

National report for Poland

By Lucyna Kirwil

1 1. The Internet

1.1 Findings on children's access to the internet and online technologies

A Eurobarometer study based on parents' and caretakers' reports shows that 47% of Polish children up to age of 17 years had access to the Internet in 2005 (Eurobarometer, 2006). All other data sources report a slightly higher ratio.

A 2002 self-report survey of 596 Polish children, aged 13-15 and randomly selected from schools and classes in two big cities in Poland, found that only 1.8% did not have any access to the Internet (Kirwil, 2002a).

A 2003 Mediapro study conducted in a sample of 12-18 year olds (N=240) found that 56% of the children had access to a broadband connection at home, but only 48% of these children used it every day. 11% accessed the Internet through a mobile phone— 8% often and 3% very often (Mediapro, 2006).

From a representative sample of 969 adults surveyed in September 2004, 335 parents with children aged 7 to 19 reported that 50% of their children accessed the Internet at home (CBOS, 2004).

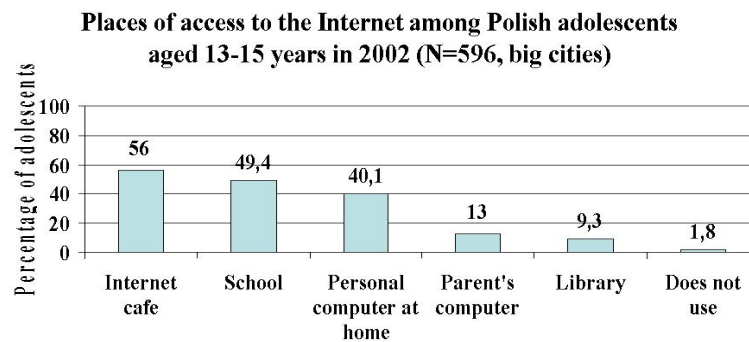
A Social Diagnosis survey conducted in 2007 (nation-wide representative sample; N=5532) showed that only 51.2% of the Polish households with children aged 7 to 15 had computer and Internet access at home. Thus, slightly more than half of the 7 to 15 year old population had access to the Internet at home (Czapiński & Panek, 2007; also see comparisons their study conducted in 2005 (Czapiński, 2005)).

More children from intact families with both parents (50%) than from single parent families (38%) or three generation families (46%) had access to the Internet in 2006 (CBOS, 2007).

According to 340 parents from Poland interviewed for Eurobarometer between December 2005 and January 2006, 47% of children aged 6 to 17 used the Internet in any location, 33% used it at school, 22% used it at home only, while 9% used it at friend's home, 8% used it in Internet cafés, 2% in public places (e.g. the library) and 3% elsewhere (Eurobarometer, 2006). All other data sources report a slightly higher ratio for home and school usage.

Of 596 Polish children, aged 13-15 and surveyed in 2002 in two big cities in Poland, 56.0% used the Internet mostly in Internet cafés, 53.1% used it at home and 49.4% used it at school. Only 9.3% used it in a public library (see Fig. 1) (Kirwil, 2002a).

Figure 1



Source: Kirwil (2002a) [158]

In another 2004 study conducted on a representative sample of Polish parents surveyed in their homes (N=969;) with children aged 7 to 19, most were convinced that their children used the Internet at school (76%), at neighbors' or relatives' homes (34%), in Internet cafés (27%) or via mobile phone (6%), and 5% believed their children accessed the Internet in some other place (CBOS, 2004).

In the same year Gemius carried out an Internet survey of 4,364 Polish students (up to 20 years old) called "Education on the Internet". The response rate was 2.2%. 99.1% of the respondents stated that there is a computer lab in their schools, but most use it together with their class during lessons. Only 35.7% said that they have used a computer at school individually. Computers were used most frequently during the Informatics lessons (95.5%) (Gemius, 2004).

Most Internet users aged 12 to 17 surveyed online by Gemius in January 2006 (N=1,779) used the internet at home (95.7%) and school (46%). Every fourth teenager used the Internet at a neighbor's home (25.3%). Only 6.6% used it in the Internet café. A marginal ratio of the respondents used it in other places (3.2%) (Gemius, 2006) (short version in English by Wrzesień, 2006).

Although Eurobarometer rates may seem a little underestimated, considering methodological differences and indices of access used in various studies, the Polish findings reveal a similar picture of Internet access for children and youth in the home and a quite different picture of Internet use in other places (including school and Internet cafés). According to Eurobarometer (Eurobarometer, 2006) Polish children belong to a group of countries better equipped with computers than other countries and for this reason the recent data show that the predominant place for Internet use is the child's own home.

Rates of Internet usage suggest that with time (and perhaps development of technology) Polish children's online activity shifts from public space (Internet cafés and libraries) to private space (their own home, relatives' homes or friends' homes).

1.2 Findings on children's use of the internet and online technologies

In 2003 a Mediapro study on a representative sample (N=Mediapro, 20,060) confirmed that 96% of children regularly used the Internet. Only 15% had had access to the Internet for less than 1 year. 36% of children aged 12-18 reported using the Internet for 4 years, and 36% had used it for between 1 and 3 years (Mediapro, 2006).

An October 2004 CBOS survey of a representative sample of households with children aged 7 to 19 found that the children used the Internet more than once a week in 59% of the households. Everyday usage increased with age, i.e. from 23% in 7-12 year olds to 35% in

older respondents. 33% used it daily, 26% several times a week and 20% once a week. 19% used the Internet several times a month or even more rarely (CBOS, 2004).

According to a recent Gemius online survey, 45% of the Internet users aged 7 to 14 accessed it daily and 34% used it several times a week. Only 9% were online once a week and only 12% a few times a month. However, this last group was online for longer periods of time (11 hours and 14 minutes) than the group that was online once a week (5 hours and 42 minutes) (Gemius, 2007b).

In 2002 only 20% of children aged 13-15 from big cities were daily users of the Internet (Kirwil, 2002a). The ratio increased to 35% among 7-12 year olds in 2004 (CBOS, 2004) and to 45% among 7-14 year olds in 2007 (Gemius, 2007b).

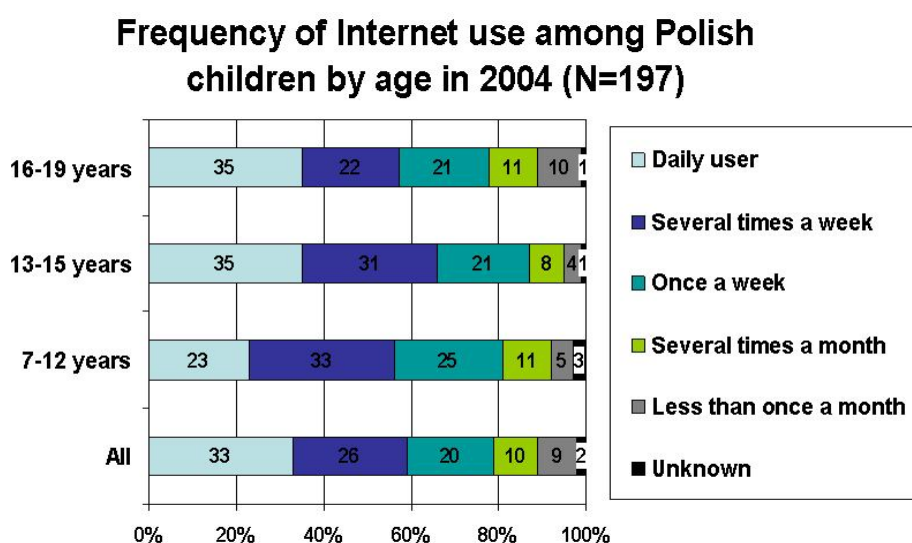
In 2002 only 6% of children using the Internet daily (N=96, i.e. 20% of the surveyed sample) were online less than 1 hour per day (Kirwil, 2002b). 22% spent more than 1 hour, but less than 2 hours, online. 27% spent 2 to 3 hours online per day, and Mediappro, 2006% spent 3 to 4 hours online per day. The remaining 21% of teens spent over 5 hours per day on the Internet (Kirwil, 2002a).

