

From the Espresso Era to the Internet Era – High School Students and On-line Chat

Dan Soen, Ph.D., Associate Professor, Ari'el University Center, Israel; Professor Emeritus, Kibbutzim School of Education, Tel-Aviv, soen@macam.ac.il

Abstract

The article addresses the broad social implications of the internet technological revolution, and its manifestations among high school students drawing attention to the contradictory conclusions reached by various researchers. The paper reports findings from a field study among 60 Israeli high school students aged 12-18. Conclusions indicate that the net expands and enhances new social relationships which fulfill important social, emotional, and intellectual functions in adolescents' lives. The study findings further indicate that gender and age are important moderators of net chat. Findings of this case study are consistent with the conclusions advanced by the late Marshall McLuhan, and the conceptualization of the communication technology as a new social essence.

A. Post-technological society: The computerization tsunami and the internet whirlpool

The current generation has witnessed unprecedented technological advances. Computer use has become entrenched even among those who were until recently adamant in its rejection. By one estimate, by June 30, 2008 the number of internet users worldwide had reached 1,463,632,361. According to Internet World Stats (2008), 21.9% of the global population was internet users: In Europe 384,633,765 individual were connected to the internet; in Asia, 578,538,257; in North America – 248,241,969; in Latin America – 139,009,209; in Africa – 51,065,630; in the Middle East – 41,939,200; and in Oceania – 20,204,331. Between 2000 and 2008, global internet usage expanded by 305.5% (ibid.).

In Japan, a radical example of a highly technology-conscious population, 94 million people (73.8% of the population) used the internet regularly in 2008 (New Media Review, 2008). In the sparsely-populated country of Greenland, the internet use rate reached 92.3%– the highest user rate in the world, and in Holland it reached 90.1% of the population by June 2008. In the US, whose users account for 15% of all global internet users, the internet use rate was 72.3% (ibid.).

Israel's internet use rates are not an exception. Whereas in the 1960's Israeli youth were dubbed "*the espresso generation*" due to their fondness for espresso-bars, which had been recently introduced into the country from Europe, local youngsters are now referred to as the "*net generation*". In 1997 33.5% of all Israeli households owned PCs. Ownership rose to 47.1% in 2000 and 71% in 2006 (CBS, 2008). In 1997, a mere 4.65% of all Israeli households had internet access. This figure rose to 19.8% in 2000 and 30.8% in 2003. In 2006 86% of all households that owned computers were connected to the internet (ibid.). In 2007 internet usage in Israel (61.06%) was similar to that of England (60.5%) (New Media Review, 2008). A sample-based survey conducted by the Tel-Aviv University's Netvision Institute for Internet Studies in 2008 showed that 68% of the population is connected to the internet at home, while 56% of the entire population surf the net (Netvision Institute for Internet Studies, 2008).

Usage rates are even higher for children and teens. According to US Census Bureau data, four-fifths of American children were using the internet as early as 2001 (US Census Bureau, 2001). That year, two-thirds of all households with school-aged children owned computers, 53% of these households had internet access. And 80% of all US children had access to the internet, independent of whether they had a computer at home, and independent of their ethnicity or family income (US Census Bureau, 2001). A US survey conducted in 2007 showed that 93% of children aged 12-17 have internet access at home (MacGill, 2007). A 2005 survey in Britain showed that 88% of all elementary school children and 95% of all children in the 11-18 age group use the internet at home (BBC News, 2005).

Where does Israel stand in this regard? Data provided by the Israeli Central Bureau of Statistics indicate very large socioeconomic-based differences both in household computer ownership and internet access. In 2003, only 30.4% of households in the lowest decile owned a PC, compared to 64.8% of households in the seventh decile, and 74.6% of households in the highest decile (CBS, 2004, 8). A similar survey in 2006 indicated that these differences did not diminish. Computer usage was 38%, 64% and 82% among low, median, and high per capita mean income earners, respectively (CBS, 2008).

