





Young Canadians in a Wired World Phase II

Student Survey

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Executive Summary

Media Awareness Network (MNet) conducted the initial *Young Canadians in a Wired World* – Phase I study in 2001 to provide educators, parents and policy makers with a factual framework for understanding how children approach the new electronic media. Phase II of *Young Canadians in a Wired World*, conducted by ERIN Research for MNet, explores new areas and revisits some of the initial benchmarks.

More than 5,000 students in Grades 4 to 11 participated in the survey. They represented each province and territory, English and Frenchlanguage schools, and urban and rural environments. The majority of schools in the 2005 research also participated in the 2001 study.

Correspondence between age and grade YCWW II, 2005						
Grade Outside Quebec						
4	4	9-10				
5	5	10-11				
6	6	11-12				
7	Secondary I	12-13				
8	Secondary 2	13-14				
9	Secondary 3	14-15				
10	Secondary 4	15-16				
П	Secondary 5	16-17				

Kids' electronic landscape

Convenient access to the Internet is almost universal among Canadian students: 94 percent of respondents now have Internet in the home, compared to 79 percent in 2001. Most of these (61 percent) have high-speed Internet service.

Children's use of email has also increased. In 2001, Young Canadians in a Wired World reported that 71 percent of kids had email accounts. In 2005, 86 percent have email accounts, most being free accounts such as Hotmail.

The 2005 results show that, for the Grade 4 to 11 population:

- 41 percent have an MP3 player.
- 37 percent have their own computer with Internet access (as opposed to sharing a family computer). By Grade 11, 51 percent have their own computer.
- 23 percent have their own cell phone (six percent in Grade 4, rising to 46 percent in Grade 11).
- 22 percent have a Webcam for personal use (31 percent by Grade 11).

Kids who have their own Internet-connected computer report spending twice as much time online as those who share a machine.

A spectrum of online activities

What do kids choose to do online, given an hour or so of free time? Kids picked the two activities that they would like the best.

- Instant messaging ranks first, a choice of 62 percent of girls and 43 percent of boys.
- Playing games is the top choice in the younger grades (chosen by 54 percent of Grade 4 girls and 78 percent of Grade 4 boys), but the popularity of games declines steadily so that by Grade 11, nine percent of girls and 38 percent of boys make this choice.
- Listening to or downloading music is the third major activity of choice, selected by 41 percent of girls and 37 percent of boys.

Not all time is free time, so it is important to examine how kids actually spend their time. The survey asked, "What activities do you do on an average school day?" While the "free-time" choices of instant messaging, games and music are represented, a number of others are also important. Across all grades, a majority of students report engaging in these activities:

- 77 percent play games.
- 72 percent do schoolwork.
- 66 percent talk to friends on instant messaging.
- 65 percent download or listen to music.
- 64 percent use email.
- 55 percent look up information on a topic of interest other than school work.

Favourite sites

Survey participants wrote down their three favourite Internet sites. They were asked not to mention search engines or email sites: there is little doubt that these are popular, and the intention of the research was to get past these obvious choices to the next level of Internet content.

The top favourite sites are, without exception, those that deliver fun and entertainment.

In the younger grades, many of the "favourite site" choices are from the very popular sites below. As kids get older, their favourite sites become more diverse and individual:

- In Grade 4, two-thirds of participants list one or more of their favourite sites from among the top 20 overall.
- In Grade 11, only one-third of respondents list a top-20 choice.

The table below shows how a large amount of interest is concentrated on a few sites, but this is just half the story. Kids are also wide-ranging in their interests. The complete "favourite sites" list of approximately 5,000 survey participants includes more than 2,800 different sites.

Top ten favourite sites

YCWW II, 2005

161111 11, 2003					
Site	Primary content	Percent who chose the site as one of their 3 favourites			
Addicting Games	games	18.2			
Miniclip	games	16.3			
Neopets	virtual pet site	9.8			
eBaumsworld	humour: jokes, photos, animation	5.7			
Newgrounds	flash animation, jokes	4.2			
Runescape	an online game	4.2			
Candystand	games	3.7			
Funnyjunk	humour: jokes, photos, animation	3.7			
YTV	TV channel info, games	3.3			
Launch	streaming radio	3.3			

A memorable experience

Kids were asked to describe one recent experience that they considered memorable or important in some way. The choice was open-ended, and the results therefore show the full range of online events that kids register as important. Major findings are:

- 1. The majority of the online experiences that kids chose as memorable were good ones: 56 percent were good, 27 percent bad and 17 percent neutral.
- Connecting with friends, playing games, experiences related to homework, and other information-seeking experiences are the largest groups of positive online experiences.
- 3. Computer crashes, viruses, annoying pop-ups and landing unexpectedly on offensive sites constitute the majority of bad experiences.
- 4. Good experiences are generally high on an "engaging" factor (i.e. funny, exciting, make you feel good). Good experiences can also be "challenging" (difficult, you learn something), but they are not offensive (risky, scary, sexist, pornographic).
- 5. Bad experiences tend to be the opposite; they are generally offensive, sometimes difficult, and not engaging.

Privacy

Protection of online privacy is a genuine issue of concern. Two-thirds of respondents say that they would like schools to teach them about protecting their privacy, and paired with this is a visible reluctance to give out personal information online.

A few examples:

- To sign up for a free email account, 30 percent would give their real name and address, 37 percent only an email address, and 24 percent would hesitate to give any real information.
- To register on a game site, 12 percent would give their real name and address, 50 percent only an email address, and 39 percent would give no real information.
- To create a profile on a dating site, seven percent would give their real name and address,
 18 percent only an email address, and 73 percent would give no real information.

Online identities

The Internet offers young people an environment where they feel anonymous and invisible. In this environment, the majority of kids, 59 percent, report that they have assumed some different online identity. Among this group:

- 52 percent have pretended to be of a different age.
- 26 percent have pretended to have different personality characteristics.
- 24 percent have pretended to have abilities they do not really have.
- 23 percent have pretended to have an appearance different from their real one.

The pattern of results is very similar across grades, for boys and girls, and for students in Quebec and in the rest of Canada.

School assignments on the Internet

From Grade 6 through Grade 11, three-quarters of kids report doing school work online on a "daily or almost-daily" basis. A majority (56 percent) say they enjoy using the Internet for homework, compared to 15 percent who dislike the Internet and 30 percent who are neutral. One-half say that online resources improve the quality of their school work; 47 percent say it makes no difference.

Respondents were asked whether they would prefer to get information for school assignments from books in a library or from the Internet. The Internet is the clear winner, and it is not hard to imagine reasons for the choice. The Net is convenient and fast.

- In Grade 4, 62 percent prefer the Internet and 38 percent the library.
- By Grade 11, 91 percent prefer the Internet and nine percent the library.

The survey asked "What Internet-related topics would you like to learn more about in school?". Subjects chosen by more than half the sample are:

- Learning how to tell if online information is true (68 percent checked this option)
- Protecting your privacy online (66 percent)
- Internet technology (56 percent)

Personal skills and Internet use

Kids rated their skills in a number of activities, both online and in the larger world.

· Not surprisingly, heavy Internet users see

- themselves as better than the norm at using the Internet and playing computer games.
- Heavy users see themselves as better at making friends, making people laugh, and shopping.
- Heavy users see themselves as about the same as others at sports, math and science, reading and arts.

What this implies is that shopping, making friends and being funny are skills that, for today's youth, are embedded in electronic communications. The Internet is an extension of everyday social life and an integral part of these skill sets. Most kids do not rely on the Internet to advance their activities in math, sports and the arts, and so these skills are not associated with Internet use.

Offensive sites

Students in Grades 7 to 11 were asked whether they had visited certain "offensive" sites on purpose during the current school year. Overall:

- 16 percent had visited porn sites.
- 18 percent had visited violence or gore sites.
- 12 percent had visited gambling sites.
- 9 percent had visited adult chat rooms.
- 5 percent had visited hate sites (e.g. those dealing in racial or religious hatred).
- 34 percent had visited at least one of the above types of site.

More boys than girls visited this set of sites, and more older than younger kids visited them. A majority of respondents believe that schools and parents should protect kids younger than themselves from sites of this nature. For example, 90 percent of respondents in Grades 7 to 9 and 80 percent of those in Grades 10 and 11 advise protecting kids who are two years younger than they are from online porn. Fewer respondents see a need to protect their peers. Seventy-seven percent of respondents in Grades 7 to 9 and 62 percent of those in Grades 10 and 11 advise protecting kids their own age from online porn.

Rules and supervision

In 2005, more students than in 2001 report that their household has rules about four specific Internet activities:

- Meeting someone in person whom you got to know online (74 percent)
- Sites that you are not supposed to visit (70 percent)
- Giving out personal information online (69 percent)
- Telling your parents if something makes you feel uncomfortable (69 percent)

Consistent with this, a larger proportion of kids report that their use of the Internet is supervised by a parent. In 2001, seven percent said they were mostly with a parent or adult when using the Net. This has risen to 13 percent in 2005.

More kids in 2005 also report that they use the Net in the company of other people. This is not necessarily supervised use, but social use – with friends or brothers and sisters. In 2001, slightly more than half said that their home Internet use

was mostly solitary; in 2005 just one-third report mainly solitary use.

The existence of rules suggests adult supervision, and in fact there is a strong link between the number of rules that the household has and the amount of hands-on supervision of Internet use. In households with no rules, 74 percent of kids report that an adult is never present when they use the Net; at the other extreme where many rules are in force, just 22 percent report that they are never supervised.

Does parental involvement make a difference?

Parental interest in children's Internet use can take many forms including discussion of online sites and activities, supervision and setting rules. The 2005 research examined the effect of four specific rules on kids' online behaviour.

The four rules are:

- Sites you should not visit
- Meeting people whom you got to know online
- Giving personal information online
- How much time you can spend online

In each case the existence of a rule makes a considerable difference in kids' online behaviour. For example, in households where there is a rule about "sites you should not visit", 14 percent of kids in Grades 6 and 7 have purposefully visited sites dealing in porn, gore, hate and related topics. In households that have no such rule, 43 percent of kids have purposefully visited these sites.

Discussions in the home

For an activity that accounts for a large proportion of children's time, Internet use is largely absent from family conversations.

Participants in Grades 7 to 11 were asked whether they had discussed various topics with adults in their house during the school year. A majority (55 percent) state that they had discussed "music or videos that you found on the Net", but fewer than half had discussed any of the other topics, e.g., science information found on the Net (43 percent), protecting your privacy online (39 percent), online porn sites (22 percent), and sexual harassment online (18 percent).

Meeting people you got to know online

The Internet becomes more important as a meeting place with age, and it is hardly surprising that young people meet some of their new acquaintances in person. Still, only 21 percent of students overall report that they have met a person in real life with whom they became acquainted on the Net. These meetings increase steadily with age: 12 percent of Grade 7 students report meeting an online acquaintance in real life, rising to 33 percent in Grade 11.

Kids were asked to write a brief description of the best and worst experience they had had meeting an online acquaintance. The majority of these encounters were positive: 29 percent describe a "worst" experience and 72 percent report a "best" one (a few report both types).

The most common descriptions of bad experiences are:

- The person's age, appearance or other characteristics were not as expected.
- The person was freaky or mean or stupid.
- Their interests did not match.

Descriptions of good experiences are the opposite – they formed a new friendship and had much in common.

Bullying and sexual harassment

Thirty-four percent of students in Grades 7 to 11 report that they had been bullied within the current school year and 12 percent report that they had been sexually harassed.

- Among those who report bullying, school was the most common location; 74 percent report being bullied at school and 27 percent state that they had been bullied over the Internet.
- Among those who report sexual harassment the situation is reversed; 47 percent report being harassed at school and 70 percent state that they had been harassed over the Internet.

Reports of bullying are less common in Quebec (where 24 percent of kids report being bullied) than in the rest of Canada, where 36 percent of kids report being bullied.

Bullying and sexual harassment are associated:

- Among kids who were not bullied, seven percent report being sexually harassed.
- Among kids who have been bullied, 26 percent also report being sexually harassed.

I. Introduction

Media Awareness Network (MNet) has launched an in-depth research strategy to investigate the role of the Internet in the lives of young Canadians.

A major component of the enterprise was the 2001 national baseline study, *Young Canadians in a Wired World* – Phase I. In 2005, MNet commissioned a second study to revisit the field, explore new areas and re-test some of the baseline measures.

The 2005 study by ERIN Research is a detailed profile of 5,272 students in French and Englishlanguage schools across Canada. It examines a broad range of topics related to young people's growing Internet use and dynamic online experiences.

Objectives

The objectives of *Young Canadians in a Wired World*– Phase II (YCWW II) are ambitious:

 To document the electronic environment of young Canadians

- To gain insight into specific online activities of young Canadians
- To identify young people's Internet identities
- To examine young people's attitudes to privacy
- To explore kids' use of the Net for school work
- To discuss the impact of parental rules on kids' Internet experiences
- To examine issues related to risky Internet use
- To assess change on some key measures since the 2001 research
- To present the voices of young Canadians in their own words

2. Method

Questionnaire

The survey was designed by MNet in consultation with ERIN Research. There are two parallel versions, one for Grades 7 to 11 and a slightly reduced version for Grades 4 to 6. The shorter version contains the majority of the material in the full survey.

Recruitment of schools

MNet approached school boards and territorial departments of education to secure their permission to conduct research. The aim was to return to the same schools that participated in the 2001 Young Canadians in a Wired World study in order to replicate the sample as closely as possible. Ninety-four percent of the English boards that participated in 2001 study agreed to participate in 2005. Sixty percent of Quebec schools that participated in 2001 participated again in Phase II. This sample was complemented by three French school boards outside Quebec and one board from each of the territories to obtain a more representative national sample.

Where a board from the 2001 study was not available, a board with similar demographic features was substituted. In all, the sample includes 11 French-language school boards, three in Manitoba, New Brunswick and Ontario, and eight in Quebec. It extends to 32 English school boards in provinces outside Quebec, and one from each of the three territories. The schools are a representative selection of urban and rural school boards and Public and Roman Catholic schools across Canada.

Once permission had been granted, school principals were contacted directly and asked to allow surveying of the same grade levels and numbers of classes that participated in 2001.

Ethical review by University of Ottawa

The survey method was reviewed and approved by the Research Ethics Board of the University of Ottawa.

Survey distribution

Upon approval by the school principal, the appropriate document packages were distributed to 69 English-language schools and 23 French-language schools. Teacher instructions for introducing and managing the survey in the classroom were provided, along with a bound reference copy for parents to view the content of the survey in the administration office at the school.

School boards were appraised of the survey's progress during the fielding and after its completion.

ERIN Research sent to each participating classroom a package containing a set of printed questionnaires and a set of parental permission slips.
The package also contained detailed instructions
for the teacher, who was told to give students all
the help they needed to understand the questions,
but to ensure complete confidentiality, i.e. not to
look at students' responses. At the end of the session the teacher put the completed surveys into a
return envelope and sealed it in the students' presence. These envelopes were sent directly to ERIN
Research via Canada Post. ERIN Research conducted the analysis and wrote the report.

On June 8, 2005, preliminary results were sent to the schools to be shared with students.

In all, 302 of the 319 classes in the sample submitted returns, a response rate of 95 percent. The

number of completed surveys was 5,272. The composition of the sample appears in Table 1.