Children aged 7 to 14 made up 11% of a sample of 19,015 Internet users surveyed online by Gemius in Poland in June 2007. Children in that age group spent 15 hours and 56 minutes online per month in 2006, and about 10 hours more (24 hours and 27 minutes per month) in 2007 (Gemius, 2007b).

The Mediappro project reports that in Poland in 2003 the Internet was in common usage by 96% of young people (up to 20 years old). Only 3% had never used it. The Internet has become a universal tool for the activities of young people, providing information, education and leisure. Most Polish children and youths have used the Internet for more than 1 year (36% from 1 to 3 years, 22% for 4 years or more). Only 15% had enjoyed access to the net for less than a year (Mediappro, 2006).

As Fig. 2 shows, everyday usage increases with age, i.e. from 23% in the 7-12 year old age group to 35% in older respondents. The most frequent usage on average was noted for 13 to 15 year olds (CBOS, 2004).

Figure 2

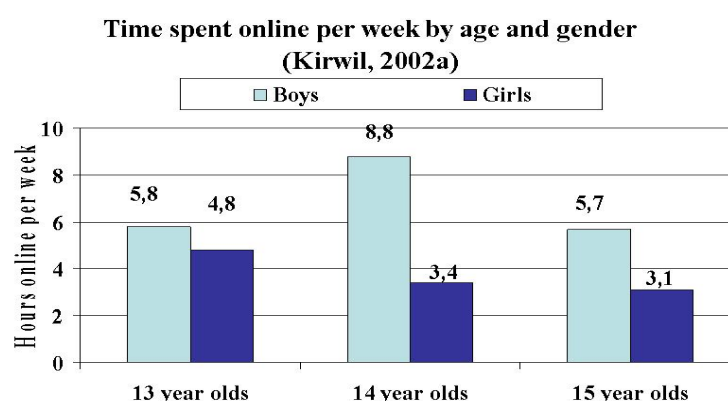


Based on: Młodzież i Internet: Korzystanie i zagrożenia. CBOS, 2004; Kirwil, 2007

Eurobarometer data suggest that the structure of places for Internet use changes with a child's age (Eurobarometer, 2006).

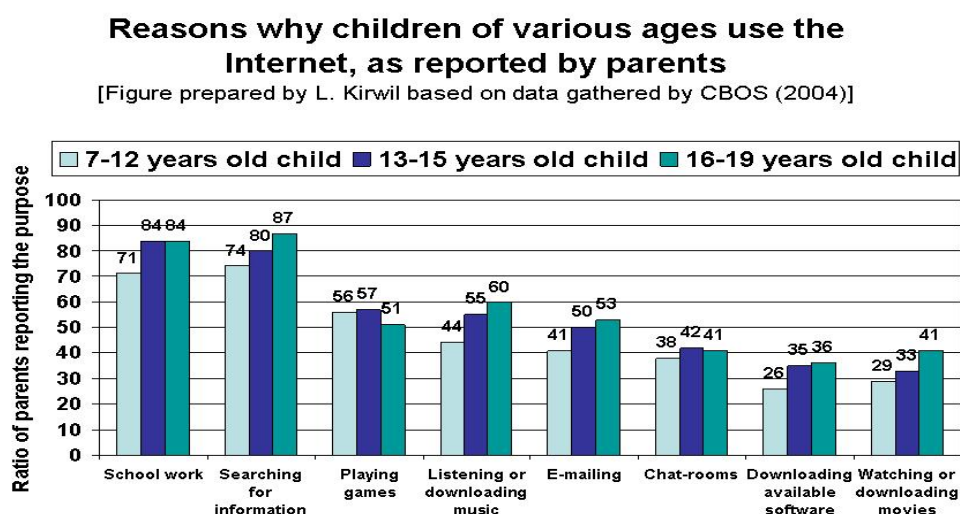
Kirwil (2002a) did not confirm the hypothesis that access to the Internet increases significantly in any place between the ages 13 and 15 years among Polish teenagers. However, the amount of Internet use is different for various ages of boys and girls. There is significant interaction between these factors for daily users. Daily use is lower (0.12 hours) in 13 year old boys than in 14 year olds (0.58 hours) and 15 year olds (0.21 hours). Teenage girls spend less time online each day as they get older: 0.17 hours among 13 year olds, 0.02 hours among 14 year old girls, and even less among 15 year old girls (Kirwil, 2002a, 2002b). Weekly use indices computed for this study showed that the only significant differences between genders were for weekly time spent online (see Fig. 3) (Kirwil, 2002b).

Figure 3



A 2004 CBOS study on parents' perception of how their children use the Internet suggests that the greatest increase in Internet use by children takes place between school age and early adolescence, because more parents from the latter group report a greater variety of technologies used by their children. The ratio of late adolescents who were interested in playing games, chatting online and using the Internet for school work is almost the same according to parents of both late adolescents and mid-adolescents (see Fig. 4).

Figure 4



Parents observed a systematic increase in opportunities for Internet use in the following: music entertainment (16% increase from childhood to late adolescence), enriching the child's knowledge through information searches (13% increase), schoolwork (13% increase), communication with others (12% increase), broader cultural participation through downloading and watching movies (12% increase) or using new technologies through downloading available software (10% increase) (CBOS, 2004).

The Kirwil study of teenagers (2002a) showed that age has a significant effect on playing games on the Internet. As adolescents get older they lose interest in the Internet as an opportunity for entertainment through games. 60% of 13 year olds reported they used the Internet for that purpose, but only 49% of 14 year olds and 43% of 15 year olds did this.

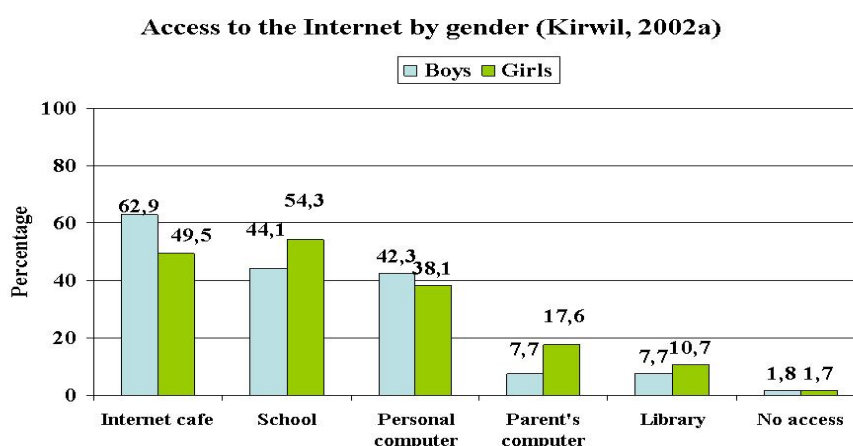
Teenage boys and girls do not differ in access to the Internet in Poland. Only 1.8% of boys and only 1.7% of girls from randomly chosen classes in two big cities reported that they did not have access to the Internet anywhere in 2002 (see Fig. 7; Kirwil, 2002a, 2002b).

However, OECD findings from 2002/03 show that more 15 year old Polish boys (Mediappro, 2006%) than girls (17%) had used the computer for over 5 years (Eurydice, 2005). The same ratio of boys and girls had a home computer (93.2% of boys and 92.7% of girls), but significantly more boys (39%) than girls (30%) had an Internet connection (Eurydice, 2005).