The significance of this new tool to children's lives may be concluded from diverse national studies. In late 2002, based on comprehensive research, British BBC network announced that British children are much more proficient in internet skills than in literacy skills. Technical internet terms are much clearer to them than technical literary terms (BBC Online Network, 2002). A European survey showed that in 2001 children aged 12-17 devoted eight hours a week on average to the internet (Jupiter Communications, 2001). In a 2001 study, 75% of the 12-17-year-old respondents declared that they would miss the internet very much if it would be unavailable to them for some reason. 74% stated that they use online instant messaging, compared to 44% of adults who use this tool for purposes of communication (Pew Internet & American Life, 2001). A 2002 sample-based survey conducted among 6,700 teenagers and their parents in the US showed that 56% of all teenagers prefer internet communication to telephone communication, (CyberAtlas, 2002). A 2005 US survey indicated that 89% of all 12-17-year-olds use electronic mail services, 75% use the web for instant messaging and 81% use game options offered on the internet (Fox, 2005). A survey conducted among 15-19-year-old teenagers living in Hong Kong indicated that these teens spend 34% of their leisure time on the internet; compared to 31% devoted to watching television, 26% to reading newspapers and magazines, and 9% to radio (NFO World Group, 2002).

In the course of a few years, information and communication technology has transformed from a mere tool for solving well-defined tasks into a medium for communication and co-activity (Heim et al., 2005), corresponding to the general societal shift from an information society to a communication society (Wiberg, 2004), and from passive media consumption to active media participation. Information and communication technology is now credited with creating new forms of communicative relationships and friendships (Brandtzaeg & Stav, 2004), and is considered the key driver in creating new opportunities for participation (Kanayama, 2003).

B. The downside – Do the internet's social costs exceed its benefits?

The fact that teenagers spend over one third of their leisure time on the internet requires serious consideration of the **internet's social implications**, especially for users who devote such a significant portion of their leisure time to its use.

A study published in 1998 by researchers from the Carnegie Mellon University in the US aroused a furor when its findings showed that even users who devoted only several hours a week to the internet seemed to be susceptible to higher levels of despondency and loneliness than non-users (Harmon, 1998). The two-year study, whose \$1.5 million costs were covered by major computer corporations including Apple, Intel, Hewlett-Packard and AT&T, disproved the basic hypothesis of its initiators, who believed that the internet encourages social contact. Consistent with findings of an earlier study which indicated that continuous television viewing reduces the social involvement of viewers, the Mellon Carnegie University study further showed that frequent internet use is significantly correlated to a decline in social involvement. This is true both of communications in the family and in social networks. More intensive internet use was found to be associated with a decline in the number of social acquaintances and in the intensity of social relationships (Silberman, 1998).

In February 2000, the main findings of a survey conducted among 2,689 households by a major social research institute of Stanford University were published. This study confirmed that the more time people devote to the internet – the less time they devote to meeting other people (Business Wire, 2000). A more extensive review of these findings indicates that one-quarter of all regular internet users (over five hours a week) felt that internet use comes at the expense of time devoted to family, friends, and recreation outside the home. 60% of regular internet users reported that they watch less television as well (ibid.). One-third of these respondents said that internet use also reduces the time they devote to reading newspapers (ibid.).

A study on link between intensive internet use, despondency, optimism, loneliness, and stress, conducted among college students found **no significant correlation** (Wastlund et al., 2001). Another study investigated the link between internet use and feelings of loneliness, distinguishing between two types of loneliness: *social loneliness* and *emotional loneliness*. Social loneliness was defined in this study as a feeling of not belonging to a social group. Emotional loneliness was defined as the absence of an intimate relationship. This study indicated that not only does the internet not cause loneliness; it even **helps reduce social loneliness** (Moody, 2001). This view had many supporters. Another study conducted among internet users showed that the internet not only does not cause despondency or encourage social loneliness, it has a significant benefit – it provides users with feelings of confidence and comfort when meeting new people (Bargh & McKenna, 2000). The paper lists four major reasons why and how the internet **encourages** social relationships: the greater anonymity; absence of physical components so critical in face-to-face relationships; the greater control afforded over the rate at which the relationship progresses and the time devoted to it; and finally, the physical distance between those involved in online relationships (ibid.). The same conclusion was reached in a later research (Morahan-Martin & Schumacher, 2003), that pointed out that social

behavior of lonely individuals was consistently enhanced online, and lonely people were more likely to report making online friends and heightened satisfaction with their online friends.