Table I. Sample characteristics YCWW II, 2005						
Dimension	Number	Percent	Dimension	Number	Percent	
Gender			Province/Territory	Province/Territory		
Female	2,478	49	British Columbia	607	12	
Male	2,596	51	Alberta	567	11	
Language			Saskatchewan	539	10	
French in Quebec	792	15	Manitoba	498	9	
French outside Quebec	475	9	Ontario	1,538	29	
English	4,005	76	Quebec	792	15	
Grade			New Brunswick	145	3	
Four	502	10	Prince Edward Island	51	ı	
Five	622	12	Nova Scotia	242	5	
Six	841	16	Newfoundland & Labrador	189	4	
Seven	864	16	Yukon Territory	5	<1	
Eight	654	12	Northwest Territories	63	ı	
Nine	520	10	Nunavut	9	<	
Ten	569	11				
Eleven	525	10				

Note: Numbers do not total 5,272 in all cases as some students did not answer all demographic questions.

Reporting

A number of questions ask about respondents' behaviour "within the past school year". Because the survey was conducted in February-March 2005, "the past school year" refers to the six or seven months since September 2004. Questions were asked in this manner in order to focus respondents on recent experiences where their memory was still clear.

Results are presented in a non-technical manner, omitting details of statistical procedures that would be expected in an academic context. Nonetheless, statistical tests were conducted in a rigorous manner. Where crosstabs are reported, the effects of grade, gender and other relevant variables have been assessed through loglinear analysis; only those results that exist independent of other variables are reported.

3. Kids' Electronic Landscape

The 2001 Young Canadians in a Wired World survey found that 79 percent of respondents had Internet in the home. Access is now almost universal with 94 percent of respondents having Internet in the home. Internet access has increased more quickly in Canada than most other countries. For example, a 2005 UK survey, *UK Children Go Online*, reports that between 70 and 80 percent of households with school-age children have home access.¹

In 2005, a majority of young Canadians (61 percent) report that they have high-speed Internet access at home and 13 percent say that they have dial-up (Figure 1). Only six percent have no Internet connection at home, leaving 20 percent who don't know what type of connection they have at home.

Children's use of email has also increased. In 2001, Young Canadians in a Wired World reported that 71 percent of kids had email accounts. In 2005, 86 percent have email accounts (Table 2).

Figure I. What type of connection do you have at home?
YCWW II, 2005

None
Don't know 6% Dial-up
13%

High-speed
61%

Table 2. Do you have an email account? YCWW II, 2005				
Email account	Percent of respondents			
Free account	72			
School account	14			
My own box on a family account	12			
Share a family mailbox with others	10			
None	14			

Note: Percentages add to more than 100 as some respondents have several email accounts.

Personal Web sites

Thirty percent of secondary students have personal Web sites today, compared to 26 percent in 2001. Years ago, creating a personal Web site required some skill in programming and only computer enthusiasts took the trouble. Today, there are many sites where people can set up their own pages without any programming skills whatsoever. Myspace.com and Nexopia.com are popular examples. Typically, a user can restrict access to his or her personal Web site or leave it open to all. Young people post their favourite pictures and their thoughts on life, comment on issues around them and carry on conversations with friends.

¹ UK Children Go Online. Sonia Livingstone and Magdalene Bober, Economic and Social Research Council, 2005. Available at www.children-go-online.net.

Electronics devices that kids have

Over the span of eight grades, there is a steady increase in the proportion of kids who have MP3 players, computers, cell phones and Webcams. Figure 2 shows how the availability of this set of four popular devices increases. This chart shows devices that kids have for their own personal use, as opposed to equipment that they share with other family members.

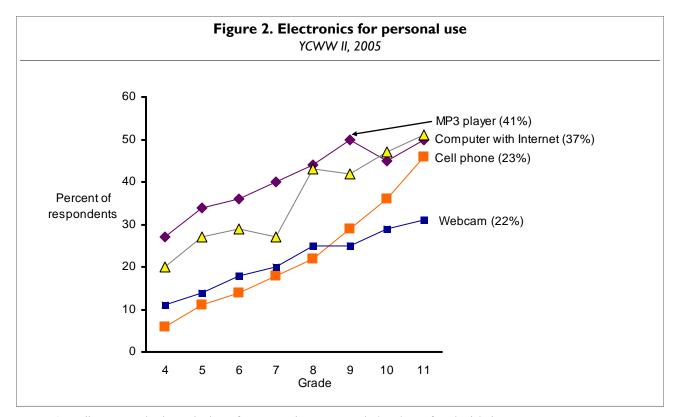
Cell phones show the most rapid growth. In Grade 4, six percent of kids have their own cell phone; by Grade 11, 46 percent have one.

In Grade 4, 20 percent of kids report having their own computer with Internet access. By Grade 11, it is 51 percent. Kids who have their own computer spend significantly more time online than do those with a shared system (see Figure 6).

A Webcam is a video camera specifically designed for use with a computer. Its purpose is to upload images to the Web. More than half of those who have their own computer also have a Webcam. In Grade 11, the proportion of kids with Webcams is 31 percent.

Kids with cell phones were asked what features their phones had, with the following result:

- Text messaging 56 percent
- Net access 44 percent
- Camera 25 percent
- None of these 26 percent



Note: Overall percent who have the item for personal use appears in brackets after the label.

Table 3 shows devices for both personal and family use. Figure 2 shows trends by grade for the top four of these devices. The lower four are used by

only a minority of kids and families, and their availability does not change greatly across grades.

Table 3. Electronic devices that kids have YCWW II, 2005						
Percent of respondents						
I have one I use one for my own that other family Device personal use members use too I don't use this						
MP3 player (iPod, Pocket DJ, etc.)	41	13	47			
Computer that has Internet	37	57	4			
Cell phone	23	45	32			
Webcam	22	22	56			
Computer that does not have Internet	12	14	74			
PDA (Palm Pilot, Blackberry, etc.)	8	12	80			
VOIP phone (over the Internet)	7	9	84			
Pager	3	10	87			

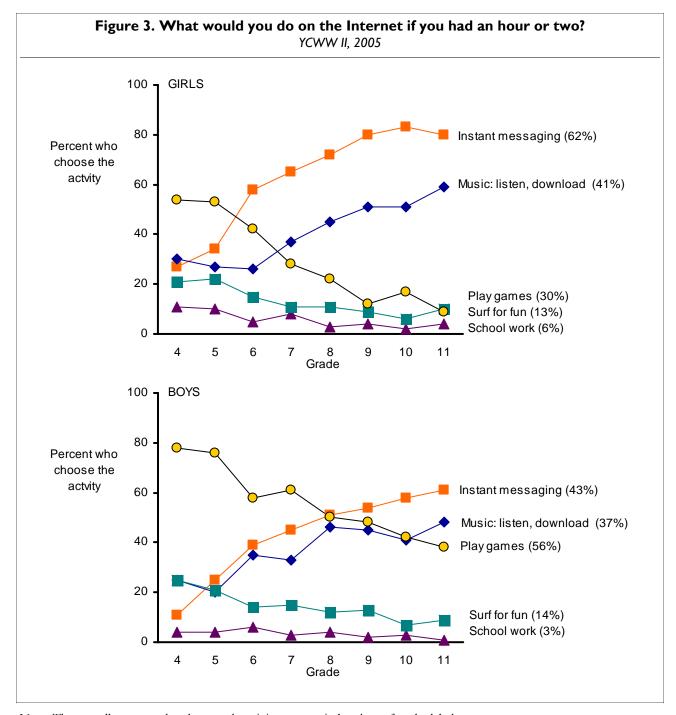
Note: Each row adds to 100 percent (within rounding error).

4. A Spectrum of Online Activities

What do kids like to do online?

What draws kids to the Net? The survey asked respondents what they would do if they had an hour or two of free time to spend on the Net.

They were offered 14 options and could choose any two. Results for five of the options are illustrated in Figure 3, and percentage data for the entire set are presented in Table 4.



Note: The overall percent who chose each activity appears in brackets after the label.

In Grade 4, playing games is the most popular choice, being selected by 54 percent of girls and 78 percent of boys. Playing games becomes steadily less popular across the grades, being replaced by instant messaging and music ("music" includes both listening and downloading as the two often go together).

Table 4 lists the full set of 14 options. Those that do not appear in Figure 3 are all rather low in popularity and show very little change across grades. None of them differs by more than five percent from Grade 4 to Grade 11.

Table 4. What would you do on the Internet if you had an hour or two?

YCWW II, 2005

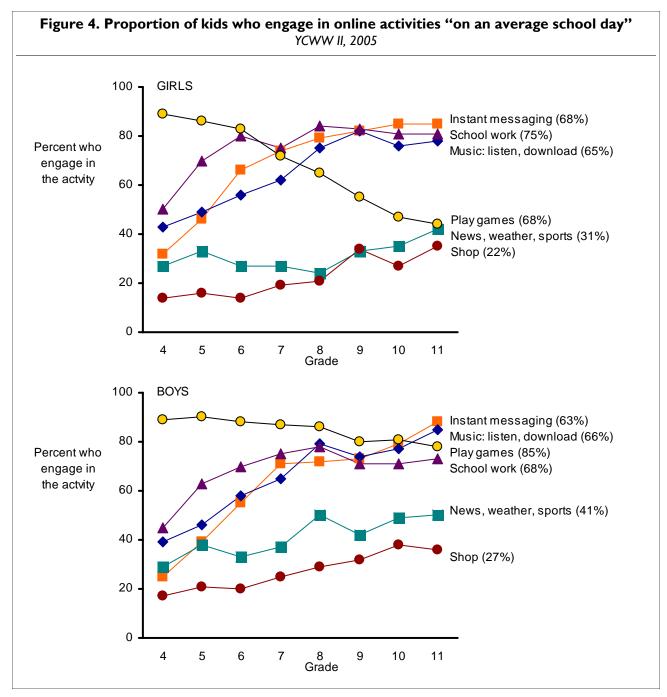
	Percent of resp	ondents
Activity	Girls	Boys
Talk to friends on instant messaging	62	43
Download music, listen to music	41	37
Play games – including multiplayer games	30	56
Write and read emails	15	5
Surf for fun	13	14
Visit a chat room	6	7
Do school work online	6	3
Get information or advice on a topic that I am interested in (not school work)	7	8
Work on my own Web site	6	4
Shop, or get information about things I might buy	3	4
Visit entertainment sites – movies, videos, etc.	4	7
Get news, weather, sports	I	5
Blogging, writing online diaries	2	I
Download movies, TV shows	3	5

Note: Percentages add to more than 100 as respondents could choose two options.

What do kids actually do online?

At a later point in the survey, students were asked what they *actually did* online "on an average school day". Several of the response options were the same as in the question about "what would you like to do", allowing a comparison of results.

Figure 4 shows the proportion of girls and boys who engage in several activities on a daily basis. (Percentage data appear in Table 5.) All activities increase over the grade range except playing computer games which declines rapidly for girls and slowly for boys.



Note: The overall percent who engage in each activity appears in brackets after the label.

Three of the activities in Figure 4 show quite similar trends. The proportion of kids who engage in instant messaging, listen to/download music, and do homework increases rapidly from Grade 4, then reaches a plateau in Grades 6 to 8 at which point it levels off or climbs very slowly.

News/weather/sports and shopping increase more slowly across the grade range.

There are several activities that rank very low among free-time choices but which many kids nevertheless engage in on a regular basis. These include:

 Visiting news/weather/sports sites: This is a free-time choice of just one or two percent of kids, but a regular activity for between one-

- quarter and one-half of respondents.
- Shopping or getting product information stands at two percent as a free-time choice, yet between 15 and 40 percent of kids do so on a regular basis.

There are close parallels between "what would you choose to do" and "what do you actually do" in several areas, specifically:

- Instant messaging and listening to/ downloading music both show a similar upward trend.
- Playing games trends downward, though the number of boys who actually play games remains quite high compared to the number who identify it as a top-choice activity.

Table 5. Respondents who engage in online activities "on an average school day" YCWW II, 2005								
Percent of respondents who engage in the activity Grade								
Online Activity	4	5	6	7	8	9	10	П
Talk to friends on instant messaging	28	43	60	73	75	77	81	86
Download or listen to music	41	48	57	63	77	78	76	82
Use email	33	52	61	70	74	74	72	78
Do homework using the Net	47	67	75	76	81	76	76	76
Work on a topic of personal interest	42	60	53	55	55	59	62	65
Play games on the Net	89	88	85	79	75	69	66	63
Get news, weather, sports	28	35	30	32	37	38	42	47
Download movies, TV shows	17	22	19	23	33	36	34	40
Shop, or get product information	16	19	17	22	25	33	33	36
Visit chat rooms	15	23	20	21	21	24	22	25
Work on my own Web site	21	26	27	31	32	31	27	25
Blogging, writing an online diary	14	11	8	15	14	19	18	17

Note: Six of the above activities are shown in Figure 4.

Table 5 shows the proportions of kids who engage in each of the online activities on a daily basis. They are ordered from most to least popular from the Grade 11 perspective. Instant messaging is the most common activity that Grade 11 kids engage in "on an average weekday".

The columns in Table 5 total more than 100 percent because many kids engage in several activities on a daily basis. In Grade 4, the average respondent engages in four of the 12 listed activities. In Grade 11, the average respondent engages in six of these activities.

Time online

Preceding sections have described the percentage of kids who engage in different online activities. This section looks at how much time they spend on these activities. Kids indicated the amount of time they spend in each online activity by choosing

How much time do you spend on an average day?			
# of minutes used to calculate average			
None	0		
Up to 15 minutes	5		
Up to I hour	20		
Up to 2 hours	80		
More than 2 hours	140		

from the five options shown below. Each option specifies a range of time. In order to calculate the average time that kids spend on an activity, a single time estimate was assigned to each range. Conservatively, an estimate nearer the lower end of each range was selected. The response options and the assigned times are as follows:

The amount of time spent talking to friends on instant messaging increases steadily from an average of 26 minutes per day in Grade 4 to 68 minutes per day in Grade 11 (Table 6). This echoes the results for the percentage of kids who engage in instant messaging on a daily basis (Table 5) – the number who engage in the activity and the amount of time that they spend on it both increase with age. The two trends are illustrated in Figure 5.

The amount of time spent on four other online activities increases with grade level. These are downloading or listening to music, doing homework online, working on a non-academic topic of interest, and blogging or diary activities.

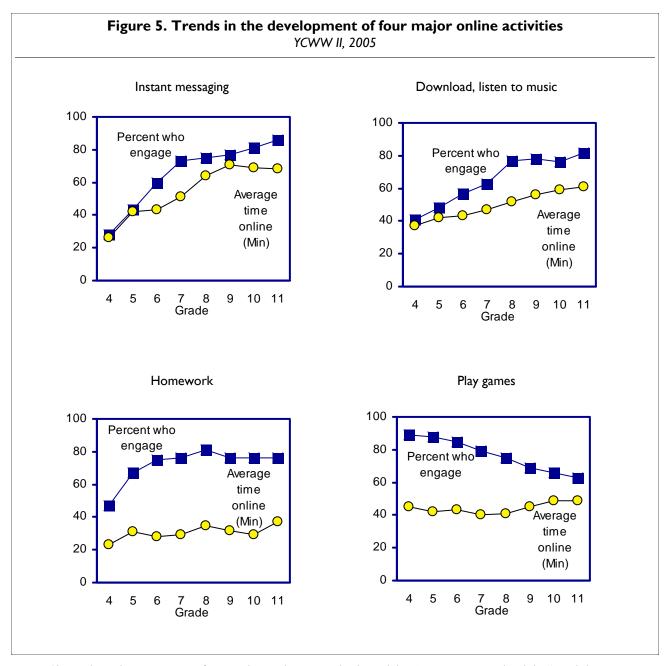
The amount of time spent downloading movies and TV shows hovers above and below the 50-minute mark, which is a considerable amount of time. This reflects the fact that movies and TV programs take a considerable amount of time to transfer. During this time the downloader is likely doing something else, either online or away from the computer.

