Habbo Hotel and IRC-Galleria

Recently there has been a trend of online youth work in Finland and many non-governmental organizations (NGOs) have extended their work from authentic real-life fields to online environments. One example is Netari.fi, which focuses on contacting young people who spend a lot of time online. Depending on the time, date and forum, there are policemen, nurses and youth workers who are available for real-time online chats with adolescents and answering their questions. Netari.fi initially served only the Helsinki area but today there are professionals from 24 different municipalities around the country.

 Netari.fi organizes, several times a week, real-time online discussions and chats in both Habbo Hotel and IRC-Galleria, and a themed chat once a week in IRC-Galleria, on issues interesting to youth. Once a week, there is also a chat, in which policemen answer the questions of youth; these chats are primarily directed at young people aged between 15 and 18 years. One specialty of youth work in Habbo Hotel is Hubu, which is a virtual bus where teenagers can discuss drugs and alcohol with a trained adult. Hubu is organized by an NGO, and is part of the preventive drug work among Finnish teenagers (Elämä on parasta huumetta ry 2010).

There is a definite need for youth work services online. According to the web pages of Netari.fi, the data for 2009 show approximately 159,000 young people used Netari services. Besides the themed chats, Netari's online youth facilities include special rooms

(spaces) where, in the presence of professional youth workers, young people can hang around with others and talk (Helsingin ja Oulun kaupungin nuorisoasiainkeskukset n.d.).

The outcomes of online Gallery use

The Mannerheim League for Child Welfare conducted a broad online survey examining the use of Finnish online galleries by youth in 2006 and 2007 (see Mustonen, Peura 2007). Two thirds of the respondents were girls, which corresponds to the data of users who log into gallery services. The results showed that galleries have become an important forum to maintain and strengthen young people's existing peer relations. Almost every respondent (91%) reported having talked on gallery sites with people they knew. Furthermore, almost one in two had found a new friend from gallery sites and one in ten had found a girl or boyfriend through these gallery web pages.

There are, however, clear negative effects of web galleries, such as taunting other users, sexually distracting comments and manipulating other users' pictures without asking permission. One fifth (19%) of the respondents related they had been bullied online during the past year. Cyber bullies were usually people whom the victim knew, for example, from school and every fifth school bullying case continued in one online format or another after school (Mustonen, Peura 2007).

 Although the use of galleries and other web sites has increased, the negative effects of the services have not increased to the same extent. Education and talking about the possible risks inherent to media, as well as learning by experience are crucial steps toward young people's wisdom online. It is worth noting that young people are also in a key position to transfer knowledge about the Internet and its applications to older generations. Mediaskooppi [Mediascope] through an informal web-based network for young people involved and interested in digital media cultures aims to create dynamic dialogue between young people and adults (Mediaskooppi 2007).

In order to contribute to achieving this goal, the network arranges digital media education for schools and other institutions and helps adults to understand what kind of sites and applications adolescents use online and why. The activities of Mediascope consist of lectures provided, for example, in seminars, public libraries and schools. The idea of the network is to let those who know best to tell about the sites and applications. Those who know best are young people who have gained the most up-to-date and diversified knowledge about the digital youth cultures emerging on the Internet. Mediascope was founded in 2007, following a high school web course on media criticism, and although financed by the Ministry of Education in Finland works independently, co-operating with educational organizations (Mediaskooppi 2007).

Mediascope has been a model for many multigenerational media education projects. Hundreds of young people have been involved in its activities so far, and some 50 of them (mainly high school students) are actively involved in trainings; some of which have also been delivered via the Internet (Jaakkola 2010).

5. Discussion

As indicated in this literature review, children and adolescents use multiple forms of information and communication technology to establish peer and dating relationships and to maintain and enlarge their social networks. They use this technology as a communication channel to enlarge their physical environments into virtual rooms where they can continue sharing their social experiences with known and unknown peers. Individuals affect the cycle of real life relationships (introduction, development and closure) in these virtual rooms. However, the anonymity provided by these virtual rooms also enables kinds of communication which would not be possible face-to-face.

While most children and adolescents use ICT in their peer relationships for constructive social purposes, recent research clearly indicates that some of them use the same tools for cyber bullying (e.g. Beran, Li 2007; Juvonen, Gross 2008; Pure 2009; Smith et al. 2008). Cyber bullying ensures a substantial number of youth suffer from the disadvantages of ICT in their peer relationships. We do not yet know whether or not individuals are engaged in constructive and destructive uses of ICT in their peer relationships or indeed whether some individuals have a tendency to be either constructive or destructive. What kind of ICT uses are characteristic of those who bully and for those who are victims, either or both on-line and off-line? More research is needed to answer these questions and to find ways in which these individuals could be encouraged and guided to engage in positive peer networking by means of ICT.

This chapter provided two web sites, as examples of Internet-based social forums, which have been developed to promote children's and adolescents' constructive peer networking. The aim of doing so was to shed some light on the possibilities that exist to support the positive development of children's and adolescents' peer relationships. Some of the ideas provided by these examples could also be applied to the development of specific sites for those who are engaged in either cyber bullying or victimization. These social forum sites could help in disseminating information, for example, about the legal aspects and consequences of cyber bullying, and the suffering cyber bullying causes the victims, and about effective coping methods and support available for victims. These types of web sites could provide an interactive forum for children and adolescents for sharing their negative experiences of bullying, getting peer support, as well as enlarging their understanding of their peer relationships in a safe virtual environment, which would be guarded by adults. Professionals of different kinds (e.g. youth social workers, psychologists, communication experts, and police and legal experts) could be on call at particular hours, discussing

online with youth about their concerns and giving them advice. The use of a common format with similar contents with country specific languages would make this type of application cost efficient.