Repeated studies in various countries have attempted to clarify the relationship between internet use and social contact. Most of the studies, including studies in the USA, England, China, Hong Kong and Japan, did not find any negative impact of intensive internet use on the fabric of social relationships in the family (Cole & Robinson, 2002; Lee & Zhu, 2002; Mikmi, 2002). Some findings emphasized the complexity of the topic. Thus, for example, one study showed that internet users spent **more** evenings with friends than nonusers. On the other hand, they spent **fewer** evenings with their relatives or neighbors. In sum, internet users did not forge less social contacts compared to nonusers (Neustadl & Robinson, 2002).

Another study, based on a sample of 2,096 Americans, found no conversion of face-to-face relationships into online-internet relationships. It also found that internet use seems to be accompanied by a slight **decrease** in feelings of loneliness among internet users who have friends on the web than among those who do not have online friends. If so, the internet has both positive and negative effects on its users (Coget et al., 2002). In 2002 the compilers of the Stanford Survey from 1998, reported above, published the conclusions of a two-year in-depth follow-up survey. The main finding of this survey was incompatible with the findings reported in the initial study. The in-depth study showed that the total effect of internet use on communication with family and friends, as well as on community involvement and psychological well-being, was **positive**. However, the study indicated that it seemed necessary to distinguish between *extroverts*, who gain more social support, and *introverts*, who gain less support through the internet (Kiesler et al., 2002).

The positive social impact of internet use was further confirmed by a study published in 2003 by Prof. James Katz, a prominent researcher. Katz concluded that the premise that intensive internet use is detrimental to community involvement and social integration was disconfirmed, in contrast to the pessimistic predictions of many researchers and observers. On the contrary, internet use **increases** community involvement, family involvement, and social involvement (Katz & Aspden, 2003). Katz stated that the internet in modern society has become an integral part of our daily routine. We should be careful not to perceive it as a utopia, liberating people and motivating them to form an egalitarian global community. Concurrently, it should not be perceived as a corruptive force leading to the formation of disparate groups and collections of isolated soulless people either. Similar to all other media, the internet may harbor both harm and benefits for its users (Katz & Rice, 2002).

Unsupervised addictive or compulsive internet use has recently emerged as an equally crucial problem associated with internet use (Careaga, 2002; Young, 2001; Greenfield, 1999; Griffiths, 1998; Kerkhof & Finkenauer, 2008). Thus, for example, in 1999 the British Broadcasting Corporation (BBC) reported a study held among a sample consisting of 17,000 respondents. This study showed that 5.7% of respondents had become addicted to the internet to some degree. The researchers stated that surfing the net had become a more serious problem than addiction to the lottery (BBC News, 1999). In the same news broadcast, the BBC reported that an earlier study held among students showed that about 10% of surfers had become addicted to the internet (ibid.). An extreme incident cited in this regard is described in a book by an American professor of psychology (Young, chap. 6, 1998). The book is based on an extensive three-year study investigating harmful internet usage. It presents the stories of dozens of addicts whose lives were ruined due to unrestricted use of the web. Radical cases of what health care professionals term "internet syndrome" (consisting of hallucinations, paranoia, and psychosis) were reported several years ago in China, where the internet age commenced relatively late (Sherriff, 2004).

C. Online chats – When, why, how much, and for what?

For the last decade, surveys have indicated that the internet plays a major role in the social relationships of 12-17 year olds with their friends, family and school in the US (e.g., Lenhart & Lewis, 2001). Both children and parents believe that the internet enriches their social life and provides them with crucial assistance in their studies. In a 2006 survey, 59% of parents whose children are connected to the internet at home stated that the internet is beneficial for their children (MacGill, 2007b), 55% of parents also believe that their children must learn to use the internet in order to succeed in life (Lenhart & Lewis, 2001). However, 68% of American parents reported setting clear rules for their children regarding which websites are permitted and which are not, and 55% of the parents said that they limit the duration of time their children are permitted to use the internet (MacGill, 2007b). Finally, the comprehensive 2006 survey showed that the five most prevalent internet usages for 12-17 year olds are reading and sending electronic mail (92%); surfing the net for fun (84%); accessing entertainment sites (83%); instant messaging (74%); searching for information about hobbies (69%) (ibid.).