The same study showed gender specificity in learning computer skills. Boys acquire more computer skills from friends (21.8%) and learning alone (35%) than girls (11% and 8% respectively), who acquire more skills at school (58%) and from their family (60%) than boys (8% and 15% respectively) (Eurydice, 2005). These variations might explain gender differences as regards places of access to the Internet.

The Kirwil (2002a) study showed significant gender differences in the places where teenagers access the Internet (see Fig. 5). In 2002 in the two biggest cities, most boys went online in Internet cafés, while most girls went online at school. At-home Internet access took third place, whereas more boys than girls had their own personal computer. In the home, more girls than boys used their parents' computer, and more girls than boys accessed the Internet from the public library (Kirwil, 2002a).

Figure 5



Eurbarometer shows that more boys than girls use the Internet at school (Eurobarometer - Polish data, $p < 0,03$) (Eurobarometer, 2006).

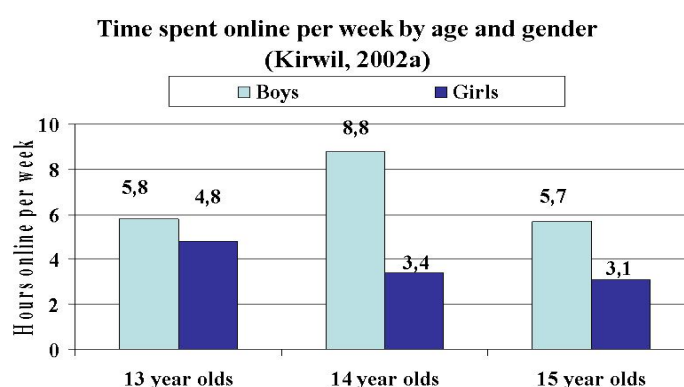
In Poland in June 2007, girls (who made up 47% of the whole tested sample of children) spent more time online (29 hours and 40 minutes per week) than boys, who spent 19 hours

and 46 minutes online each week (Gemius, 2007). Thus, Polish girls were online for 4 hours and 50 minutes, or 16 minutes longer than boys (Gemius, 2007b).

The OECD study shows that in 2002-2003, boys used computers more often (55% nearly every day and 11% a few times a week) than girls (36% nearly every day and 16% a few times a week (Eurydice, 2005).

The amount of Internet use differs for various ages of boys and girls. In general, boys go online longer than girls. However, significant interaction between gender and age has been found for daily users. Daily use is lower (0.12 hours) in 13 year old boys than when they are 14 years old (0.58 hours) and 15 years old (0.21 hours). Teen girls spend less time daily online as they get older (0.17 hours among 13 year olds, 0.02 hours for 14 year olds, and even less time for 15 year old girls (Kirwil, 2002a). Findings from that study showed that gender differences appeared significant only for the amount of time spent weekly online (see Fig. 6; Kirwil, 2002a). Girls aged 13 and 15 systematically spent less time online each week. Fourteen year olds were online three hours longer per week than boys aged 13 and 15 years old.

Figure 6



The OECD study proved that more boys than girls are very satisfied with how they perform computer activities: downloading files (74% boys, 59% girls), attaching a file to an e-mail message (61% boys, 40% girls), using Power Point (58% boys, 42% girls), and constructing a website (42% boys, 27% girls) (Eurydice, 2005).

Among Polish 15 year olds more boys than girls used a computer for six activities: 71% of boys played games at least a few times each week, compared to only 35% of girls; 48% of boys looked up information on the Internet compared to only 35% of girls; 24% of boys communicated via e-mails or chat-rooms compared to 40% of girls; 69% of boys and 62% of girls used word processing at least once a month; 61% of boys and 48% of girls used spreadsheets; 55% of boys and only 30% of girls programmed activities (Eurydice, 2005). Boys perceive themselves as more skilled than girls in surfing the Internet. In the focus group discussion by Kirwil (2002b) 13-15 years old boys knew how to deal with parent filter-blocking access to websites consisting of pornographic content; they knew how to set it up after disabling it.

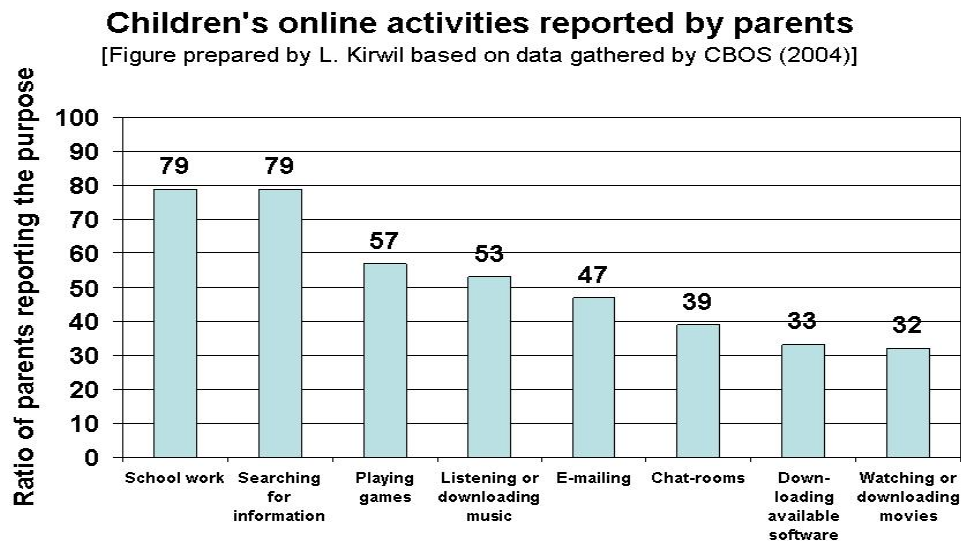
1.3 Opportunities experienced by children online

a) Parent report

Figure 7 shows that schoolwork (79%), searching for information (79%), playing games (57%), and downloading or listening to music (53%) are the most popular online activities among children 13-15 years old. Communications via e-mail (47%) and in chat-rooms (39%) are less popular online activities. Downloading available software or movies was least popular among teenagers in 2004, because the Internet quality was rather low (due to the low and

unstable speed of the service, there was very limited access to the broadband Internet at that time) (CBOS, 2004).

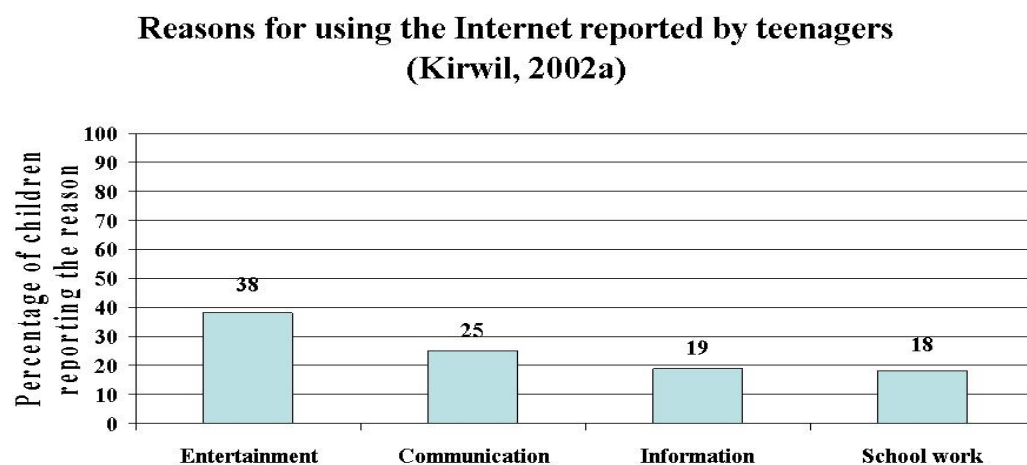
Figure 7



b) Children's report

Kirwil (2002a) asked teenagers (13-15 years old) for what reasons they used the Internet most. The Internet served mainly entertainment functions for 38% of respondents, while the remaining 62% of teenagers used it mainly for social contacts (communication 25%), looking for information (19%) or for schoolwork (18%) (see Fig. 8).