Table 6. Time spent pursuing online activities "on an average school day" YCWW II, 2005 Average time spent by those who engage in the activity (minutes) Grade **Online Activity** ш Talk to friends on instant messaging * Download or listen to music * Use email Do homework using the Net * Work on a topic of personal interest * Play games on the Net Get news, weather, sports Download movies, TV shows Shop, or get product information Visit chat rooms Work on my own Web site Blogging, writing an online diary *

Note: * Statistically significantly difference across grades.

Figure 5 charts trends by grade in four major online activities. The numerical data on which the charts are based appear in Table 5 and Table 6. The first chart shows that, in Grade 4, 28 percent of respondents spend an average of 26 minutes each on instant messaging. By Grade 11, 86 percent of respondents spend an average of 68 minutes each.

- For instant messaging and listening to music, both the percent who engage and the time they spend increase across grades.
- The percent who do homework increases rapidly to about 75 percent by Grade 6 and remains relatively constant thereafter. The time spent doing homework increases slowly, from an average of 23 minutes in Grade 4 to 37 minutes in Grade 11.
- The proportion of people who play games on a daily basis declines, but for those who do play games, the time spent in this activity remains fairly stable across grades.



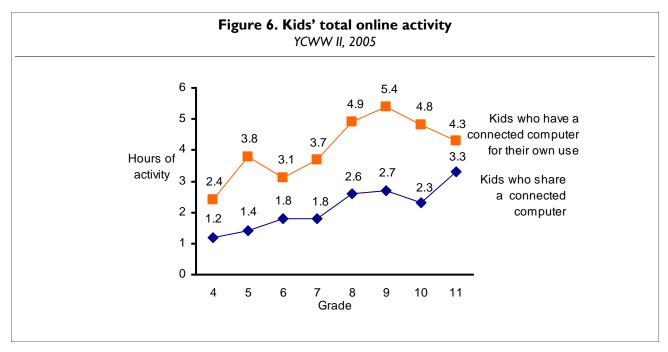
Note: Charts show the percentage of respondents who engage in the activity "on an average school day", and the average number of minutes that these people spend per day doing the activity.

It is important to note that certain online activities can go on concurrently. Kids listen to music as an accompaniment to other activities. The instant messaging program may be constantly on – kids send and receive messages, and move to a different task such as homework. A movie download may be going on in the background, and one's own web page (or that of a friend) may be visible in order to monitor activity. Because some activities are concurrent, adding up the time spent on each one produces a rather large number. This number reflects the total amount of online activity that kids engage in – which in many instances will be greater than the time that kids are physically in front of their computer.

Figure 6 shows the median amount of time that respondents report for all activities together.² Some of this time represents concurrent activities such as listening to music and doing homework.

The interesting feature of Figure 6 is the pronounced difference in online activity between those who have their own Internet-connected computer and those who share the family computer. Over most of the grade range, those with their own connected computer report twice as much online activity as do those with a shared computer.

² The median is the point that divides a group in half. For the case of Grade 4 kids with their own connected computer, half report spending less than 2.4 hours per day engaged in online activities and half report spending 2.4 hours or more.



Note: "Hours of activity" may be less than "hours at the computer", as some activities can be concurrent.

5. Favourite Sites

A primary aim of this section of the survey was to identify the top sites that draw kids to the Internet.

Respondents listed their three favourite Internet sites. They were asked not to mention search engines or email sites: there is little doubt that these sites are popular, and the intention of the research was to get past these obvious choices to the next level of Internet content.

In all, respondents listed more than 2,800 different sites.³ Table 7 and Table 8 show the choices made by several subgroups of the sample. By way of introduction to these results, the first entry in Table 7 shows that 25.5 percent of Grade 4 to 7 girls outside Quebec listed Neopets as one of their three choices.

Favourite sites are, without exception, sites that deliver fun and entertainment. Sites that offer online games are in the majority, while music, sports and social contact sites are also represented.

There are differences (and many similarities) between students in Quebec and the rest of Canada. Where these groups differ in their choice of specific sites, the type of site they choose is often similar. For example, the younger girls in Canada outside Quebec put YTV among their top ten and the younger girls in Quebec schools list VRAK TV. In the same vein, older boys outside Quebec list the NBA, NFL and NHL sites, while older boys in Quebec list RDS (Réseau de sports, the French counterpart to TSN). The overall pattern of choices by kids in Quebec and those outside Quebec is very similar.

Younger and older children overlap in their favourite site choices, but there are differences as well. The younger kids are more oriented toward the youthful games – Addicting Games, Miniclip, Neopets and Runescape. Older kids gravitate to sites such as Newgrounds and eBaumsworld, which have a decidedly teenage bent, or follow sports interests such as NBA and RDS, or music (MuchMusic, MusiquePlus).

Girls and boys have many of their top favourite sites in common. Game sites such as Addicting Games, Miniclip and Jeuxvideo appear on every favourites list in Table 7 and Table 8. In the higher grades, girls tend to list social contact sites and music sites that do not appear on the boys' lists, (Nexopia, Launch, etc.), while boys list more sports sites (NFL, NHL, RDS) and game sites (Gamespot, Gamefaqs).

While it is possible to make certain general statements about kids' favourite sites, each individual site has a unique user profile. A site appeals more to girls or to boys, and more to kids of one age or another. Figure 8 and Figure 9 show demographic profiles of four highly-popular sites.

In writing their choices, respondents used various spellings for the same site, for example, ebay, eBay, -bay and so on. The various renditions were recoded into a single spelling in order that the results could be analyzed.

Table 7. List your three favourite Internet sites: Grades 4 - 7

YCWW II, 2005

Site	Percent of respondents	Site	Percent of respondents	
Grades 4-7 girls outside Q	uebec	Grades 4-7 girls in Quebec		
Neopets	25.5	Neopets	35.3	
Addicting Games	21.4	Miniclip	22.3	
Miniclip	16.4	Radio-Canada.ca	18.0	
Family Channel	11.3	VRAK TV	16.8	
Funnyjunk	5.3	Bonus	14.3	
YTV	4.8	Tfou	8.5	
Barbie	4.4	Cartoonnetwork	7.5	
Candystand	4.4	Hilaryduff	7.2	
Habbohotel	4.3	Musiqueplus	7.2	
Myscene	4.2	Myscene	7.0	
Grades 4-7 boys outside Q	uebec	Grades 4-7 boys in Quebec		
Addicting Games	29.6	Miniclip	25.3	
Miniclip	28.6	Bonus	15.1	
Runescape	12	Newgrounds	13.8	
YTV	8.9	T45ol (French language Flashplayer site)	11.8	
Flashplayer	6.8	Neopets	10.4	
Funnyjunk	6.3	Cartoonnetwork	7.8	
Candystand	6.1	Chimboz	6.4	
Neopets	5.0	Mofunzone	6.6	
Cartoonnetwork	4.7	Runescape	6.6	
Coffeebreakarcade	3.8	eBaumsworld	5.6	

Note: In Quebec, elementary education spans Grades 1 to 6 and secondary education spans levels 1 to 5.

Grade 7 = Secondary 1

Grade 8 = Secondary 2

Grade 9 = Secondary 3

Grade 10 = Secondary 4

Grade 11 = Secondary 5

Table 8. List your three favourite Internet sites: Grades 8 - 11
YCWW II, 2005

Site	Percent of respondents	Site	Percent of respondents	
Grades 8-11 girls outside Quebec		Grades 8-11 girls in Quebec		
Addicting Games	14.7	Doyoulookgood	15.5	
eBaumsworld	7.5	Launch	10.8	
Neopets	7.4	Miniclip	10.3	
Miniclip	6.1	Musiqueplus	8.8	
Nexopia	6.0	Reggaetonlyrics	6.3	
Launch	5.3	VRAK TV	6.2	
Livejournal	4.8	Neopets	5.1	
Muchmusic	4.6	Radio-Canada.ca	4.7	
Piczo	3.9	Prizee	3.4	
Seventeen	3.8	RDS.ca	3.2	
Grades 8-11 boys outside Quebec		Grades 8-11 boys in Quebec		
Addicting Games	20.0	Newgrounds	19.2	
eBaumsworld	12.4	Miniclip	17.0	
Miniclip	11.5	Jeuxvideo	16.7	
Newgrounds	8.7	Launch	5.5	
eBay	5.6	Runescape	4.6	
NHL	5.1	eBay	3.9	
NBA	3.8	eBaumsworld	3.3	
Gamefaqs	3.6	Gamespot	2.8	
NFL	3.5	Doyoulookgood	2.3	
Homestarrunner	3.3	RDS.ca	2.4	

Note: In Quebec, elementary education spans Grades 1 to 6 and secondary education spans levels 1 to 5.

Grade 7 = Secondary 1

Grade 8 = Secondary 2

Grade 9 = Secondary 3

Grade 10 = Secondary 4

Grade 11 = Secondary 5

A trend to more individualistic use of the Internet

Looking carefully at the results for the older and younger children, it is evident that the younger kids' choices tend to be more similar than those of older kids. The top site for each of the younger groups (Table 7) includes anywhere from 25 percent to 35 percent of respondents. The top site for each of the older groups (Table 8) includes between 15 and 20 percent of respondents. Scanning down the lists the same pattern is evident. The implication is that, as kids grow older, they are less inclined to do what everyone else is doing and become more individualistic in their use of the Internet.

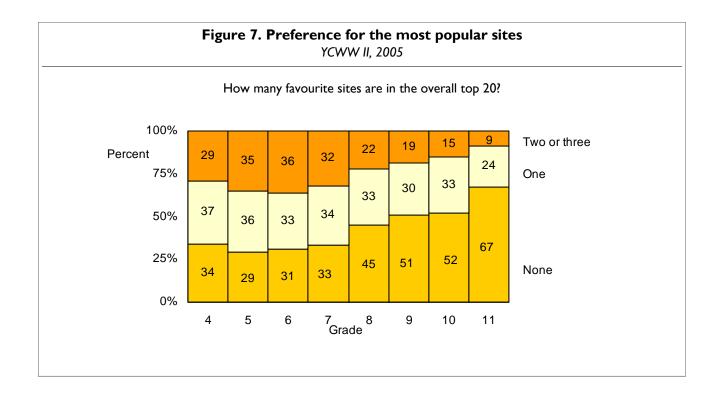
We can chart the trend toward more individualistic use with some precision. Let's take the 20 most popular sites overall as a reference. A given respondent made three "favourite sites" choices, so it follows that either none of these choices were

among the top 20, or that one was, or that two or three were.

Figure 7 divides respondents into three groups – individualists who chose no favourite sites from among the top 20, conventional respondents who chose either two or three sites from among the top 20, and a group in between with one favourite site in the top 20.

There is very little change through the Grade 4 to 7 range – about one-third of respondents are in each group. Beginning in Grade 8, there is a swift and steady trend away from conventional behaviour toward more individualistic choices. By Grade 11, two-thirds of respondents do not include any of the top-20 sites among their favourites.

The Appendix presents an extended analysis of this choice data and compares it to similar data for television and computer games.



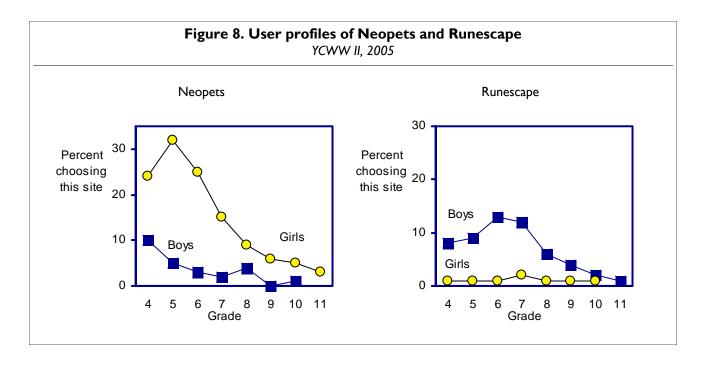
User profiles of popular sites

The most popular sites vary greatly in their content and in the populations that they appeal to. User profiles of four sites are shown here by way of illustration.

Neopets is an online play environment and registration is required to play. You create a virtual pet and care for it, abiding by the many rules of the site. You can also amass points that enable you to play on the site and buy things for your Neopets, and you can purchase branded merchandise. The user profile below identifies the target audience – girls in elementary school. One-third of all Grade 5 girls listed Neopets as one of their three favourite sites.

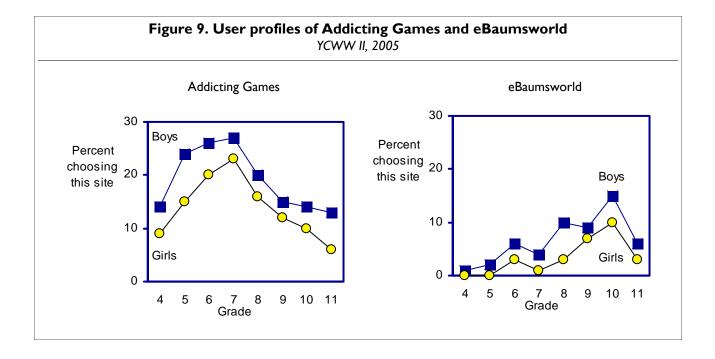
Neopets can be termed a "product-centred" Web environment in that it markets specific products to a defined audience. Product-centred games are discussed further in the following section.

Runescape is an online game that appeals to younger boys. It takes place in an imaginary mediaeval world where wizards, mysteries and dangers abound. Registration is required to play. While Runescape attracts a wide following (13 percent of Grade 6 boys list it among their three favourite sites) it does not command Neopets' massive market share.



The most popular site overall, Addicting Games, holds strong appeal for both boys and girls up to Grade 7, and then decreases in popularity. Addicting Games offers hundreds of games that are freely available without registration. Most are simple at a conceptual level – puzzles, arcade games, and so on.

The fourth most popular site overall, eBaumsworld appeals primarily to the Grade 8 to 10 crowd. The site features jokes, animations and photos, most of which are contributed by users. The humour tends to be crude and demeaning.



Product-centred sites

"Product-centred" sites are designed in whole or in part around brand-named products. Candystand, for example, which appears on the favourite-sites list of younger kids outside Quebec, is a platform for advertising Lifesavers, gummi candy and other popular products. Kids can play games on this site without registering, but registration allows them to enter contests, to post their winning scores, and to garner other benefits.