Notably, of all teenage internet usages, only one is interactive in essence: chatting.

Table 1: 12-17 year old US teenage internet uses (%)

Use	%
Reading and sending e-mail	92
Surfing for fun	84
Accessing entertainment sites	83
Sending posts	74
Searching for information about hobbies	69
Searching for news	68
Games	66
Exploring products and services prior to purchase	66
Listening to music	59
Accessing chat sites	55
Downloading music	53
Checking results of sports matches	47
Accessing websites of clubs of which they are members	39
Shopping on the net	31
Accessing exchange or purchase sites	31
Searching for information on health issues	26
Constructing a website	24
Searching for information on topics that they do not feel comfortable discussing	18

Source: Lenhart & Lewis (2001, p 6).

This is the state of affairs in the USA. What is the situation in Israel?

A survey conducted several years ago in Israel (Cohen, 2003) showed that over 79% of participating youngsters in grades 4 through 12 have internet access. A later study, conducted in 2006, showed that 89% of elementary school respondents and 94% of junior and high school respondents had access to the internet at home (Lamish & Riback, 2007). According to another survey conducted among 12-18 year olds in 1999 (Shemla et al., 1999; Nachmias et al., 2000), the prevalent internet use was for communication purposes. In addition, 90% of users searched the net for information related to their hobbies, over 80% searched the net for general information, 70% accessed game sites, and many stated that they surf the net with no declared purpose (Shemla et al., 1999). Chatting was very popular: 46.3% accessed chat rooms very often and an additional 33.9% of the respondents used chat rooms infrequently. Only 19.8% did not access chat rooms at all (Nachmias et al., 2000). In contrast, discussion groups were not popular and were frequented only by 17% of boys versus 5% of girls (Shemla et al., 1999).

Respondents gave various reasons for using the internet: 21% began using the internet out of curiosity, 18% due to its importance, and for fun. Other reasons mentioned in this survey were the desire to enter chat rooms, to download resources, and to locate information for learning purposes (Shemla et al., 1999; Nachmias et al., 2000). According to Lamish and Riback's 2006 survey, the most prevalent internet usages among students are searching for information (85%), instant messaging (83%), downloading various files (79%), homework (71%), and games (68%). While use of chat rooms was not prevalent among the participants of this survey (16%), 36% of survey respondents reported participating in discussion groups, which is a significant interactive use (Lamish & Riback, 2007). A series of surveys conducted since 2000 among ages 13 and over, compiled by a commercial firm, showed that 34% to 44% of the respondents reported using the internet for chatting purposes (survey, TIM[™] 2004).

According to a survey by Cohen (2003), online activity showed a significant age effect:

- Youngsters in grades 4-6 surf the net in Hebrew and use the internet for playing games and accessing hobby sites more than youngsters in grades 7-12.
- Youngsters in grades 10-12 use the internet to find general information, and to downloading text and articles, more than youngsters in grades 9-1.
- Youngsters in grades 7-9 are the internet user group that most intensely uses the internet for communication purposes. This group uses e-mail more than youngsters in either grades 4-6 or grades 10-12. The study also found a gender effect in internet usage: Boys are usually online more times a week ($M=5.47$) than girls ($M=3.67$) and remain online twice the number of hours a week ($M=9.17$) than girls ($M=4.29$) (Cohen, 2003[2]). In general, boys randomly surf the net, access game sites, take distance learning courses, and download resources more than girls (ibid.). In other words, gender impacts the net use in more than one way.

The age effect was confirmed in the 2006 survey noted above (Lamish & Riback, 2007). Use of the internet for instant messaging was much more prevalent among junior high school (85%) and high school (91%) students than among elementary school students (70%). Downloading files on a daily basis was a prevalent internet use only among 18% of elementary school students versus 43% of junior high school students and 56% of high school

students. The opposite was true for the internet gaming which was prevalent among 92% of elementary school students yet only 67% of junior high school students and 50% of high school students (Lamish & Riback, 2007).