Figure 8



The Mediappro report shows children online most often use search engines (91%), communicate via instant messengers (75%), download music (67%), download software or movies (50%), and communicate by e-mail (62%). The way the data is presented does not

allow us to draw conclusions about other opportunities that children gain from Internet use (Mediappro, 2006).

The survey conducted in Poland by Gemius in 2004 for Interklasa showed that 92% of students below 20 years of age used the Internet for educational purposes (Gemius, 2004). In 2007 Gemius found that 82% of 7 to 14 year old children searching websites chose the websites presenting new technologies. 70% of children aged 7 to 14 chose websites that allow social contacts. Websites offering information are least popular: they were chosen by only 63% of children in this age group (Gemius, 2007b).

Gemius reports that in 2006, 12 to 17 year old surfing in the Internet most often used such services as messengers (92.1%), websites (91.4%), e-mail (85.3%), online games (51.3%), P2P (38.9%), chat-rooms (26%) and discussion forums (21.6%). Some young people went to dating services online (9.3%). Almost all teenagers used text messengers (99.3%). Only 38.5% used audio messengers and not many of them (13.1%) used video for this purpose (Gemius, 2006).

In their report Gemius found that 70% of children using the Internet spent a substantial amount of time playing games online (4 hours and 42 minutes per week) (Gemius, 2007b).

Table 1 shows a summary of findings from recent research on children's online activities.

Table 1. Online opportunities used by Polish children. Polish data from various studies; child and parent perception

(Based on: Eurobarometer, 2006, Kirwil, 2002a, Mediappro, 2006, Gemius, 2006, CBOS, 2004, Gemius, 2007b; selection by L. Kirwil)

Opportunity	% (source of data)
Communicators use	92 (Gemius, 2006)
Using search engines	91 (Mediappro, 2006)
Visiting websites	91 (Gemius, 2006)
-for new technology	82 (Gemius, 2007b)
-for social contacts	70 (Gemius, 2007b)
-for global information	62 (Gemius, 2007b)
Access to global information – parent perception	79 (CBOS, 2004)
Educational resources in general	92 (Gemius, 2004)
Educational resources (school work) – parent perception	79 (CBOS, 2004)
Use MSM or instant messengers	75 (Mediappro, 2006)
Use instant messengers – parent perception	60 (CBOS, 2004)
Send/receive emails	85 (Gemius, 2006)
E-mails	62 (Mediappro, 2006)
E-mails – parent perception	47 (CBOS, 2004)
Entertainment, games and fun: playing games	70 (Gemius, 2007b)
Playing games – parent perception	57 (CBOS, 2004)
Playing games	51 (Gemius, 2006)
Playing network games	23 (Mediappro, 2006)
Playing games online	23 (Mediappro, 2006)
Entertainment, fun: music	67 (Mediappro, 2006)
Downloading and listening to music – parent perception	53 (CBOS, 2004)
Listening to music	45 (Mediappro, 2006)
Phone calls via Internet	30 (Mediappro, 2006)
Chat in chat-rooms – parent perception	39 (CBOS, 2004)
Chat-rooms	26 (Gemius, 2006)
Chat-rooms	13 (Mediappro, 2006)
Watch/download video clips, watch TV	25 (Mediappro, 2006)
Privacy for expression of identity: blog	18 (Mediappro, 2006)
Look for products or shop (often & very often)	12 (Mediappro, 2006)

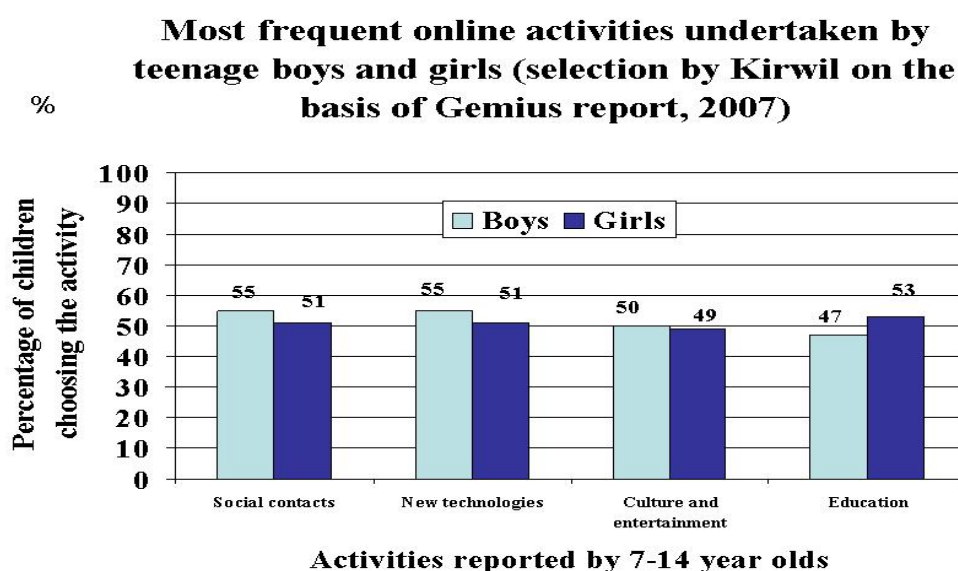
Children use the Internet for communication and entertainment, for social contacts and participation in various networks, and as a source of information for school work. Parents

underestimate the Internet's potential for entertainment, communication and creating social contacts (i.e. visiting websites for social contacts, using instant messages, sending e-mails, playing games, listening to music; the exception is visiting chat-rooms), and the educational function of the Internet for children doing their schoolwork. At the same time, parents overestimate the role the Internet has for children as a source of global information. While children use the Internet as a tool for getting knowledge, they tend to use it less than parents think they do.

Gender makes little difference to the location of Internet access. Kirwil (2002a, 2002b) reports that more boys used Internet cafés and had personal computers at home, while more girls accessed it at school, the public library and at home via their parents' computer.

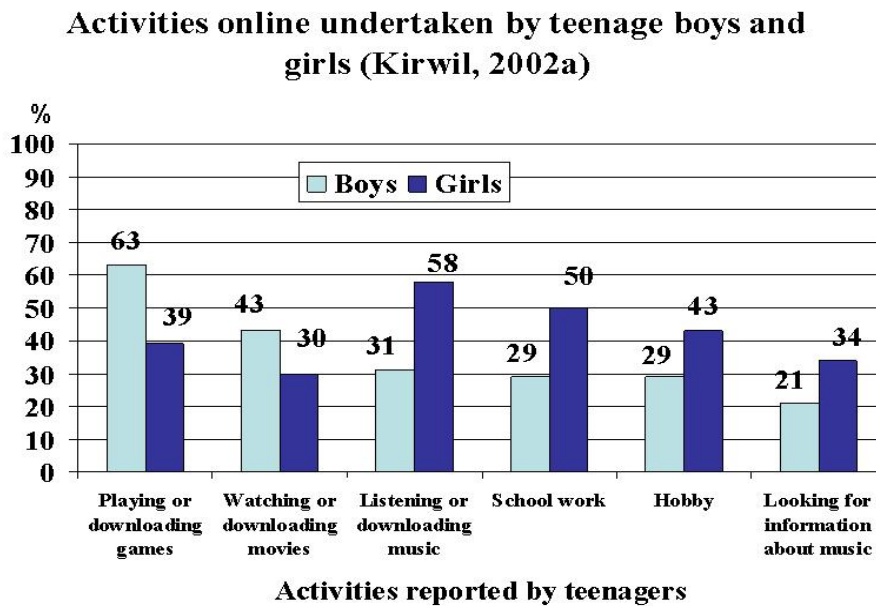
Boys and girls differ in the purposes for their Internet use. In 2007 Gemius reported that among 7 to 14 year old children, boys chose websites which provided social contacts and participation in various social networks (55.2%) and new technologies (54.9%) more often than girls (51%) (see Fig. 9). Girls (53%) are more interested than boys (47%) in educational opportunities. Both genders are almost equal in the frequency they enter websites for entertainment and cultural participation (Gemius, 2007b).