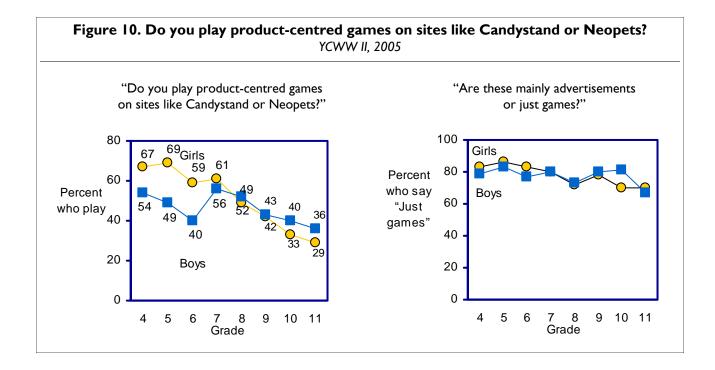
Neopets stands third overall in the "favourite sites" rankings. Neopets may be just a fun game to the kids who engage in it, but it is also a highly commercialized environment. According to the Globe and Mail,⁴ Neopets generates 60 percent of its revenue from online advertising, and 40 percent from product licensing.

Many product-centred sites, including Candystand and Neopets, conduct online consumer surveys of their visitors, asking them about their lifestyle and brand preferences. Some companies retain this information for their own use while others sell the marketing intelligence to third parties.

The appeal of product-centred games is greatest in elementary school, where a majority of both girls and boys state that they play them. It declines throughout high school (Figure 10).

Those who played were asked if they considered the sites to be mainly advertising or just games. About three-quarters consider them to be "just games", but awareness of their advertising function does increase with age. In Grade 4, 18 percent of those who use these sites consider them to be "mainly advertisements" and this figure rises to 31 percent in Grade 11.

⁴ "Viacom gobbles up child-magnet Neopets" by Rob Shaw, *The Globe and Mail*, Tuesday June 21, 2005.



6. A Memorable Internet Experience

Previous chapters have documented some fundamental information about kids' use of the Internet.

To summarize:

- Most kids spend from one to several hours per day on the Internet.
- During this time they pursue a wide variety of activities. Some are social (e.g. instant messaging), some focus on entertainment (e.g. music, playing games), and some focus on information (e.g. doing homework, sports scores and news).
- Their favourite sites, given some free time, tend strongly to light entertainment games, jokes, music and like pursuits.

But what moves them? This section of the survey is designed to get at the heart of a recent Internet experience and learn:

- What kinds of experiences do kids consider memorable?
- What features of these experiences make them good or bad?

These are difficult questions to get at. The typical survey approach would present respondents with a list of potentially-memorable online activities; respondents would then check off what they found to be memorable or important. The problem is defining what should be included in this list of potentially memorable experiences? At this point we do not know – this is exactly what we want to find out.

The survey therefore asked respondents to make their own choice. They were asked to think of a recent Internet experience, either positive or negative, in school or outside of it, that they particularly remembered. They described their chosen experience briefly in words, then subsequently using a set of 11 rating scales. Each respondent recounted just one experience, but with over 5,000 in the sample, the data span the full range of activities and events that kids define as memorable.

A central question about the online experience is whether it was a good one or a bad one. Kids therefore rated their experience from "Very good" to "Very bad" on a five-point scale. A majority of kids recalled a good experience (56 percent rated it either four or five out of five) while 27 percent rated it in the bad range (one or two out of five).

The average rating of all online experiences is 3.48 out of five, which corresponds to 62 out of 100.

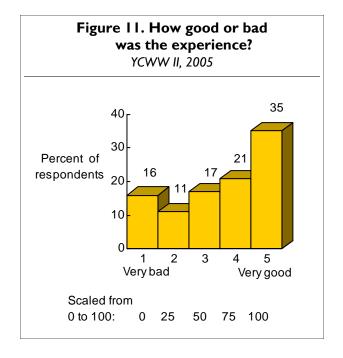


Table 9 lists the types of experience that emerge, showing how frequent each type was and its average rating on the good-bad scale. Ratings are out of 100, i.e. 0 is Very bad and 100 is Very good.

The most frequent type of experience, by a small margin, is connecting with friends or making new friends. It accounts for 15 percent of all the memorable online experiences reported and received an average rating of 80 out of 100. However, not every experience in this group was good: six percent were rated bad (one or two out of five); 13 percent were neutral (three out of five); and 81 percent were either four or five out of five.

Playing games follows, with 13.8 percent of the total. These were also generally good experiences, with an average rating of 82 out of 100.

Computer crashes and technical problems are a third category, with 11.3 percent of experiences and they are generally bad experiences, with an average rating of 33 out of 100. Still, 15 percent of respondents rated these in the good range, because they learned something useful, got a new Internet service, etc.

Most of the kinds of experience that kids report are consistent across grade levels, but two show a distinct change. Memorable online experiences that involve playing games decline in frequency (from 23 percent of the total in Grade 4 to seven percent in Grade 11) and experiences involving friends increase (from six percent in Grade 4 to 23 percent in Grade 11).

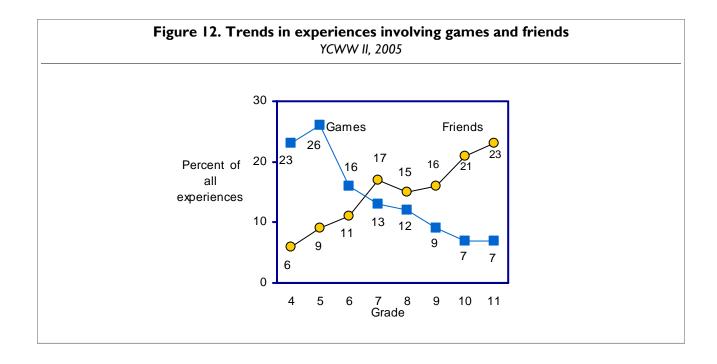


Table 9. Types of memorable online experienceYCWW II, 2005

Online experience	Percent of respondents	Average rating
Connected to friends, made new friends	15.0	81
Played games, found new game, multiplayer games	13.8	82
Crashes, technical problems	11.3	33
Homework, good marks, found good information, found nothing	10.9	72
Found new non-academic information, sites, etc.	8.9	82
Viruses	8.6	23
Pop-ups	4.7	36
Porn	4.5	24
Downloaded or listened to music, watched videos	3.5	79
Shopped or sold items online	3.3	80
Created a Web site, xanga, PowerPoint, blog, artwork	2.4	80
Unable to find site information	1.8	38
Unwanted emails, MSN messages, rude or mean comments	1.8	28
Family members mentioned as focus of comment	1.5	84
Chatroom experiences	1.4	49
Hacked	1.3	27
Found new computer tools, new software, etc.	1.2	85
Threatened, bullied, fought online, negative relationship	1.2	27
Humour - funny stories, funny pictures	0.7	88
Won a prize	0.5	86
Spam	0.4	_
People pretending to be someone else	0.4	_
Sex - on webcam, asked for sex on MSN, etc.	0.3	_
Indiscretion - telling secrets, etc.	0.2	_
Gore	0.1	_
Hate mail	0.1	
Racism	<0.1	_
Drugs - offered, bought, etc.	<0.1	
Total	100	62

Note: There are insufficient respondents in the eight smallest categories to calculate meaningful average values. Each of these categories describes generally bad experiences. The mean for the eight as a whole is 38 out of 100.

Bad online experiences that result from technology

The majority of bad experiences had nothing to do with the activity that the respondent was attempting to pursue at the time, rather, they involved computer issues that interfered with the respondent's intended activity. There are four recurring themes:

- Computer crashes
- Viruses
- Annoying pop-up windows
- Accidentally landing on porn sites or other unwanted places

Together, these account for 29 percent of all the memorable experiences.

Comments on memorable online experiences

This section presents a representative selection of comments on the major types of experience, both good and bad.

Connected to friends, made new friends

- I found people like me who like talking to friends. (boy, Grade 7, AB)
- I learned how to use MSN. (girl, Grade 6, ON)
- I got the email address of an old friend. (girl, Grade 8, MB)
- Clavarder ave quelqu'un que je ne parlait pas depuis quelques années. (boy, Grade 11, QC)
- I went on MSN and chatted with my buds. (girl, Grade 7, AB)

- J'ai rencontré des bons amis par des messages instantanées. (girl, Grade 10, QC)
- I had a party using email invitations. (girl, Grade 7, AB)
- I get to talk to my friends in Hong Kong and Toronto. (girl, Grade 7, BC)

Played games, found new games, multi-player games

- I joined a clan for medal of honour allied assault. (boy, Grade 8, ON)
- Something that happened in the last few months, is that I got in the record book for games. (boy, Grade 8, ON)
- I won 10 grand on torn city and bought a gat.
- I was playing World of Warcraft and got lots of items I needed. (boy, Grade 7, BC)
- I played a multi-player game with my buddy. (boy, Grade 8, SK)
- It was a bad experience, I got kicked out of my clan. (boy, Grade 5, AB)
- J'étais un des meilleurs joueurs dans mon équipe. (boy, Grade 7, MB)
- I blasted music and played pinball. (girl, Grade 11, BC)
- I once got 5000 neo points on Neopets. (girl, Grade 7, MB)

Crashes, technical problems

- Internet ne marchait plus à cause de mon antivirus trop plein. (girl, Grade 8, QC)
- I downloaded MSN and when I added someone my PC shut down. (girl, Grade 9, ON)

- Je me suis connecté sur MSN et mon ordi s'est arrêté. (girl, Grade 9, QC)
- Mon ordi s'est fermé tout seul. (girl, Grade 7, QC)
- I found out I had over 500 trojans on my computer. (boy, Grade 10, MB)
- Most sites that I go onto on my computer give me an error report. When I use a search engine for homework, it won't let me go on some sites. The settings are the same as the schools. (boy, Grade 8, BC)
- By accident, I deleted all of my book project. (boy, Grade 5, AB)

Homework, good marks, found good stuff, found nothing

- I went on the Internet to do most of my homework for planning and science. (girl, Grade 10, BC)
- I was researching a project and got lots of information out of it. (girl, Grade 10, BC)
- I had some trouble with math and I went to a math Web site and it worked out great. (boy, Grade 5, AB)
- Me permet de trouver des renseignments pour des devoirs ou des recherches. (girl, Grade 7, QC)
- L'information que je cherchais était trop vague. (girl, Grade 10, NB)
- Got information for an assignment and received a good mark in the end. (girl, Grade 7, ON)
- I did a project at the last minute and I got an "A". (boy, Grade 7, ON)

Found new, non-academic information, sites, etc.

- I found a band that I liked and they are coming to Victoria. (girl, Grade 9, BC)
- I went onto a site where you can design things, play games and just have fun. (girl, Grade 4, SK)
- I looked up info on the space-time continuum. (girl, Grade 7, AB)
- I found a great site about my new bike. (boy, Grade 9, BC)
- I saw the stats for my favourite NBA player, Allen Iveerson, and he had 60 points. (boy, Grade 11, NS)
- I am making an awesome list of obscure words to confuse classmates. (boy, Grade 7, MB)
- Des tabletures pour m'ameliorer en musique. (boy, Grade 10, QC)

Viruses

- I got 14 viruses from an email. (girl, Grade 7, NB)
- I was sent a virus on instant messaging that screwed up my computer. (girl, Grade 9, AB)
- At my uncle's, his computer got a virus while I was playing games. (boy, Grade 4, ON)
- There was a pop-up and I opened it and it gave my computer a virus. (girl, Grade 7, MB)
- J'ai attrappé un virus. (boy, Grade 10, QC)
- I received a virus and had to spend hundreds of dollars to fix it. (boy, Grade 7, ON)

Pop-ups

- I was on a normal site that I usually go to and a bunch of pop-ups appeared. (girl, Grade 11, NS)
- My internet has been getting many pop-ups. It has been slowing down and sometimes doesn't connect. (boy, Grade 9, ON)
- I was looking up information for a school project and a pop-up came and showed where you could go to gamble and you could be any age.
 (girl, Grade 10, ON)
- I was trying to play games but pop-ups kept bugging me. (girl, Grade 6, SK)
- Sick pop-ups came up on my screen that I did not want to see. (girl, Grade 7, AB)

Porn

- Naked people popped up on the screen. (boy, Grade 4, ON)
- Je cherchais des images des souliers quand je suis tombé sur des images XXX. (boy, Grade 7, QC)
- I was looking at Simpsons pics and saw porn. (boy, Grade 7, BC)
- J'avais un gros projet à l'école sur les mariages gays et l'ordi m'emmenait sur des sites porno. (boy, Grade 11, NB)

- Des pop-ups de pornographie se sont ouverts sur l'écran automatiquement et ma mère l'a vu et croyait que je regardais de la pornographie. (girl, Grade 7, QC)
- I clicked on a site on Google and it came up with porn. (boy, Grade 7, AB)
- One time I was looking up a picture of a hamster for a display picture and when I clicked on it, a different, more revealing picture of a person came up. (girl, Grade 9, BC)

Various other comments

- I spent \$150 on E.Bay buying my Dad's birthday present. (girl, Grade 7, AB)
- I was talking to my friends on MSN, then suddenly a guy says, "I know where you live".
 (girl, Grade 6, SK)
- I talked to my dad for the first time in a long time. (girl, Grade 6, NB)
- I made my own Web site it worked well because it shows you how to do everything. (girl, Grade 7, AB)
- Someone is sending me nasty and dirty emails. (girl, Grade 10, ON)
- I saw my grandma on MSN messenger. I hadn't seen her in 10 years, thanks to msn I did. (boy, Grade 10, ON)

Common elements of the memorable experiences

Kids rated their memorable experience as very good, very bad, or something in between. What underlies these shades of value? A statistical analysis was performed to identify the elements that contribute to an experience being good or bad. It identified eight attributes that play a primary role in determining how good or bad an experience is. The attributes appear in Table 10.

There were in fact 11 rating scales, the eight shown in Table 10 and three others that did not have major impacts on their own. To provide an additional perspective on the memorable experience, the 11 scales were combined into three groups of related items.⁵ The three factors are:

- 1. **Engaging:** High scores on this factor correspond to a good Internet experience.
 - It made me feel good about myself.
 - It was exciting.
 - It made me feel more connected to people.
 - It was funny.
- 2. Challenging: High scores on this can go with either good or bad Internet experiences. For example, "I learned a lot" is good in the context of doing homework, not in the context of dealing with viruses or spam or other matters that they would have preferred to avoid in the first place.
 - · It was challenging.
 - It was very difficult or complicated.
 - I learned a lot.

Table 10. Attributes of kids' good and bad Internet experiences YCWW II, 2005					
Attribute	Impact (positive or negative)				
It was exciting	+				
It made me feel good about myself	+				
My parents would approve of this activity	+				
It was funny	+				
I had to deal with offensive content, e.g. racist, sexist	-				
It was very difficult or complicated	-				
It was risky	-				
I felt scared, threatened, or upset	-				

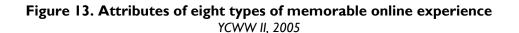
⁵ The groups were created using factor analysis, a statistical technique that identifies related measures.

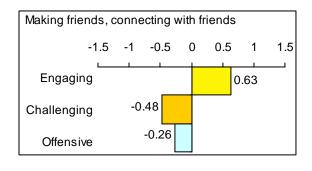
- 3. **Offensive:** Positive scores on these items correspond to a bad Internet experience (except for "parents would approve" where positive scores are good).
 - I had to deal with offensive content, e.g. racist, sexist.
 - I felt scared, threatened, or upset.
 - It was risky.
 - My parents would *not* approve of this activity.