D. Findings of a survey on chat room usage by junior high school and high school students

Below are findings of a 2004 study on chat room usage patterns of 60 students aged 12-18 junior and high school students from central Israel. The research group included 34 girls (57% of the respondents) and 26 boys (43% of the respondents). 37 of the respondents were aged 12-15 (62% of the respondents). 23 were aged 15 or over (38% of the respondents).^{*} The survey included all students from relevant grades in the two schools who reported accessing chat rooms. The study comprised two parts: the distribution of printed questionnaires and analysis of responses; open-ended conversations with 10 respondents.

- This survey sought to shed additional light on whether gender and/or age affect chat room usage patterns.

The main variables examined by the survey were: frequency of chat room access, access times, and prominent topics of discussion in these rooms, types of sites used, and the identity of chat partners in these rooms.

Consistent with previous studies, analysis of the findings indicated significant **gender** differences in chat room usage patterns. Boys are the significant "chatters": 46% access chat rooms daily or almost daily; versus 25.7% of girls. Only 6.7% of boys, versus 21.5% of girls, use chat sites less than once a week.

Table 2: Distribution of online chatting among boys and girls (%)

Frequency of online chatting	Boys (N=26)	Girls (N=34)
Daily	23.3	8.3
Almost daily	23.3	17.4
2-3 times a week	24.2	22.2
Once a week	22.5	30.6
Less than once a week	6.7	21.5
Total	100.0	100.0

P<0.01

$\chi^2(4) = 22.36$

However, despite the statistically significant differences between boys and girls, girls also view chat sites as a routine activity, as indicated by the remark of a 16 year old girl: "Chatting is something you do all the time. Almost everybody does it. It's ordinary. You speak to friends by chatting. I even know when my friends are connected and when I can speak to them."

A significant correlation was also found between gender and topics of conversation occupying teenagers on chat sites, and the relative importance of chat topics. The main chat topic among boys is *relationships between the sexes*, followed by *relationships with peers*. The main chat topic among girls is *relationships with peers*, followed by *relationships between the sexes*. Moreover, interests and hobbies, which occupy 23.0% of boys on chat sites, occupy only 11.4% of the girls. In other words, girls and boys have different chat focuses.

Table 3: Distribution of chat room log-ins by topics of conversation among boys and girls (%)

Chat topics	Boys (N=26)	Girls (N=34)
Relationships with peers	23.0	37.1
Relationships between the sexes	42.5	31.4
Personality / self image	4.6	4.8
Interests (hobbies)	23.0	11.4
Other	6.9	15.2
Total	100.0	100.0

P<0.05

$\chi^2(4) = 11.42$

Remarks made by respondents in this context are notable. For example, one 15 year old boy stated, "We talk about all kinds of things; about the parties, about the girls we met there, about who's particularly good looking, about who's particularly nice."

^{*} I am grateful to my student, Ronit Gertenberg, for collecting the field data as part of my seminar on "Values, socialization, and Israeli society."

In contrast, a 13 year old girl stated, *"I chat with friends. We talk and gossip. We tell each other about school and the youth movement. What's new with this girl or with another?"*

At the same time, both boys and girls perceive the significance of these relationships per se. Both see the internet and chat sites as a means of forming social contacts. This is evident from the following information, provided in a conversation with a 17 year old boy: *"Sites are used for purposes of acquaintance. You leave an electronic message on the board. If shared interests are revealed as a result, they lead to actual meetings. You eventually become friends."*

These findings raise the question of whether gender affects the identity of teens' chat partners. Analysis of sample findings shows a significant statistical correlation: The relative weight of boys who chat with strangers is much higher than that of girls, while the weight of girls who chat with friends is much higher than that of boys.