Figure 9



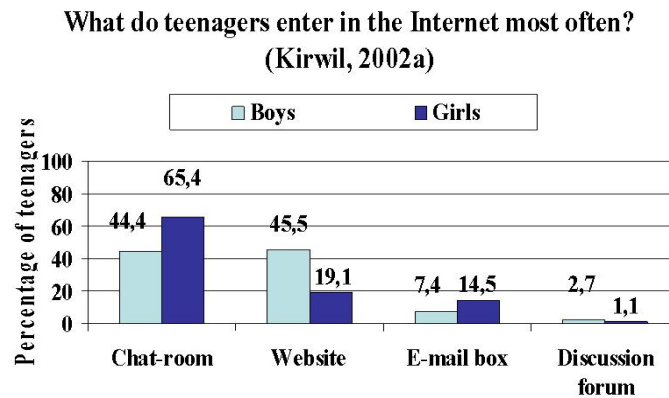
Kirwil (2002a) found that most teenagers used the Internet for entertainment (see Fig. 10). Among 13-15 year old teenagers more boys than girls found entertainment playing games and downloading and watching movies. More girls than boys at this age entertained themselves with downloading and listening to music, or finding needed information about music and songs. Girls also used the Internet for their hobbies more often than boys. Girls used the Internet more often than boys as a source of information for schoolwork.

Figure 10



Boys surf websites and participate in discussion forums more often than girls, while girls chat and exchange e-mails more often than boys (see Fig. 11; Kirwil, 2002a, 2002b).

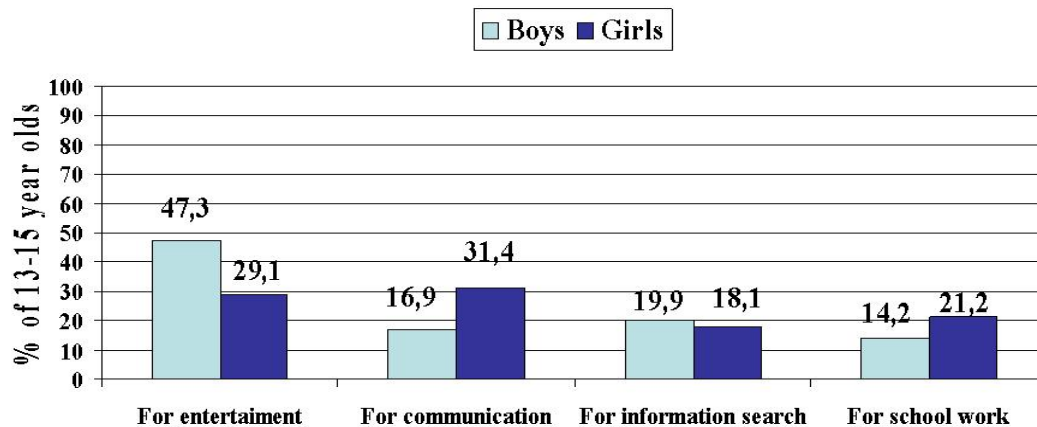
Figure 11



Kirwil (2002a) also looked for the most important reason teenagers used the Internet (see Fig. 12). Having four choices: searching for information, communication with other people, entertainment, and schoolwork, boys chose entertainment more often, while girls chose communication with other people and schoolwork. The frequency of information searches only slightly differed between genders.

Figure 12

The most important reasons of the Internet use by boys and girls (Kirwil, 2002a)



Findings in the population of Polish children and youth confirm that there are differences in the way boys and girls use the Internet. The Internet is a source of entertainment and amusement rather than knowledge for boys, while it is a source of entertainment and knowledge for girls.

1.4 Risks experienced by children online

a) Risks indicated by parents (or the adult generation):

In a 2004 CBOS study 61% of parents (N=601) were afraid of risks on the Internet (63% of those parents whose children do not use the internet, and 67% of the parents whose children do use the Internet). The parents (N=967) answered open-ended questions about the risks related to Internet use by children. Their answers were classified into the categories presented in Table 2.

Table 2. Online risks reported by Polish parents (CBOS, 2004)

Risks reported by parents	% (N=601)
Sexual abuse: demoralisation, pornography, molestation; (paedophilia)	67 (38)
Bad friends; lack of parental control over child's social contacts	31
Other inappropriate contents (without sex and erotica)	11
Violence, aggression, bullying	10
Sects, Satanists	7
Drug abuse	5
Internet dependency	5
Frauds, being swindled	5
Risks for household safety	3
Risks for health	2
Losing time	1
Other	3

The more educated the parents were, the more risks they perceived: about one fourth of parents with higher education, one third of parents with secondary education, and half of parents with primary education did not perceive the risks. The four most commonly listed risks were perceived more often by parents with higher education than by other parents (CBOS, 2004).

Three years later Gemius (2007a) asked in an online survey whether adults in Poland (N=2,090; 829 males, 1,261 females; 1,158 of responding adults were students) were aware of various types of violence experienced by children and youth when they were online. Only 13% of adults surveyed did not hear about various types of cyber bullying (listed by children below in Tab. 3). 47% of adults were aware of the risks related to bullying online in the form of threats and blackmailing, and 64% of them were aware of verbal abuse or extreme verbal aggression.

The 2005/2006 Eurobarometer survey found that 18% of parents/guardians think that their child has ever encountered harmful or illegal content on the Internet

b) Risks indicated by children:

The online survey conducted by Wojtasik (2003) on a sample of 8991 children (1180 boys - 13%, 7763 girls - 87%) aged 12-17 showed that more than three quarters of Polish children (75.3%) have been invited to a face-to-face meeting and a quarter of the participants have met in person with a stranger from the Internet. While communicating online with strangers, children are often targets of sexual interest and unwanted sexual proposals. 56% of them have been induced to unwanted sexual conversations, often accompanied by abusive images (14%), aggression (32%), requests for a photo (66%), and a meeting proposal (69%). More girls (61.2%) than boys (35%) reported being induced to sexual chatting. More than 30% of the children who have been induced to sexual conversations felt frightened/scared about this situation. A vast majority of the children were exposed to unwanted abusive images on the Internet. In the past year 80% of them have inadvertently encountered pornographic materials on the Web. Half of the children have received links to pornographic websites in e-mail messages. Among children who have come upon pornographic materials on the Internet (80%), a significant percentage report that these have not been isolated incidents (36% report several and 29% report numerous cases). Nearly half (49%) of the participants who have received links to pornographic websites have used them (29% have done this repeatedly) (Wojtasik, 2003).

A study conducted by Gemius in September 2006 focused on the problem of dangerous content on the Internet (N=2559 children using the Internet). It showed that 71% of young Internet users encountered pornographic and erotic images on the Web and 51% found violent content on the Web (a majority by accident). A vast majority of the respondents reported that this was mostly casual contact (Gemius, 2006b).