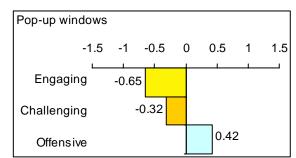
The memorable experiences can be described using these factors. Homework, for example, rates slightly below average on the engaging and offensive scales, and above average on the challenging scale. Connecting with friends is high on engagement, and relatively low on the challenging and offensive scales.

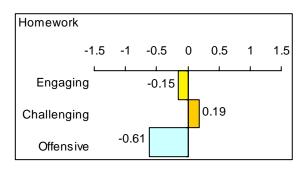
These and several other types of experiences are illustrated in Figure 13. The centre line in each chart represents the average rating across all experiences. A negative score (to the left of centre) indicates that kids rate this type of experience lower, on average, than they rate other types of experience. A positive score indicates that kids rate this experience higher than others. Unanticipated problems – pop-up windows, viruses and landing on porn sites – generate the most extreme ratings. The units on the horizontal axis are standard deviations (a statistical measure).

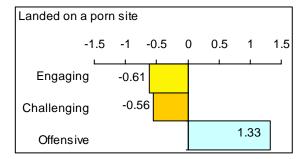
⁶ A normal distribution (bell curve) has a mean (average) of zero, which corresponds to the centre line of the charts in Figure 13, and a standard deviation of 1. The charts show the range from 1.5 standard deviations below the mean (negative scores to the left) to 1.5 standard deviations above the mean. This range includes the peak of the bell curve – about 40 percent of the total area under the curve. It cuts off the tails of the curve, excluding both the top and bottom 30 percent of scores.

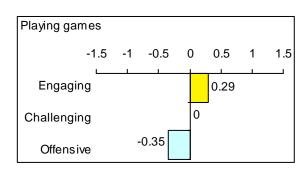


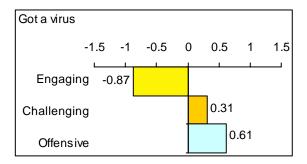


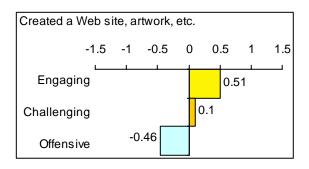


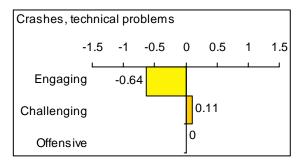












To sum up...

- 1. The majority of the online experiences that kids chose as memorable were good ones: 56 percent were good, 27 percent bad and the rest neutral.
- 2. Connecting with friends, playing games, experiences related to homework, and other information-seeking experiences are the largest groups of positive online experiences.
- 3. Computer crashes, viruses, annoying pop-ups and landing unexpectedly on offensive sites constitute the majority of bad experiences.
- 4. Good experiences are generally higher than average on the "engaging" factor (funny, exciting or make you feel good), and they may also be challenging (difficult, you learn something), but they are not offensive (risky, scary, sexist, pornographic).
- 5. Bad experiences tend to be the opposite; they are generally offensive and not engaging.

7. Privacy

Protecting privacy online is a real issue to today's youth. They know from experience that their privacy can be violated by viruses, spyware and spam. They have heard stories of how a person's email or instant messaging password can be used to spread rumours and false information. They regularly make decisions about providing personal information – name, address, email – to register on various sites. Given this, it is hardly surprising that a solid majority of kids identify "learning how to protect your privacy" as something they would like to learn more about (this topic is described in greater detail in Chapter 9).

This chapter explores how kids balance the need to guard their privacy while participating in the online world.

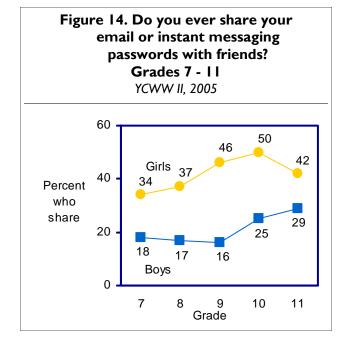
Passwords

Kids share passwords with friends they trust, either for social reasons or as a convenience, e.g. so that friends can check email for them when they are away. Some kids recognize that sharing a password carries potential risk, hence the emphasis on trust in their rationales. The following is a selection of reasons that kids give for sharing their passwords.

- Parce que je n'ai pas haute vitesse chez moi et mon internet est limité à 40 heures par mois.
 Mes amis vont voir mes courriels à ma place.
- Juste à une seule de mes amies pour ne pas oublier mon mot de passe.
- None of my emails are ever that personal that

I have a reason not to.

- It's my girlfriend's and it doesn't bother me that she knows. I'm not that worried at all.
- I trust good friends and it's easy to check emails if you're not around a computer. Just call a friend and ask them to check it for me.
- Because I have told them my combination for my locker and other stuff and they have never done anything to me about it - I trust them.
- Because I can trust them and if I forget it, I can ask them.
- So my friend could check my emails when my computer was down.
- Je partage seulement avec des amis proches.
- I'm not good with computers so if I share my password, it's so the other person can go onto my account and do what I need them to do.



Occasionally, sharing passwords has a more crafty motivation:

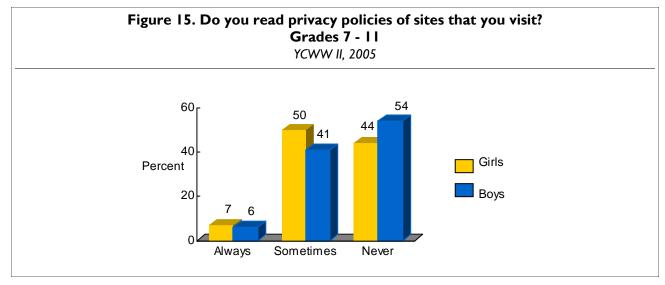
- To go on one another's accounts and pretend to be the other person.
- So she can get rid of some annoying people for me (I change my password after).

Privacy Policies

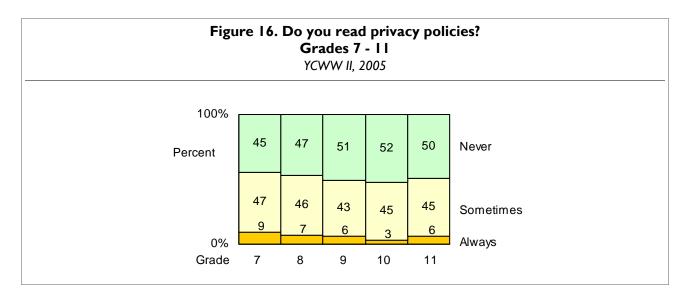
The legalistic language in privacy policies could be difficult for many kids to understand. It is perhaps surprising, therefore, that about half the sample reports reading privacy policies at least sometimes.

A slight majority of girls (57 percent) read privacy policies either "always" or "sometimes", as do 47 percent of boys (Figure 15). There is little change in response across grades (Figure 16).

The question on reading privacy policies appeared in both the 2001 and 2005 surveys. There is a small but statistically significant increase in the proportion of kids who read them over this time.

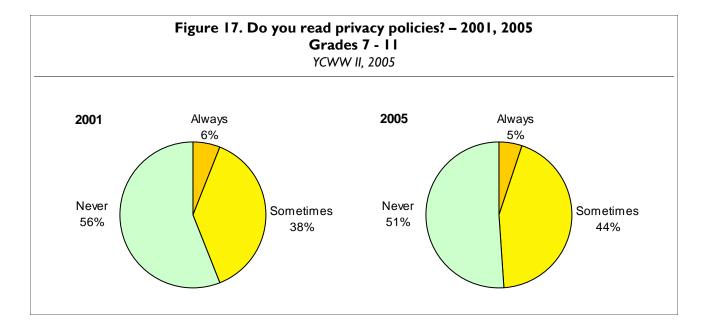


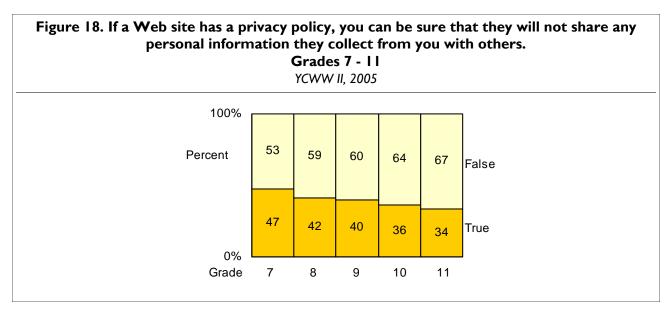
Note: The question on privacy policies appeared only in the Grade 7 to 11 survey.



In 2005, 51 percent of respondents say that they "never" read privacy policies, compared to 56 percent who "never" read them in 2001. The proportion who "sometimes" read them is greater in 2005, while the proportion who "always" read them is about the same (Figure 17).

A privacy policy is not a guarantee of confidentiality. Many privacy policies state that the organization will share information that they obtain from their customers with third parties. As a check on kids' understanding of this issue, they were asked whether the following statement was true or false: "If a Web site has a privacy policy, you can be sure that they will not share any personal information they collect from you with others". The proportion giving the correct answer ("False") grows from one-half in Grade 7 to two-thirds in Grade 11 (this question did not appear on the Grade 4 to 6 survey).





Information you give on the Internet

Many sites require that users register by providing their name, address and/or email address.

Some kids have two or more email addresses: one that they use to register on sites that require them to create a profile, and a second that they use for personal mail. The logic is that getting spam in their personal email is less likely.

About one-half of the students in the study would give their real name and address in at least one of the seven situations shown in Figure 19, while three-quarters would give their email address. As kids get older they are more willing to give out personal information, particularly an email address. Figure 20 and Figure 21 show trends by grade for six common situations.

Kids are more likely to give their real name and address on commercial sites (such as MSN) that offer free email accounts and online contests than they are in the more interactive areas such as chat rooms and dating sites.

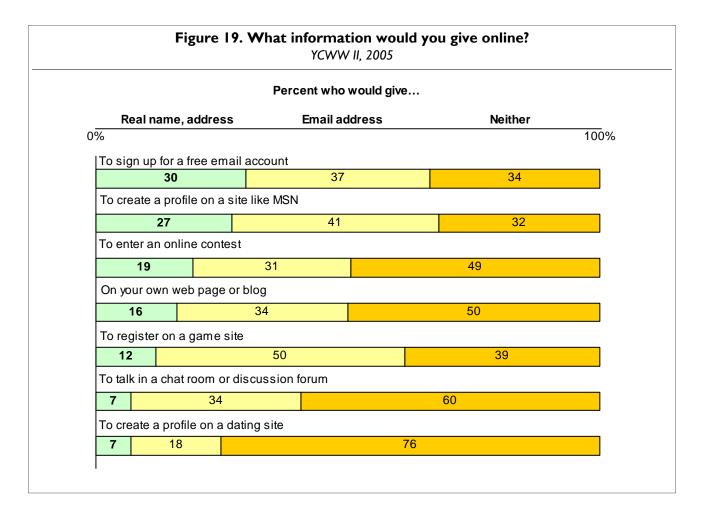
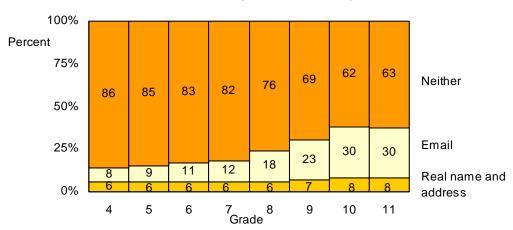
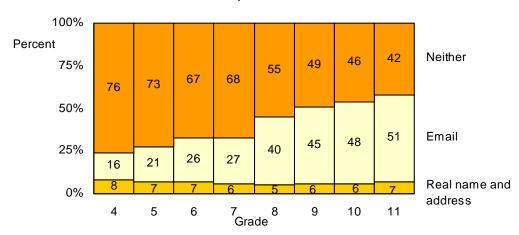


Figure 20. What information would you give? YCWW II, 2005

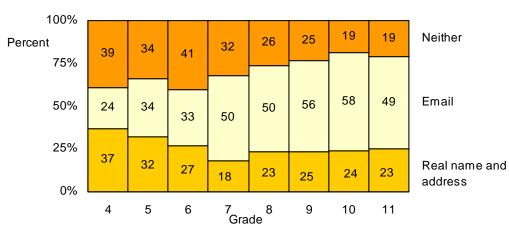




To talk in a chat room, discussion forum or bulletin board

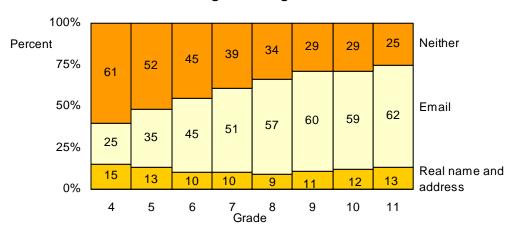


Information on your own web page or blog (results restricted to kids who have a Web site or blog)

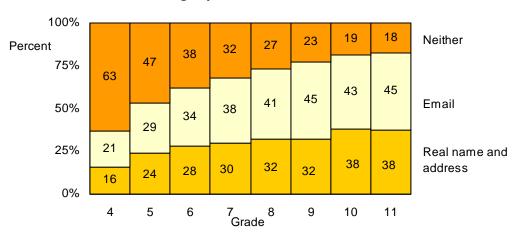




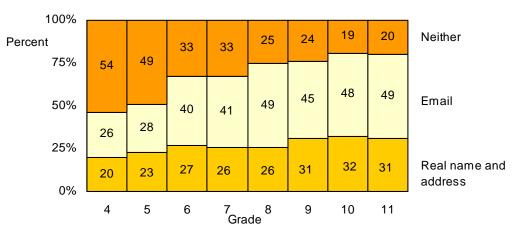
To register on a game site



To sign up for a free email account



To create a profile on a site like MSN

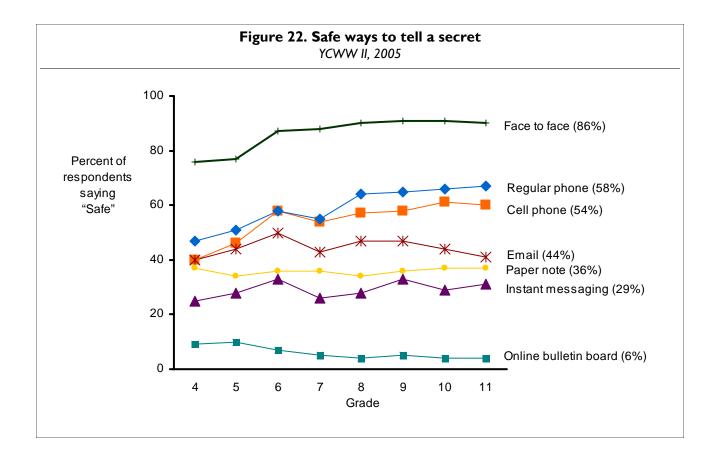


Safe ways to tell a secret

Do kids consider that some communications media guard their privacy better than others? The survey asked kids whether they considered seven means of communication "safe" of "not so safe" for telling secrets. Figure 22 shows the proportion who consider each method to be safe.

Kids consider face-to-face communication to be the safest way to tell a secret, followed by the telephone and cell phone. (You never know who might be listening in on an extension or overhearing the conversation at the other end.) Kids consider that putting the secret down in writing, sending it by email, paper note or instant messaging is distinctly less safe, and they believe that bulletin boards (being public spaces) are not safe at all. What may be surprising is that the younger students make these distinctions almost as sharply as the older ones.