Table 4: Distribution of respondents' conversation partners by gender (%)

Conversation partners	Boys (N=26)	Girls (N=34)
Close friends	19.2	26.5
Distant friends	11.5	26.5
Strangers	69.3	47.0

$P < 0.01$; $\chi^2(3) = 24.76$

On this issue, the remark of a 15 year old girl is notable: *"When chatting you never know who's really on the other side of the screen. You never know if it's the person described. You have to be afraid. Fear prevents you from doing anything dangerous. Meeting a person without knowing who he really is, as he describes himself, is very dangerous!"*

In contrast, no gender effect was found in chat times. The major frequency group of both boys (46.2%) and girls (45.1%) comprised those who reported chatting randomly at irregular hours. At the same time, more boys (31.5%) than girls (23.8%) access chat rooms at night.

Moreover, although the survey showed that boys chat much more than girls, it seems that once they access the internet there is no significant gender based difference in the duration of conversations. The most prevalent duration among both boys and girls is 30 ms (60.5% for boys; 69.4% for girls). This is also true of the distribution of reasons for accessing chat sites, on which there is no significant difference between girls and boys. The desire to "pass time" is the main reason cited by both groups. "Forming acquaintances" was the second most important reason for both boys and girls.

The second major finding of the survey is that **age** is also a significant moderator of chatting patterns. Among young teens aged 12-15, the frequency group is comprised of those who do not chat at regular times (51.7% of the sample). Among older teens aged 15 and over, the frequency group is comprised of those who chat at night (41.1%).

Table 5: Distribution of chat times by age group (%)

Chat times	Ages 12-15 (N=37)	Ages 15+ (N=23)
Afternoon	14.2	8.1
Night	17.0	41.1
Weekend	11.4	6.5
No regular time	51.7	37.9
Other time	5.7	6.5
Total	100.0	100.0

$P < 0.01$; $\chi^2(4) = 22.94$

Furthermore, among younger teens aged 12-15 the frequency group is comprised of those who access one or two chat sites (64.2%). This is true of only 42.4% of teens aged 15 and over.

In contrast, no significant correlation was found between age and frequency of accessing chat sites or between age and the duration of time devoted by teenagers to chats. In both age groups the frequency group is comprised of those who devote between 30 to 60 ms to chat rooms (for 12-15 year olds, 64.5%; for the older 15 and over group: 66.7%). This is also true of the extent to which chat rooms are used. 73.3% of children aged 12-15 chat online, while 77.7% of the older 15-18 year olds chat online.

Just as no significant correlation was found between gender and the reasons for accessing chat rooms, neither was a correlation found between age and reasons for internet use. The dominant reason both among 12-15 year olds (56.0%) and the older 15 and over age group (62.1%) was "to pass the time." As mentioned, this is the dominant reason for both genders. However, in contrast to gender, which had a significant effect on chat issues, no age effect was found in access reasons, or in chat topics: The prevalent chat topic found among both younger (38.7%) and older (32.4%) teens was *relationships between the sexes*.

While gender was found to have no significant effect on the type of chat sites used by students, age was found to have such an effect. This is particularly evident in the distribution of accessing children's chat sites. While teens in the 12-15 age group still use children's sites, the older age group does not use them at all. The opposite is true of adult sites. The younger age group does not access adult sites at all while the older group does.

Table 6: Distribution of chat sites by user type and age group (%)

Type of sites	Ages 12-15 (N=37)	Ages 15+ (23)
Children's sites	8.1	0
Teen sites	51.4	60.8
Adult sites	1.9	8.7
All-inclusive sites	35.1	30.5

$P < 0.01$; $\chi^2(4) = 23.71$

This is true of chat site genres and also of teenage views of chatting. Finally, analysis shows that age has a significant effect on teenage views of chatting.

Table 7: Distribution of respondents by age group and views of chatting (%)

Why do you like to chat	Ages 12-15 (N=37)	Ages 15+ (N=23)
I like to chat with people	78.4	39.1
I like being anonymous	59.5	43.5
Its an opportunity to express myself	24.3	13.0

$P < 0.01$; $\chi^2(2) = 22.80$

On this matter, it is interesting to note the response of a 17 year old respondent: "*Why do I like to enter chat sites? Because it's an opportunity to expand my acquaintances 'without leaving my seat'. Like a detective. In real life you focus on appearances. Online you can sketch the character of the other person by corresponding. It's interesting. Like a crossword puzzle.*"

On the other hand, note the practical-realistic attitude of another 17 year old male respondent: "*I met a girl in a chat room. We talked several times and then she gave me her mobile phone number. I met her. It's fun.*"

E. Discussion and summary

The current paper describes a study conducted with a group of teenagers aged between 12 and 18 years old, following the rapid, wide internet penetration of all levels of society and teens in particular. Since various studies in Israel and elsewhere have shown that teenagers use the internet primarily for communication purposes – of which chatting is a significant part – the study focused on this subject.