Another online survey conducted by Gemius in January 2007 aimed to describe types of media violence (i.e. via internet and mobile phones) and their prevalence among 790 teenagers using the Internet (140 children aged 12-14 and 650 teenagers aged 12-17; 276 boys, 514 girls). Other goals were to find how victims respond to different types of cyber violence (negative emotional reactions, copying). More than half of children using the Internet and mobile phones have experienced various forms of violence and cyber bullying (see Table 3; Gemius, 2007a).

Table 3. Type of violence (bullying) experienced by Polish children via Internet and mobile phones; children's report – life prevalence indices (Table by L. Kirwil on the basis of data gathered by Gemius in January 2007)

Online risks reported by children (as recipients)	% (N=790)
Being an object of unwanted photos or films	57
Extreme verbal aggression:	52
Vulgar, crude words; rude naming, calling names, bad language	47
Humiliation, poking fun at	21
Threats, blackmailing	16
Publication of embarrassing personal information	14
Information, pictures	9
Multimedia materials	5
Somebody impersonated, has taken child's identity	29

Besides verbal forms of cyber bullying, more than every second child experienced potential threats related to unwanted photos and video recording, mostly with mobile phones. Most threat came from peers and school friends.

It is interesting to note that many victims of cyber-bullying responded to this cyber-bullying with a neutral emotional reaction: 35% of victims of humiliation/poking fun and 43% of victims of threats/blackmailing. More than 80% of cases of unwanted photos or videos were taken for fun.

Only 21% of filmed respondents were convinced it was done to them in anger, only 12% believed it was to poke a fun at them, and only 1% said it was done to blackmail them. 54% of filmed respondents had a neutral emotional reaction (Gemius, 2007a).

The EB 2007 focus groups of children aged 9-14 showed that:

- The most serious threats connected with using the Internet refer to participation in open chats, entering websites (blogs) of strangers and downloading files.
- Girls indicate attempts to be contacted by strangers as the primary danger related to using the Internet (instant messages, Gadu-Gadu or chats). Girls speak openly about such incidents with their parents and colleagues. They claim that they do not accept such contact, although they also mention cases when the stranger turned out to be a colleague who just wanted to make a joke.
- Younger boys spontaneously mention the following threats: mobile phone theft, finding websites with viruses or websites that charge money on the Internet. Older boys indicate also the risk of catching a virus through a computer or a mobile phone, hacking (learning passwords and getting access to games), and chatrooms as a place where one can meet a person pretending to be someone else.

Older Polish children are more at risk of encountering harmful or illegal content on the Internet according to their parents (see Table 4).

Table 4. Ratio of Polish children with experience of exposure to harmful or illegal content according to parental reports as dependent on child's age; source of data: Eurobarometer; computation by L. Kirwil, 2007)

Age category	(N)	Percentage of parents reporting their children were exposed to illegal or harmful content
6-9	(26)	34.6
10-13	(55)	38.2
14-17	(73)	64.4
<i>Chi-square=11.6, df=2, p=0.003</i>		

Data gathered in Eurobarometer show that about one third of Polish parents think that their children aged 6 to 13 have encountered harmful or illegal content on the Internet. The ratio of parents with such a conviction dramatically increases to about two thirds among parents with adolescent children aged 14 to 17. This finding is consistent with the hypothesis that older children take more risks, although one must note that sub-sample sizes in the Eurobarometer study are low (for the relationship between perceived ratio of children who had encountered harmful or illegal content and the child's age: $Chi-square[2]=11.6$, $p=0.003$) (Eurobarometer, 2006).

The risk of encountering such content increases significantly with age only at home: none of the parents of children up to age 9 reported their child had ever encountered harmful or illegal content at home. The ratio of parents convinced that their children encounter harmful or illegal content increased to 7.3% among parents of children aged 10 to 13, and it increased to 16.4% among parents of children aged 14 to 17. A child's age is significant in determining the child's exposure to risks on the Internet at home ($Chi-square[2]=6.5$, $p=0.04$; computation by L. Kirwil, 2007, based on Eurobarometer, 2006).

Data in Table 5 confirm the hypothesis about gender differences: as a child reaches age 10, more boys' parents than girls' parents think that their child is at risk of being exposed to harmful content.

Table 5. Ratio of Polish children with experience of exposure to harmful or illegal content, according to parental reports as dependent on child's age and gender (% of Polish parents reporting that the child encountered harmful or illegal content; source of data: Eurobarometer; computation by Kirwil, 2007)

Age category	Percent of boys	Percent of girls
6-7	1.3	1.2
8-9	2.7	3.1
10-11	7.3	6.3
12-13	11.0	9.2
14-15	14.4	11.9
16-17	17.2	13.4

Type of risks:

Compared to girls, boys receive more links to websites, e-mail and mail addresses and telephone numbers consisting of or informing them how to reach illegal or inappropriate contents (see Fig. 13; Kirwil, 2002a, 2002b).

Figure 13

Percentage of boys and girls that received telephone numbers, mail addresses or websites with inappropriate illegal content via Internet (Kirwil, 2002a)



For instance, boys introduce more “risky” key words to search engines than girls. Among 833 keywords reported as the five keywords most frequently used in search engines by 133 teen boys, 10% of the boys’ keywords were related to sex and erotica. In a survey of 771 keywords reported by 119 teen girls, only 0.3% of the keywords were related to sex and erotica (Kirwil, 2002a).

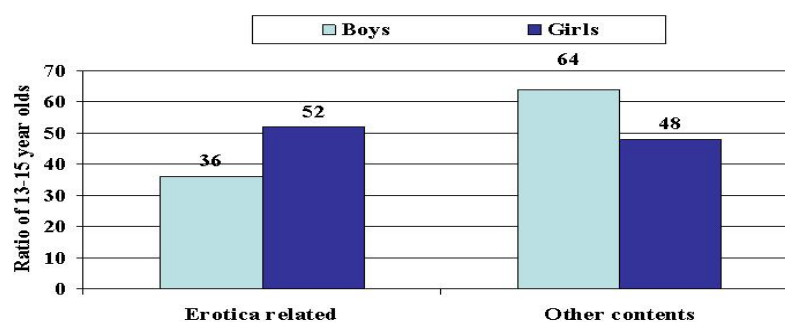
More boys than girls are exposed to risks of illegal inappropriate content via the Internet because they are more actively look for risks.

At the local level, Polish study findings suggest the hypothesis that boys are more at risk might be valid. The children surveyed (aged 13 to 15) reported that 45.7% of girls (N=294) but only 22.8 % of boys (N=275) had never encountered shocking pornographic content on the Internet (Kirwil, 2002a).

Kirwil (2002a) asked teenagers whether they had ever received an e-mail that shocked them with its content (inappropriate questions, proposals, invitations, messages, letters). More girls (52%) than boys (36%) were shocked by erotic content of e-mail, while more boys (63%) than girls (48%) were shocked with other non-erotic content (see Fig. 14), including extremely violent and drastic scenes. Exposure to risks related to erotica via e-mail is gender-dependent: girls are more at risk of being exposed to sex and erotica than boys.