The overall percentage of respondents who consider a method safe appear in brackets next to the label.



Spam

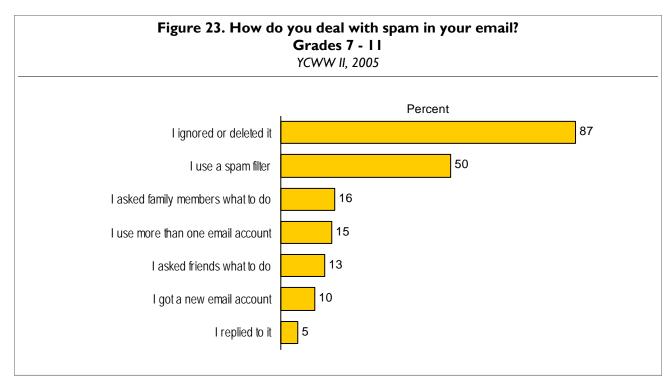
The survey section on spam appeared in the Grade 7 to 11 survey. Overall, 43 percent of these students reported that they had had a problem with too much spam in their email during the current school year. The proportion increases from Grade 7 (where 36 percent report a problem) to Grade 11 (where 54 percent report a problem).

Earlier in this chapter, it was shown how older kids are more willing to give out their email addresses (see Figure 20 and Figure 21). Couple this with the fact that older respondents spend more time online (Table 6) and engage in a greater range of online activities (Figure 4), and the increase in spam over the grade range is easily explained.

Those who had a spam problem were asked how they dealt with it (Figure 23). While ignoring the issue is almost universal, it is important to note that 50 percent of kids use a spam filter. This proportion increases with age, from 40 percent in Grade 7 to 60 percent in Grade 11.

The proportion who ask family members how to deal with spam declines from 23 percent in Grade 7 to 12 percent in Grade 11. Other options do not change significantly across grade levels.

In all, 65 percent of those with spam problems report taking one or more of the constructive steps listed in Figure 23, i.e. taking one of the actions other than ignoring the spam or replying to it.



Note: Percentages add to more than 100 as respondents could choose several options.

8. Online Identities

Pretending to be someone else

The Internet offers young people an environment where they feel anonymous and invisible. In this environment, the majority of kids, 59 percent, report that they have assumed some different online identity. Pretending to be older is the most common practice (Figure 24). The pattern of results is very similar across grades, for boys and girls, and for students in Quebec and in the rest of Canada.

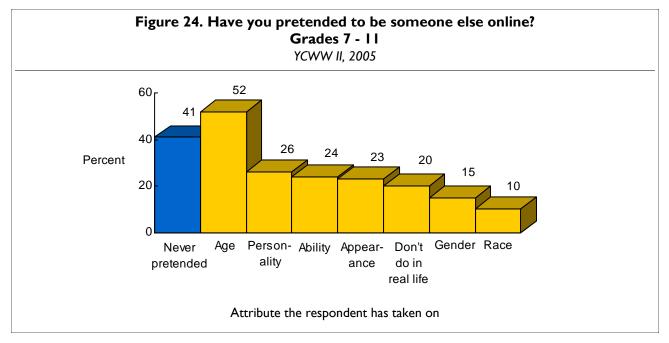
Among the 59 percent of kids who have pretended to have different attributes (e.g. different age, gender, etc.):

- 34 percent have pretended to have just one false attribute.
- 38 percent have pretended to have either two or three false attributes.

 28 percent have pretended to have between three and all seven of the false attributes in the list.

The survey suggested five reasons that a respondent might have for taking on a different personality. The first three reasons given in Table 11 relate to experimenting with social roles – being someone else, being older and flirting. Altogether, 50 percent of the respondents who had ever pretended to be someone else chose one or more of the first three reasons.

There is no overall change in the incidence of pretending from 2001 to 2005. The fluctuations up and down on individual attributes are within the realm of chance measurement error.



Note: Percentages add to more than 100 as kids can pretend to have several different attributes.

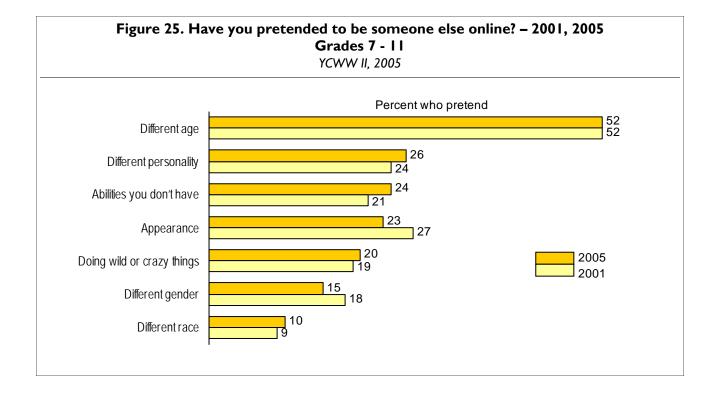
Table 11. Why do you pretend to be someone else? Grades 7 - 11

YCWW II, 2005

Why did you pretend?	Percent of respondents
I want to see what it would be like to be someone else	28
I can pretend to be older and talk to older kids	28
I can flirt with people	26
I can act mean to people and not get into trouble	17
Other reasons	53

Note: Percentages add to more than 100 as respondents could choose several reasons.

Results exclude the 41 percent of respondents who have never pretended to be someone else online.

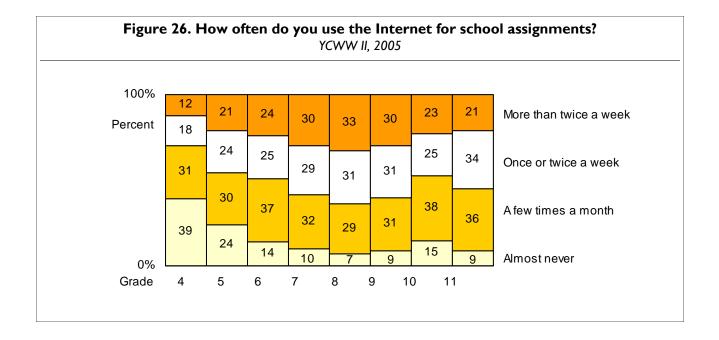


9. School assignments on the Internet

Figure 26 reports answers to the question, "How often do you use the Internet for school assignments?"

- The proportion who "almost never" do online assignments drops from Grade 4 to Grade 7, then levels off.
- About one-third in each grade do assignments "a few times a month".

- The proportion who do online assignments "once or twice a week" increases to about one-third of students in Grade 11.
- The proportion who do online assignments "more than twice a week" increases up to Grade 8, then recedes through the high school years. By Grade 11 it is back to the Grade 5 level.



The difference may lie in the wording of the questions. Homework is frequently a set of questions based on the day's lessons, and doing homework using the Net may include something as simple as looking up a word on dictionary.com. An assignment implies something of larger scope such as writing an essay. The difference in emphasis occurs in the French survey too – "homework" is "devoirs" and "assignment" is "travaux scholaires".

52

⁷ The survey asked about doing schoolwork on the Net in two places, with somewhat different results. Figure 4 reported that about three-quarters of kids past Grade 6 do "homework" using the Net on an average school day. Figure 26 suggests that half, at best, do "assignments" online on a regular basis.

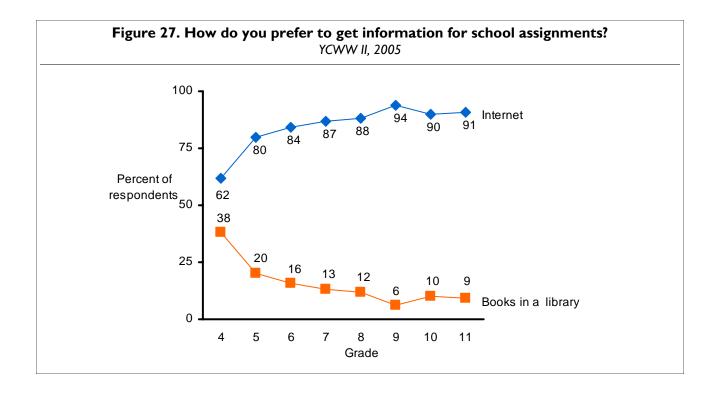
Respondents were asked whether they would prefer to get information for school assignments from books in a library or from the Internet. The Internet is the clear winner (Figure 27), and it is not hard to imagine reasons for the choice. The Net is convenient and fast.

In Grade 4 the preference for online research is already well established, with 62 percent favouring the online method and 38 percent preferring to get information from books in a library. The preference for the Internet climbs rapidly to Grades 5

and 6 and then more slowly. This trend mirrors kids' adoption of the Internet as a tool for doing homework, which was shown in Figure 4.

For most, the Internet is an enjoyable way to do school work. Fifty-eight percent of respondents say they like the Net for school work, while only 15 percent say that they dislike it.

There are not meaningful differences in response to this question on the basis of grade, gender or geographical location.

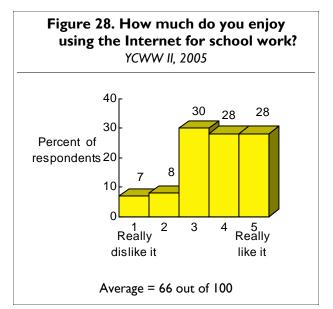


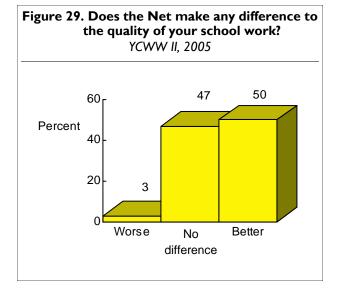
From the perspective of many adults who never had access to the Internet to help with homework, the fact that almost half the respondents say that the Net makes no difference to the quality of their schoolwork is worthy of note.

There are several possible hypotheses why kids might not see a difference. First, many or most survey respondents cannot remember a world without the Internet, so they lack the comparative context.

Second, some may have had trouble with online assignments and done poorly as a result (perhaps because they had difficulty finding sound information among the many, sometimes conflicting, sources that are available).

Finally, there is a difference between students in Quebec and elsewhere. A majority of students outside Quebec (53 percent) think that the Internet makes their schoolwork better, compared to 38 percent of students within Quebec. Interestingly, respondents from Quebec enjoy using the Net as much as respondents from other provinces, and they use the Net for school assignments almost as much as others.





What would you like to learn about in school?

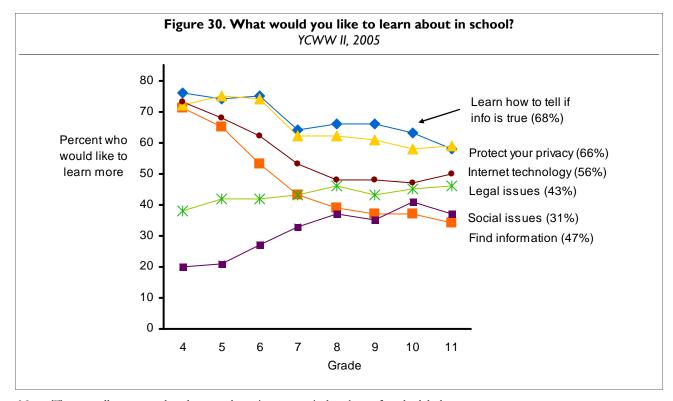
The survey set out six topics and asked students if they would like to learn more about them in school. Results are given in Figure 30 and also numerically in Table 12.

"Learning how to tell if information that you find on the Net is true" is the leading topic that kids would like to know more about. "Protecting your privacy" follows closely, and is of interest because kids often give out personal information. As reported in Chapter 7 on Privacy:

- One-half would give their real name and address for various purposes.
- Three-quarters would give their email address.
- One-third share passwords.

Younger and older students divide distinctly in terms of the topics they find interesting. From Grade 4 to Grades 6 or 7, interest in exploring four topics declines: learning to tell if information is accurate, privacy, Internet technology and learning how to find information. Interest in social issues, on the other hand, increases. From Grades 7 or 8 on, there is very little change in what kids find interesting. All the proposed topics are of at least moderate interest.

As examples of social issues the questionnaire listed hate sites, racism, sexism and bullying. Examples of legal issues were downloading, file sharing, copyright and plagiarism.



Note: The overall percent who chose each topic appears in brackets after the label.

Differences in interest level between Quebec and other regions are not statistically significant. Gender differences are small.

- "Telling if information is true" interests 72 percent of girls and 63 percent of boys.
- "Protect your privacy" interests 68 percent of girls and 62 percent of boys.
- "Internet technology" interests 50 percent of girls and 60 percent of boys.
- "Social issues" interest 34 percent of girls and 29 percent of boys.

Table 12. What would you like to learn about in school? YCWW II, 2005								
Percent of respondents Grade								
Торіс	4	5	6	7	8	9	10	П
Find info on the Net	71	65	53	43	39	37	37	34
How to tell if online info is true	76	74	75	64	66	66	63	58
How to protect your privacy online	72	75	74	62	62	61	58	59
Social issues, e.g. racism, sexism, bullying	20	21	27	33	37	35	41	37
Legal issues	38	42	42	43	46	43	45	46
How Internet technology works	73	68	62	53	48	48	47	50
Total	100	100	100	100	100	100	100	100

Skills

Kids rated their own skill level in ten common areas of their lives. Most of the skills, listed in Table 13, relate to the world of schools and friends – only two are specifically computer-based (skill using the Internet and skill playing computer games).

The rating scale runs from 0 to 100 with 50 as the midpoint. If people rate their skills accurately, the average rating would be 50. If most people

thought that they were better than average, then the mean rating would be higher than 50.

In fact most of the ratings exceed 50, meaning that students as a group tend to be rather confident in their abilities.

"Using the Internet" is, by a slight margin, the topranked skill. Both girls and boys feel confident in their Internet abilities.

Table 13. Girls and boys' self-ratings of ten skills

YCWW II, 2005

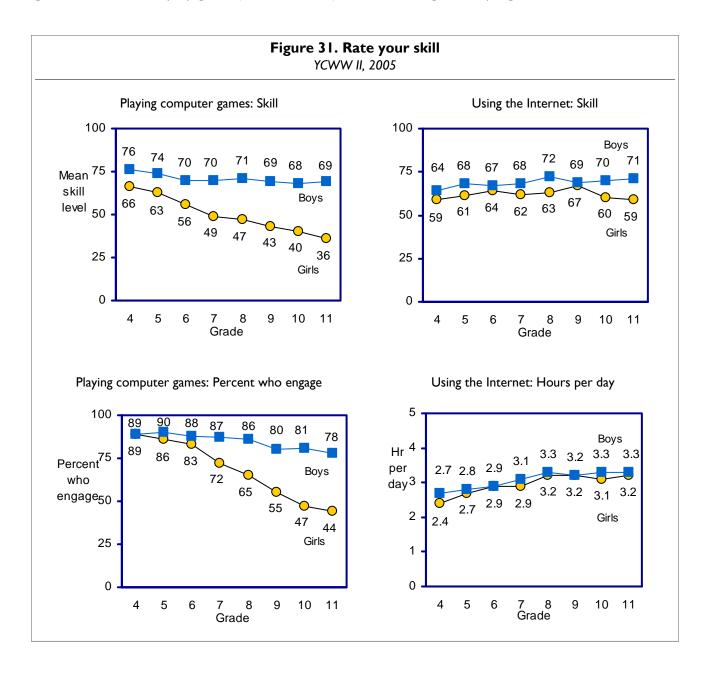
Skill		Skill rating (0=Not as good, 50=About the same, 100=Better)						
	Girls	Boys	Total					
Using the Internet *	62	68	65					
Making friends	66	62	64					
Telling jokes, making people laugh	60	65	63					
Reading *	66	58	62					
Playing computer games *	50	71	61					
Sports *	51	64	58					
Math and science *	52	57	54					
Visual arts *	55	47	51					
Shopping *	62	33	47					
Playing a musical instrument or singing *	51	42	47					

Note: * Statistically significant gender difference accounting for one percent or more of the variance.