References

Beran, T. and Li, Q. (2007) 'The relationship between cyberbullying and school bullying', *Journal of Student Wellbeing,* 1(2): 16–33.

Blais, J., Craig, W., Pepler, D. and Connolly, J. (2008) 'Adolescents online: the importance of Internet activity choices to salient relationships', *Journal of Youth and Adolescence,* 37(5): 522–536.

Caron, A.H. and Caronia, L. (2007) *Moving Cultures: Mobile Communication in Everyday Life*, Montreal: McGill-Queen's University Press.

Elämä on parasta huumetta ry (n.d.) *Hubula*. Online. Available HTTP: <http://www.hubu.fi/> (accessed 21 May 2010).

Helsingin ja Oulun kaupungin nuorisoasiainkeskukset (n.d.) *Netari.fi.* Online. Available HTTP: <www.netari.fi> (accessed 10 May 2010).

Jaakkola, M. (2010) '*Discussion on Mediaskooppi'.* Email (26 April 2010).

Joensuu, M. (2007) *Nuorten Internet-yhteisöt ja Niiden Merkitys Nuorisotyön Kannalta,* Helsinki, Finland: Humanistinen ammattikorkeakoulu.

Juvonen, J. and Gross, E.F. (2008) 'Extending the school grounds? Bullying experiences in cyberspace', *Journal of School Health,* 78: 496–505.

Kaare, B.H., Brandtzæg, P.B., Heim, J. and Endestad, T. (2007) 'In the borderland between family orientation and peer culture: the use of communication technologies among Norwegian tweens', *New Media & Society,* 9(4): 603–624.

Kasesniemi, E. and Rautiainen, P. (2001) *Kännyssä Piilevät Sanomat: Nuoret, Väline ja Viesti,* Tampere, Finland: Tampere University Press.

Lehtinen, V. (2007) *Maintaining and Extending Social Networks in IRC- galleria.* Online. Available HTTP: <https://oa.doria.fi/handle/10024/7282> (accessed 21 May 2010).

Lenhart, A., Rainie, L. and Lewis, O. (2001) *Teenage Life Online*, Washington D.C: Pew Internet & American Life Project.

Livingstone, S. and Bovill, M. (2001) *Children and their Changing Media Environment: A European Comparative Study,* Mahwah, NJ: Lawrence Erlbaum.

McKay, S., Thurlow, C. and Zimmerman, H.T. (2005) 'Wired whizzes or techno-slaves? Young people and their emergent communication technologies', in A. Williams and C. Thurlow (eds) *Talking Adolescence: Perspectives on Communication in the Teenage Years*, New York: Peter Lang.

Mediaskooppi (2007) *Mediaskoopin esittelydiat englanniksi.* Online. Available HTTP: <http://www.mediaskooppi.net/aineistot/mediascope.pdf> (accessed 23 April 2010).

Mustonen, A. and Peura, J. (2007) *Netin kuvagalleriat nuorten elämässä. Nettikyselyn tuloksia 2007. Tulosten vertailua 2006 ja 2007.* Online. Available HTTP: <http://www.mll.fi/@Bin/11904188/Netin+kuvagalleriat+nuorten+el%c3%83%c2%a4m%c3%83%c2%a4ss%c3%83%c2%a4.pdf> (accessed 23 April 2010).

Oksanen, A. and Näre, S. (2006) *Lapset Pelissä: Virtuaaliviidakon Ansat*, Jyväskylä, Finland*:* Minerva.

Pelastakaa Lapset (2009) *Lapsen Ääni 2009*, Helsinki, Finland: Pelastakaa Lapset ry.

Pure, R.A. (2009) 'Uncertainty and psychological consequences due to cyberbullying', in T.A. Kinney and M. Pörhölä (eds) *Anti and Pro-Social Communication: Theories, Methods, and Applications,* New York: Peter Lang.

Sjöberg, U. (2002) 'Screen rites: a study of Swedish young people's use and meaning-making of screen-based media in everyday life', University of Lund, Sweden.

Smith, P.K., Mahdavi, J., Carvalho, M., Fisher, S., Russell, S. and Tippett, N. (2008) 'Cyberbullying: its nature and impact in secondary school pupils', *Journal of Child Psychology and Psychiatry,* 49: 376–385.

Smith, R. and Curtin, P. (2001) 'Children, computers and life online: education in a cyber-world', in I. Snyder (ed.) *Page to Screen: Taking Literacy into the Electronic Era,* repr. edn, London: Routledge.

Stern, S.T. (2007) *Instant Identity: Adolescent Girls and the World of Instant Messaging,* New York: Peter Lang.

Subrahmanyam, K., Greenfield, P.M., Kraut, R. and Gross, E. (2002) 'The impact of computer use on children's and adolescent's development', in S.L. Calvert, A.B. Jordan and R.R. Cocking (eds) *Children in the Digital Age: Influences of Electronic Media on Development*, Westport: Praeger.

Sulake Corporation Oy (n.d.) *Sulake*. Online. Available HTTP: <http://www.sulake.com/> (accessed 29 January 2010).

Valkenburg, P.M. and Peter, J. (2007) 'Preadolescents' and adolescents' online communication and their closeness to friends', *Developmental Psychology,* 43(2): 267–277.

Väestörekisterikeskus (2009) *Taskutieto 2009*. Helsinki, Finland: Väestörekisterikeskus. Online. Available HTTP: <http://www.vaestorekisterikeskus.fi/vrk/home.nsf/files/Taskutieto_2009/$file/Taskutieto_2009.pdf> (accessed 10 May 2010).

Wolak, J., Mitchell, K.J. and Finkelhor, D. (2002) 'Close online relationships in a national sample of adolescents', *Adolescence,* 37(147): 441–455.