Regarding concerns and findings expressed in previous studies, the current study found a not insignificant number of cases of excessive internet use among the research population: 9.7% of the boys and 5.0% of the girls reported chatting for two hours or more when they accessed chat rooms. We may cautiously identify boys and older teens as the high risk groups among chatters. However, findings seem to show that internet technology and chat sites help satisfy teenagers' crucial communication needs (see also Harasim, 1993; Rheingold, 1993). The advantage of the net in this context is that virtual contacts formed in chat rooms avoid the obstacles that teenagers encounter in daily life. For example, chat rooms allow participants to judge others without necessarily becoming emotionally involved (King, 1996). Chatters may become passive partners in online relationships (by limiting themselves to **reading** posts, such as 27.8% of boys and 23.6% of girls in our study reported) while still enjoying a deep emotional experience.

Furthermore, one of the main tasks in adolescence involves developing social relationships, including relationships with peers, members of the opposite sex, and family (Ziv & Ziv, 2001). It is recognized that the source of the relationship is an important factor to consider (Mesh, 2009). Studies have shown diversification in the sources of friendship formation among adolescents. Several studies pointed out that teens make new friends in their home

vicinity and at school, but also *online* (Mesch & Talmud, 2006; Wolak et al., 2003; Gross et al., 2002). The internet obviously affords options for expanding teens' relationships outside the family: internet usage allows teens to remain inside the home while simultaneously "leaving the home" on a virtual level. They sit at the computer, talk to their peers, become detached from their parents, and focus on themselves. This corresponds to the process of *individuation* – identity formation – characteristic of this age group (Blos, 1967). Moreover, compared to personal encounters, the use of chat rooms facilitates more flexible role playing, as chatters can adopt various fictitious identities (Grohol, 1998). Over 80% of both girls and boys in our study expressed the opinion that chatters on the web *do not represent themselves realistically*. About 36% of the respondents admitted to not declaring their sex on chat sites. Over 50% reported using aliases.

Thus, based on the findings of the study the development of new relationships made possible through chat sites fulfills adolescent needs in three important spheres (Ziv, 1984): in the social sphere (relationships with the opposite sex and with peers), in the emotional sphere (character shaping or forming identities and self-image), and in the intellectual sphere (in regard to interests and hobbies).

On two issues, findings of the present study confirmed previous points raised by other researchers: **gender and age** are variables that affect online activity. The effect of gender is manifested both in the intensity of internet usage (boys are undoubtedly the more intensive chatters in our study, both regarding chat frequency and duration) and chat topics. These findings are congruent with findings of previous studies, which show that boys spend more time online than girls (Haisken-DeNew et al., 2001; Nachmias et al., 2000; Schumacher & Morahan-Martin, 2001; Papastergiou & Solomonidou, 2005). The findings of the current study, however, contrast with findings of other previous studies (e.g. Bissen & Panis, 1997, Miller et al., 2001; Ilomaki et al., 2002).

The effect of age is manifested both in the times at which teens access the net and in the number of sites accessed by users. It also impacts teenagers' views of chatting.

In 1967 Marshal McLuhan, renowned Canadian sociologist and educator, published his important essay "*The medium is the message*" (McLuhan, 2005). This essay was the first indicator of the new era of our current "**electronic society**". The previous decade was the decade of the internet revolution which breached the boundaries of formerly interpersonal communications. As early as 1964, McLuhan predicted that electronic communications will reshape human thinking. This reshaping eventually influences the arts, sociology, science, and religion. The technological revolution is not only a new medium; media technology is also a **social essence**. This is the basis for the significance that must be attributed to the study of new technologies uses. This is also the basis for the unique significance that must be attributed to ways in which teens involve themselves in these technologies.

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