The top charts in Figure 31 show grade and gender differences in the two computer-based skills. The bottom charts show the activity levels in the same two skills. Kids' perception of their skill corresponds in a general way to the amount of activity that girls and boys undertake in these areas.

Thus, the proportion of girls who play computer games declines steadily by grade (lower left chart) and the level of skill in computer games that girls perceive they have declines in parallel (upper left chart).

The lower-right chart shows the total amount of time that kids spend online per day (discussed in Chapter 4). Boys spend slightly more time online than girls, and they rate their overall level of Internet skill significantly higher.



How do heavy and light users see their skills?

Heavy Internet users see themselves as better, and light users see themselves not as skilled in these areas (illustrated in Figure 32):8

- Skill using the Internet
- Playing computer games
- Shopping
- Making friends
- Telling jokes, making people laugh

There is little to no difference in the way that heavy and light users rate their skills in these areas:

- Playing sports
- Math and science
- Reading
- Visual arts
- Playing an instrument or singing

It is no surprise that heavy Internet use is associated with skill using the Net and skill playing computer games. But what about shopping or making

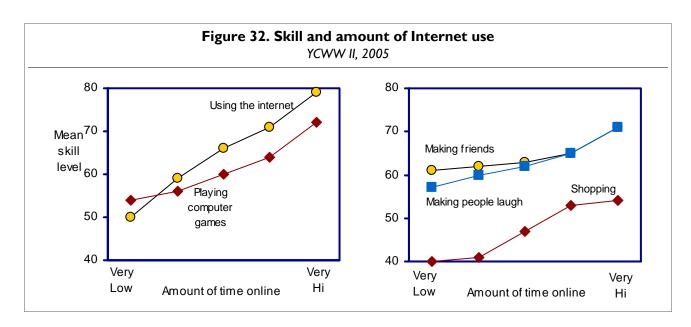
friends or making people laugh? One hypothesis is that kids who are good shoppers recognize that the Internet is one tool of the trade and they spend time online to advance their interest in shopping. Likewise, the Net is a medium for making new friends (e.g. via MSN), and it is a huge source of humorous material (several of the topranked "favourite sites" deal primarily in jokes).

Kids who are interested in making new friends will use the Net as one channel of social interaction and will therefore increase the time they spend online.

On the other hand, those who are interested in math, science, reading and the arts may find less to advance their interests on the Net and spend less time online.

What the hypothesis states is that shopping, making friends and being funny are skills that, for today's youth, are embedded in electronic communications. The Internet is an extension of everyday social life and an integral part of these skill sets.

⁸ All these tests control for grade level.



10. Offensive Sites

Students in Grades 7 to 11 were asked about their encounters with five types of offensive sites. In the current school year, about one-third of students have visited one or more of these sites on purpose, one third have visited by accident, and one-third not at all (landing on a porn site by accident was a frequent scenario in the Memorable Experience results, Chapter 5).

Porn sites are the most frequent encounter of the five types, closely followed by gore sites and gambling sites. One-third of the respondents report visiting a porn site during the current school year, 16 percent on purpose and 19 percent by accident.

For each of the five site types, the number of accidental visitors and the number of purposeful visitors is similar.

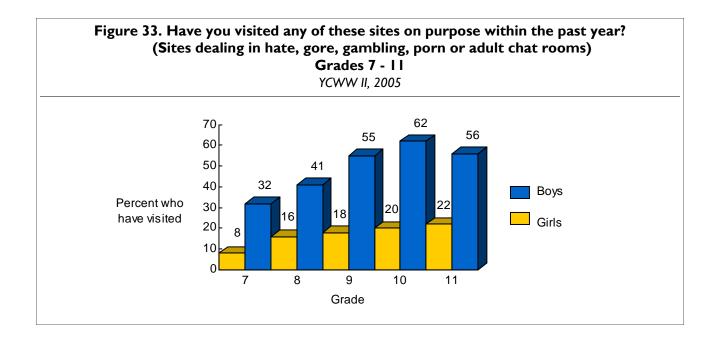
It is worth noting that the results for 2005 differ somewhat from those reported in the 2001 study. The 2005 results generally show fewer visits to offensive sites. For example, the 16 percent who made purposeful visits to porn sites in 2005 corresponds to 25 percent in 2001. The 2005 figure of 19 percent who accidentally visited porn sites corresponds to 52 percent in 2001. While these differences are puzzling, they may well reflect a change in the survey question. The 2005 survey asked whether the respondent had visited these sites in the current school year, while the 2001 survey did not state a time frame. Students likely reported whether they had ever visited the site in question.

Table 14. In this school year (since September 2004) have you visited these sites? Grades 7 - 11 YCWW II, 2005						
Site	On purpose	By accident	Never			
Porn sites	16	19	66			
Violence or gore sites	18	12	70			
Gambling sites	12	12	76			
Adult chat rooms	9	8	83			
Hate sites (against different races or religions, e.g. Neo-Nazi sites)	5	7	89			
Any of these sites	34	35	31			

There are large grade and gender components that underlie purposeful visits to these sites (Figure 33 and Table 15). Across grades, three times as many boys as girls have made purposeful visits to one or more sites in the group. In Grades 9 to 11, a majority of boys have made purposeful visits

(anywhere from 55 to 62 percent) compared to only 20 percent of girls.

Region also plays a role. More students in Quebec (45 percent) than outside Quebec (31 percent) have visited one or more of the five sites on purpose.



If accidental visits are truly random, then one would expect boys and girls to report about the same number of incidents: boys might have slightly more accidental encounters than girls, because they spend more time online, but the difference, if any, would be small.

The actual pattern of accidental visits shows no significant gender differences for gambling sites, adult chat rooms and hate sites. This is in line with the idea that landing on these sites are random events.

On the other hand, there are large gender differences for both porn and gore sites – more than

twice as many boys as girls accidentally find their way to these locations. Some explanations, which must be tested at a future time, are that boys visit more sites that contain hidden links to porn and gore sites, that some of the boys' visits are "accidentally-on-purpose", and that girls are less likely to register and recall visits to these sites.

Turning to purposeful visits there are two general conclusions:

- More boys than girls visit each type of site.
- The proportion of kids who visit each type of site increases with grade level.

Table 15. Visits to offensive sites by grade and gender Grades 7 - 11 YCWW II, 2005											
GIRLS Grade							BOYS Grade				
Site	7	8	9	10	11	7	8	9	10	11	
Accidental visits											
Porn sites *	12	12	16	14	10	26	24	29	24	21	
Violence or gore sites * †	9	12	14	9	7	18	16	17	12	12	
Gambling sites	11	12	13	12	8	14	16	14	П	10	
Adult chat rooms ^	8	9	8	7	3	6	6	10	8	10	
Hate sites	4	7	7	6	6	8	5	10	7	6	
Purposeful visits											
Porn sites * †	ı	4	3	8	7	12	19	31	36	33	
Violence or gore sites * †	4	4	11	8	7	23	23	34	33	26	
Gambling sites * †	3	4	5	7	8	9	13	19	20	25	
Adult chat rooms * †	3	6	6	8	6	5	8	14	16	18	
Hate sites * †	ı	ı	3	4	3	3	6	8	10	10	

Note: Significant differences:

^{* =} Gender: more boys than girls visit.

^{† =} Grade: the proportion who visit changes with grade level.

^{^ =} Gender by Grade: gender differences change with grade level.

Protection from offensive sites

There is wide agreement among Canadian students in the sample that schools and parents should protect kids from three types of offensive Internet site, and also from bullying and harassment. Two questions were asked, "Should kids your age be protected?" and "Should kids two years younger than you be protected?" The general pattern of results, shown in Table 16, is highly consistent. In every instance, more respondents advise protection for younger kids than for those their own age. The difference is greatest for gore sites. In the Grade 7 to 9 instance, 63 percent think they themselves should be protected while 86 percent think that younger kids should be protected. The spread

is 23 percentage points. The Grade 10 to 11 group show a spread of 24 points – 54 percent think that they themselves should be protected from gore sites while 78 percent think that younger children should be protected.

A second consistent result is that more girls than boys advise protection. The gender difference averages 15 percentage points across the four types of activity.

A third trend is that more younger kids (Grades 7 to 9) advise protection than older kids (Grades 10 and 11). This difference is slightly smaller than the gender difference, averaging 10 percentage points across the four activities.

Table 16. Should schools and parents protect kids?

Grades 7 - 11

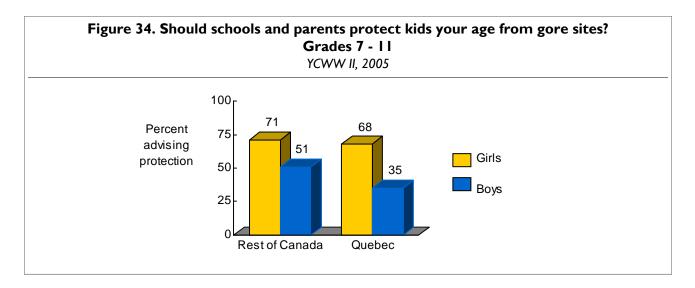
YCWW II, 2005

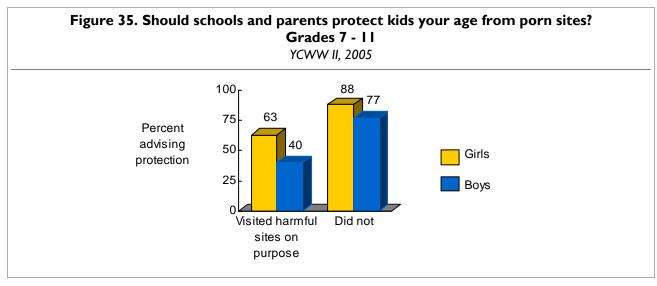
		, 2000						
	c	Grades 7-9		Grades 10-11				
Activity	Girls	Boys	Total	Girls	Boys	Total		
Protect kids your age from								
Hate sites	83	72	78	73	61	66		
Violence or gore sites	75	50	63	65	44	54		
Online porn	89	66	77	78	49	62		
Bullying and harassment	88	75	82	77	64	70		
Protect kids two years younger from								
Hate sites	93	86	89	87	76	81		
Violence or gore sites	92	79	86	86	72	78		
Online porn	96	84	90	90	72	80		
Bullying and harassment	94	87	90	90	77	83		

Note: Gender differences are statistically significant in every instance.

In addition to the foregoing, fewer Quebecers, and especially fewer Quebec boys, see a need for protection from offensive Internet sites. Figure 34 illustrates this with results for gore sites, though it holds for other types of site as well. Close to 70 percent of girls in Quebec and elsewhere advise protection from gore sites, compared to 35 percent of Quebec boys and 51 percent of boys from other provinces and the territories.

A final piece in the puzzle is that kids who have purposefully visited offensive sites do not see the same need for protection as kids who do not visit these sites on purpose. Figure 35 illustrates this with results for gore sites though again, it holds for other types of sites as well.





Note: In Quebec, elementary education spans Grades 1 to 6 and secondary education spans levels 1 to 5.

Grade 7 = Secondary 1

Grade 8 = Secondary 2

Grade 9 = Secondary 3

Grade 10 = Secondary 4

Grade 11 = Secondary 5

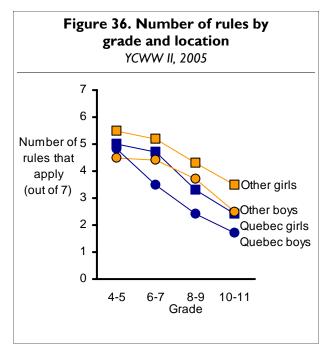
II. Rules in the Home

The majority of respondents report that their household applies one or several rules to govern Internet activity. Table 17 lists the seven rules that the survey asked about. "Meeting someone in person whom you got to know online" is the most common rule, applying in 74 percent of households.

There is a significant gender difference in the case of each rule. The largest differences are in areas where parents may be especially protective of girls – meeting someone whom you got to know online, talking to strangers, and giving out personal information.

The number of rules in force declines with age, indicating that parents of older children are less involved in the minute-to-minute supervision of children on the Net.

In addition, students outside Quebec report more rules than those in Quebec.



Note: In Quebec, elementary education spans Grades 1 to 6 and secondary education spans levels 1 to 5.

Grade 7 = Secondary 1

Grade 8 = Secondary 2

Grade 9 = Secondary 3

Grade 10 = Secondary 4

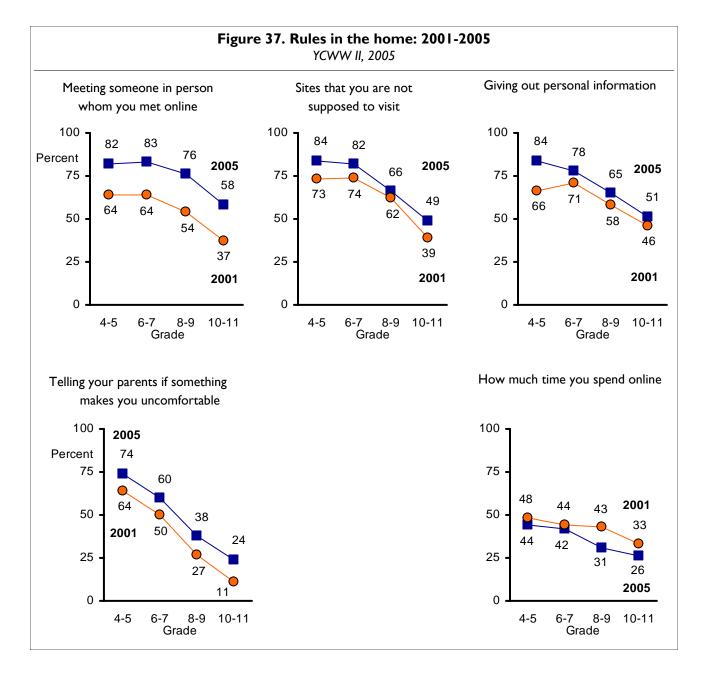
Grade 11 = Secondary 5

Table 17. Are there rules about these in your house? YCWW II, 2005							
Percent who have a							
Rule	Girls	Boys	Total				
Meeting someone in person whom you got to know online	85	65	74				
Sites that you are not supposed to visit	74	67	70				
Talking to strangers on the Internet	78	61	69				
Giving personal information on the Net – name, address, email, etc.	79	62	69				
Telling your parents if you find something that makes you feel uncomfortable	55	44	49				
Downloading music, videos or software that you are supposed to pay for	51	41	46				
How much time you are allowed to spend on the Internet	39	32	36				

Rules then and now

Several of the rules in the present survey were also tested in the 2001 survey. Four of these rules address specific behaviours such as "Sites you are not supposed to visit". Each of these rules is more prevalent now than it was four years ago. The fifth

rule, "How much time you spend online," is more general in nature and reported by fewer students at this time. The pattern of results implies that parents are becoming more attuned to the specific issues related to the Net, and are addressing these rather than issuing blanket proscriptions against too much time online.