Figure 14

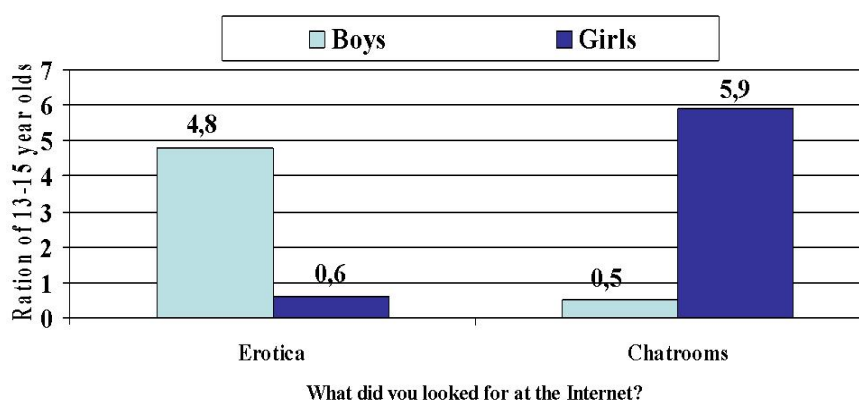
**Shocking contents in e-mails
received by boys and girls (Kirwil, 2002a)**



Findings from the studies conducted by Kirwil (2002a, 2002b) also suggest that more girls than boys encounter erotic content in communication by e-mails (see Fig.14) and in various chat-rooms (see Fig. 15), while boys encounter this content by intentionally looking for it while surfing websites. Boys are eight times more likely than girls to be exposed to erotic and pornographic content while surfing the Internet. Girls are eleven times more at risk than boys of such exposure when they chat in chat-rooms. Girls take more communication risks, while boys look at more porn and violent content.

Figure 15

Ocassions for encountering pornographic content while boys and girls surf at the Internet (Kirwil, 2002a)



Children themselves might be responsible for being exposed to pornographic content while surfing the Internet when they intentionally look for erotica (Mediappro, 2006).

1.5 Parental mediation

Most Polish parents do not seem to use parental mediation. Just 18.7% of the parents with children aged 6 to 17 monitored their child's activity online by sitting next to the child when he or she was online (Eurobarometer, 2006).

Nor are restrictive rules commonly used. Table 6 shows how often restrictive strategies were used to prohibit some online activities.

Table 6. Rules regarding using the Internet by children set by Polish parents (source of data: Eurobarometer 2006; computations by L. Kirwil 2007)

Rules set by parents	% (N=251)
Rules on Internet use	15.5
Not allowed to visit some websites	8.8
Rules regarding time allowed to be spent on the Internet	6.4
Not allowed to give any personal information	4.4
Not allowed to do online shopping	3.2
Not allowed to meet in person with someone met on the Internet	2.8
Not allowed to go to chat-rooms/talk to strangers in chat-rooms	2.8
Not allowed to use rude language in e-mails and chat-rooms	1.2
Must tell when feeling uncomfortable about something on the Internet	0.8
Other rules	2.8

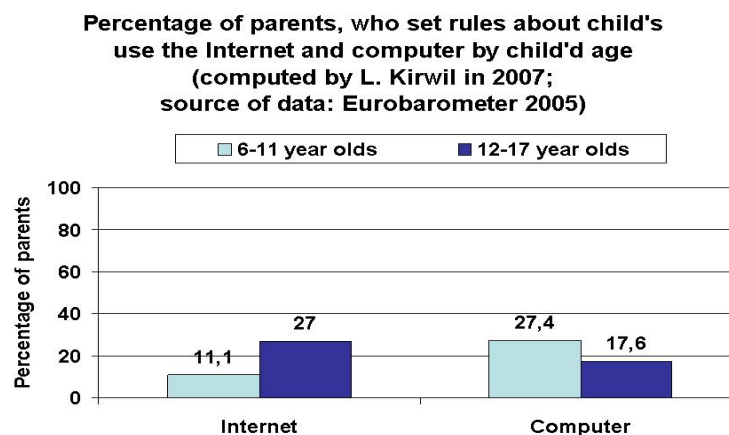
Most parents (84.5%) with children aged 6 to 17 do set some rules for Internet use. Only 8.8% of parents do not allow children to visit certain websites and only 6.4% of parents established rules regarding amount of time spent on the Internet. Other rules are enforced by a marginal percentage of parents: for example only 0.8% of parents required their children to inform them about the child's personal negative experience related to being online (source of data: Eurobarometer 2005; computations by I. Kirwil, 2007) (Eurobarometer, 2006).

Technical solutions, i.e. filter blocking access to some websites, are used by Polish parents least: 11.2% of parents report these blocks on home computers (Eurobarometer, 2006).

In a Eurobarometer survey of a representative sample of Polish parents with children aged 6 to 17 (N=251), rules related to Internet use by their children were set by more parents with teenagers (27% of 125 teenagers) than parents with school age children (11.1% of 126 school children). The older the child, the more parents set rules on Internet use (see Fig. 16; *Chi-square*[1]=3.78, *p*=0.057). However, fewer parents of 12-17 year olds (17.6%) than parents of 6-11 year olds (27.4%) set rules for computer usage by their children (see Fig.16; *Chi-square*[1]=3.78, *p*=0.05, *one-tailed*).

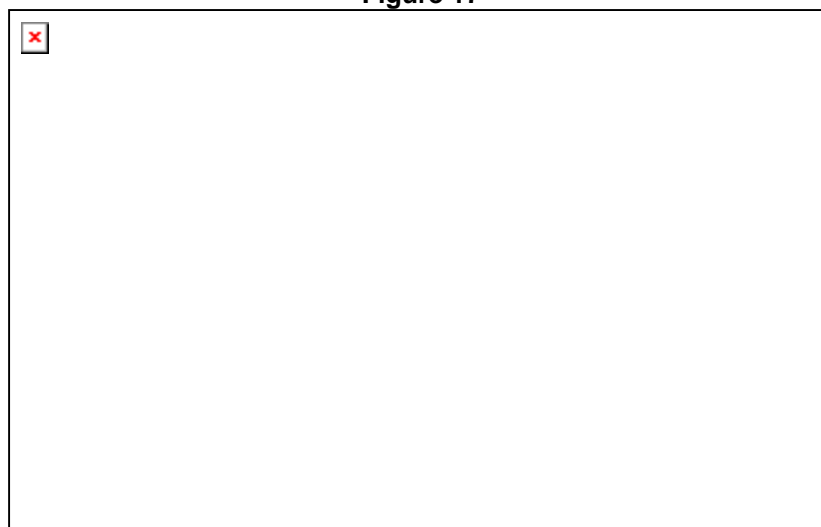
This contradiction may be caused by more intensive Internet usage by older children and the growing cost of this activity (many households in Poland have expensive access to a very slow Internet).

Figure 16



Kirwil (2002a) reports children's perceptions of parental mediation. There is a difference between boys and girls in their perceptions of what is forbidden for them on the Internet by their parents (see Fig. 17), i.e. in restrictive mediation. More boys are not allowed to look at the websites with erotic contents, but more girls are forbidden to enter chat-rooms.

Figure 17



Of the Polish parents surveyed in Eurobarometer (total N=164), 25% who set rules for Internet use reported that their children had experienced risks accessing the Internet at home, compared to 8% of parents who did not set rules for Internet use (*Chi-square*[1]=5.28,

$p=0.03$). There is a similar relationship for risk experienced at school ($Chi-square[1]=6.70$, $p=.018$; computations made by Kirwil in 2007 on the basis of Eurbarometer, 2006 dataset).

Technical solutions for mediating a child's Internet use, i.e. filtering/blocking tools avoiding access to certain websites and monitoring a child going online, i.e. sitting next to the child when he/she uses the Internet), are not related to any online risk in the Polish sample (on the basis of computations made with use of Eurobarometer data set by Kirwil in 2007).

On the basis of Polish and UK findings from Eurobarometer 2005, I suggest the hypothesis: More online risk experienced by children results in more parental mediation. A child's experience online affects the parent, and the parent responds with increased mediation (transactional model).

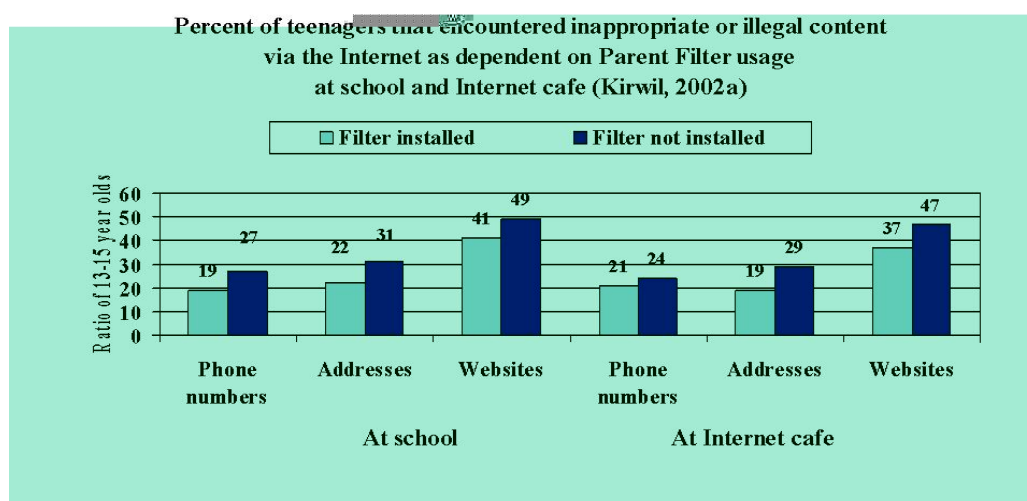
Among those parents, whose child has never encountered harmful or illegal content online at home, only 29.1% monitor how their children use the Internet. Among those whose child was at risk of encountering harmful or illegal content, 50% do this ($Chi-square[1]=2.90$, $p=0.08$, *one-tailed*; source of data: Eurobarometer 2005, computation by L.Kirwil, 2007). This finding is obtained for a very small number of parents whose children were at risk on a home computer, thus further verification of the hypotheses is needed.

There is a similar relationship between online risks experienced at school and the way parents monitor a child's online activities. Only 28.9% of parents whose child has never encountered harmful or illegal content online at school monitor their children using the Internet sitting next to them. Among those whose child was at risk of encountering harmful or illegal content, 75% do this ($Chi-square[1]=7.49$, $p=0.01$; source of data: Eurobarometer 2006, computation by L. Kirwil, 2007).

Technical solution: blocking websites with sexual & pornographic content:

A so-called "Parent Filter", blocking access to websites with pornographic and sexual content, was the only filtering tool available in 2002 in Poland. However, this Parent Filter was ineffective in reducing the risk of a child accidentally encountering inappropriate or illegal content at the child's computer and on parents' computer used by children. Parent Filters successfully reduced teens' exposure to inappropriate/illegal content on school computers or in Internet cafés (see Fig. 18) (Kirwil, 2002a).

Figure 18



A lower ratio of teens working at schools and Internet cafes with filters were exposed to inappropriate or illegal content. This strategy of mediating the child's contact with the Internet reduced the risk up by to 10%, most efficiently for illegal websites (Kirwil, 2002a).

The Parent Filter was not efficient as a strategy of parental mediation at home and on children's computers, but it appeared to be efficient when teens were online in public the sphere (i.e. school and Internet café) (Kirwil, 2002a).

This finding suggests that technical solutions like filtering/blocking access to illegal or harmful content can reduce a child's risk of exposure in the public sphere where social control does not allow them to disable it as they can at home computers. When parents set the 'Parent Filter' they trust it and do not check how it functions and do not monitor a child's online activities. Eurobarometer data did not show any significant relationships between filtering the Internet and a child's risk of being exposed to inappropriate content (Eurobarometer, 2006).

1.6 Media literacy

Data on this issue were gathered by Mediappro, but there is no systematic presentation of findings in their report [Mediappro, 2006].

Eurobarometer 2005/06: 56% of parents/guardians think their child knows what to do if uncomfortable online, and 25% think they do not. The survey conducted by Wojtasik (2003) in a sample of 8991 children aged 12-17 showed that Polish children followed fundamental safety rules that help protect them from Internet-based paedophiles. Most of them refused to give strangers personal details or any other information that might disclose the child's identity, and refused to meet strangers in person. At the same time a large percentage of Polish young Internet users had ignored key safety rules by contacting strangers on the Internet in the preceding year: 64% of children gave their phone number, 42% of children gave their home address, and Kirwil, 2002b% of children sent their photo. Children often accepted strangers' invitations to meet in person (Wojtasik, 2003).

Gemius (2007a) did not ask about all kinds of consequences or risks related to Internet violence. Findings from this study suggest that Polish children using the Internet and mobile phones cannot cope with the negative emotional consequences of being a victim of cyber bullying. Victims usually do not tell anyone about being bullied. For instance, 53% of victims of unwanted filming did not report it to anyone. Mediappro, 2006% of victims reported it to a friend, only 6% of them reported it to their parents, and only 3% to teachers. Children cope better with the consequences of publication of embarrassing materials about them, probably because it will soon be known to other people. More than twice as many victims of such kinds of bullying report the fact to a friend (54%), parents (13%) or teachers (12%).

An earlier survey of risks related to contact with strangers met on the Internet- conducted online by Gemius (2006) on a sample of 1779 Polish teenage Internet users aged 12 to 17- showed that 64% of them (N=1139) were ready to meet in person with strangers encountered online. About 52% of the teenagers who were prepared to meet a stranger from the Internet in person were actually invited to meet with strangers in real life (i.e. 44% of the total sample; N=772). Among those who were invited for a meeting, 44.4% went on to have real contact with the stranger (i.e. 19% of the total sample; N=343). Half of them went to the meeting alone (i.e. less than 10% of the total sample; N=170), 48.4% of them went with a peer or sibling, and only 1.2% with a parent or an adult. 21.9% of those who met in person with a stranger met online did not inform anybody about going for a meeting with this stranger (i.e. 4.2% of the total sample; N=75).

52% of those who met in person with a stranger encountered online informed a peer or sibling, and only Mediappro, 2006% of them (4.5% of the total sample) informed parents or other adults. The most frequent reason for not informing other people was privacy and a need for autonomy (61.5%), or a prediction that adults would not allow a meeting with the stranger (27.3%). 21.2% were convinced that adults are not interested in who they meet (Gemius, 2006; and calculation by L. Kirwil based on additional information received from Gemius on February 15, 2008 and March 28, 2008).

The findings suggest that there is a separation between teenagers' and parents' perceptions of risks related to activities online. Most teenagers do not tell their parents about their risky

behaviour, when they plan undertake it, or about negative consequences when they experience it. Peers and siblings were the most trusted person for children to talk to about being bullied. Thus there is evidence for the hypothesis about a generation gap during adolescence. Children separate their parents from problems connected to the Internet and mobile phone use and probably do not cope efficiently with their negative emotions resulting from bad experiences (risks) because most of them do not discuss the risks. Polish findings confirm the results obtained by Eurobarometer (2006) on this issue.

Other risks are related to culture participation. Using the Internet changes the cultural practices of children and youth in Poland. Use of the Internet seems to have reduced television viewing (54% of the sample viewed TV less) and reading books (30% of young people reported that they read less). Instead young people listen to more music (49%) (Mediappro, 2006).

Additional advanced analyses of data gathered in 2002 in Poland were conducted in 2007. Findings show that children who could receive and send e-mails or participate in chat-room activities have also been exposed more often to unexpected content related to erotica and sexual relations (68.8% of chat-room visitors in comparison to 40.0% of non-visitors, and 68.1% of e-mail users in comparison to 54.3% of non-users). The correlation between chatting online and the risk of exposure to illegal sexual content was stronger ($r=0.24$, $p<0.000$) than that between e-mail use and exposure to illegal sexual content ($r=0.14$, $p=0.02$) [computations made by L. Kirwil in 2007 on the basis of data from Kirwil, 2002a].

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