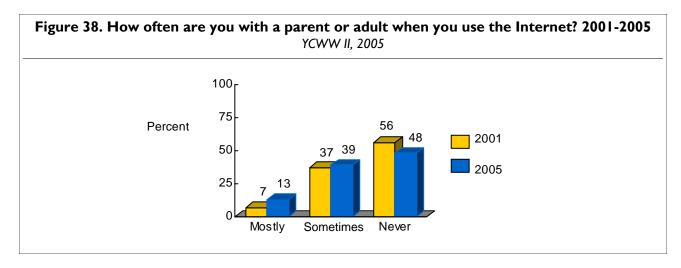
Internet use alone and with others

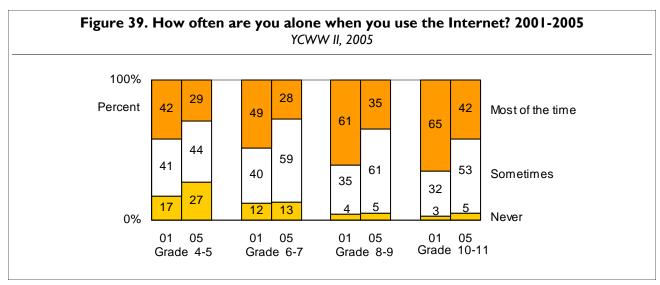
Both the 2001 and 2005 surveys asked young Canadians from Grades 4 to 11 two questions about the social environment in which kids use the Internet. These measures show marked trends – one toward more parental supervision and the other toward more social and less solitary Internet use.

Figure 38 shows that the proportion who use the Net "mostly" with an adult has almost doubled, from seven percent in 2001 to 13 percent in 2005. Those who are "never" with an adult declines from 56 percent in 2001 to 48 percent in 2005.

Figure 39 reports on "social" use of the Net – which may be with friends, brothers and sisters, or adults. From 2001 to 2005, there is a large decrease in the proportion who use the Net "mostly" alone and a commensurate increase in those who use it "sometimes" alone. In addition, in the Grade 4 to 5 group, the proportion who are "never" alone increases from 17 to 27 percent.

Both these changes are consistent with the increases in the number of household rules, discussed above. The increase in social Internet use is so large, however, that it may reflect some additional dynamic that this survey does not address.



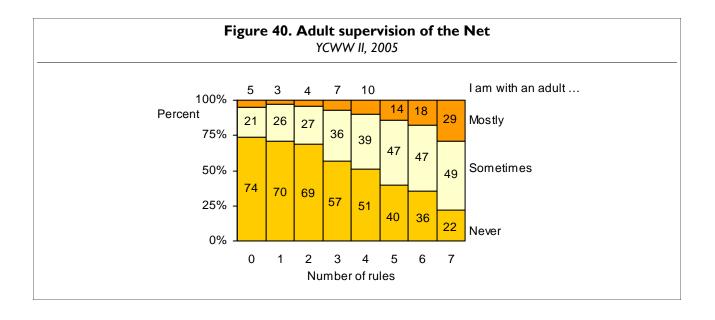


Rules and supervision

The existence of rules suggests adult supervision. There is a strong link between the number of household rules and the amount of hands-on supervision of Internet use. In households with no rules, 74 percent of kids report that an adult is never present when they use the Net; at the other

extreme where all seven rules are in force, just 22 percent report that they are never supervised.

Figure 40 shows this relationship averaged across Grades 4 to 11. There are more rules and more supervision in the younger Grades, but the relationship between number of rules and amount of supervision that the chart illustrates holds for each grade.



12. Does Parental Involvement Make a Difference?

Previous sections have described the rules that families set and also the propensity of some kids to seek out inappropriate sites. The 2005 survey sought to establish whether rules make a difference to kids' behaviour.

We begin with four rules:

- Sites you should not visit
- Meeting people whom you got to know online
- Giving personal information online
- How much time you can spend online

In each case, the existence of a rule makes a large difference in kids' behaviour. While the survey questions were stated simply in terms of rules, we should probably understand the issue in terms of greater parental interest and involvement in the area in question. For example, a rule about not meeting people may well be discussed with kids on a number of occasions and presented so that the kids understand the basis for their parents' concern.

Sites you should not visit

Some households have rules about "sites that you are not supposed to visit" – which presumably includes sites dealing in porn, hate, gambling, etc. (described in Chapter 10).9 Are kids less likely to visit such sites if there is a rule in the house? The short answer is yes: this rule does make a difference, especially for younger children.

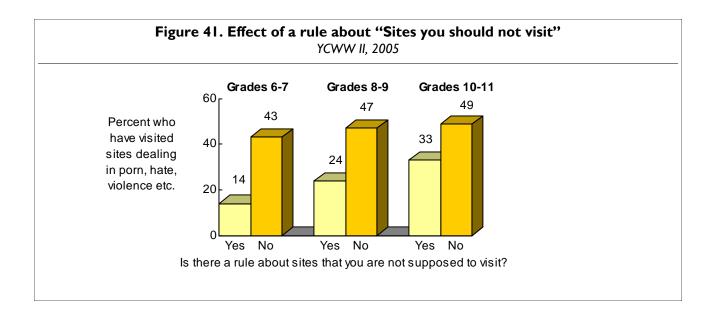
Figure 41 shows the proportion of kids who have willingly visited one or more of the five types of sites (hate, violence, gambling, adult chat rooms, and porn). It shows that in Grades 6 and 7:

- When there is no rule, 43 percent of Grade 6 and 7 kids went to one or more of these sites.
- When there is a rule, just 14 percent of Grades 6 and 7 kids visited the sites.

When there are no rules, the number of kids who report visiting these sites does not change greatly across grades. When there are rules, increasing numbers of kids break the rule as they get older, but the rules still have an impact on behaviour in Grades 10 and 11.

- When there is no rule, nearly one-half of Grade 10 and 11 students (49 percent) went to one or more of these sites.
- When there is a rule, 33 percent of Grade 10 and 11 kids visited the sites.

⁹ A rule about "sites that you should not visit" may extend well beyond these "offensive" sites. Many parents ban or restrict game sites, instant messaging and others in order to limit the amount of time that children spend online. The premise here is that if such a rule exists, it in most cases includes offensive sites. Parents who ban Neopets are unlikely to allow porn or adult chat rooms.



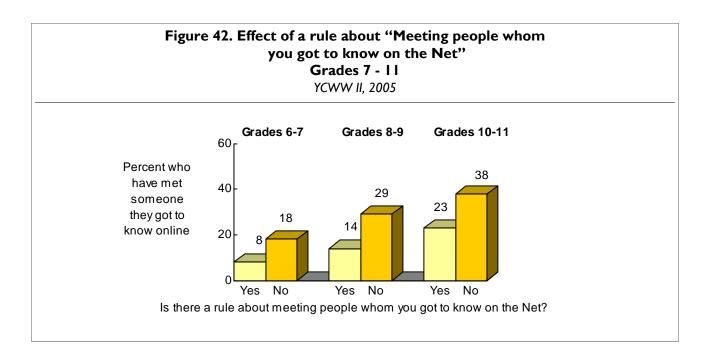
Meeting people whom you got to know online

The most prevalent rule is about not meeting people whom you got to know online. This may not be an absolute prohibition; it may mean that kids should not meet online acquaintances without first getting parental approval. Nonetheless, one would expect that if the rule is in force, there should be fewer instances of the behaviour.

This is indeed the case. The incidence of meeting online acquaintances increases as kids get older, but when there is a rule about the activity, it is much less common.

There is not a significant gender difference in these results. Without a rule, 36 percent of girls and 32 percent of boys report meeting people in real life whom they got to know online. With a rule in place, the results are 17 percent of girls and 15 percent of boys.

The 2001 data reveal that, of those who have met someone in person that they first met on the Internet, 33 percent have a specific rule in their household against this behaviour. In the 2005 data, this figure has risen to 52 percent. The overall implication is that, while the rule does have an effect in 2005, it may be a smaller effect than in 2001.

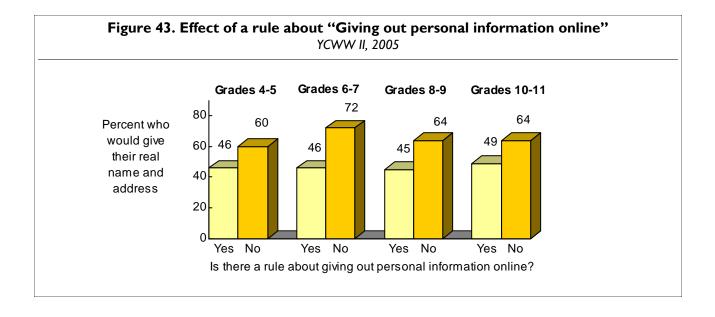


Giving personal information online

Questions on giving personal information were discussed in Chapter 7 and took the form, "Would you give your real name and address to enter a contest?" There were seven such questions, and kids who answered "Yes" to any one of them are included in the "Yes" group in Figure 43.¹⁰

The fluctuations across grade are not statistically significant.

10 It may be that the criterion of giving your real name and address under *any* of the seven conditions is too strict. There can be times when it is appropriate to do so. If the analysis is run allowing kids to give their real name and address under one or more of the instances specified, the result is parallel to that in Figure 43. Both the Yes and No percentages decrease, but the pattern remains similar.

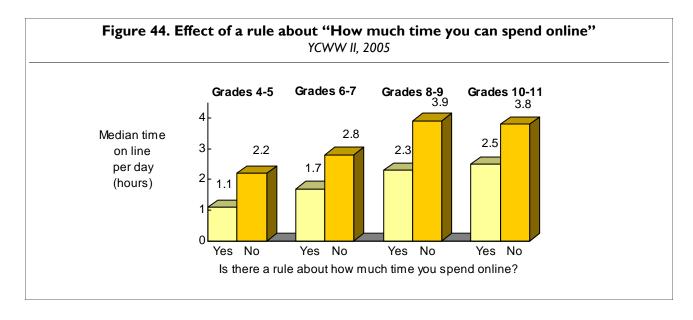


How much time you spend online

The total amount of time that kids spend online is calculated by adding up the time they spend on each of 12 activities. Some of these activities can be done concurrently, e.g. listening to music, chatting on MSN and doing homework. We do not know the precise degree of overlap among these activities, but it is likely that the time that kids are physically in front of their computers may be less than what Figure 44 indicates.

Figure 44 reports the median amount of time for kids who do and do not have a rule about time spent online. The median is the point that splits a group in half, thus, for Grades 4 and 5 kids who have a rule about time spent online, half spent less than 1.1 hours per day online and half spent more than this.

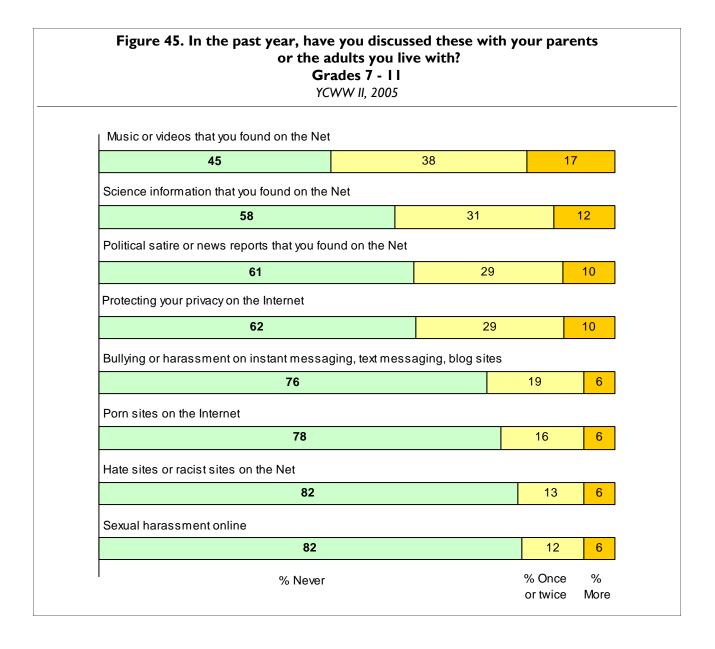
At each grade level, the existence of a rule makes a large difference in the amount of online activity. Averaging across all grades, kids who do not have a rule report 95 percent more online activity than kids who do have a rule in place.



13. Discussions in the Home

The survey asked students in Grades 7 to 11 whether they had discussed each of eight topics with adults in their house during the school year. A majority stated that they had not discussed any of the eight except "music or videos that you found on the Net". If this is true, an activity that

accounts for a large proportion of children's time is largely absent from family conversation. It is striking that while children seem to recall many rules about Internet use, and while these rules do have an observable effect on behaviour, they recall relatively little conversation about the medium.

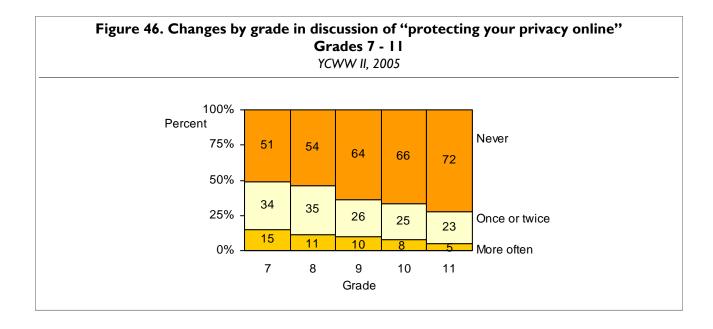


For most of the discussion topics, the frequency of discussion declines slightly with increasing grade level. Protecting your privacy on the Internet shows the greatest change with grade. The proportion who never discuss this topic increases from 51 percent in Grade 7 to 72 percent in Grade 11 (Figure 46). Discussion of bullying and harassment on the Net has the second largest grade-level shift.

Discussion of porn sites, hate sites and science information follows the same pattern as protecting your privacy, though the grade-level changes are smaller.

Discussion of music videos is the only topic to increase in frequency with grade level. The change is small: the proportion who discuss this more than once or twice increases from 12 percent in Grade 7 to 19 percent in Grade 11.

There are not significant grade effects for discussion of political satire.

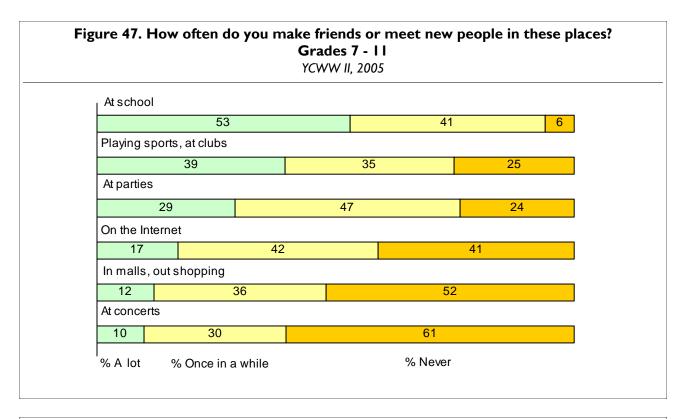


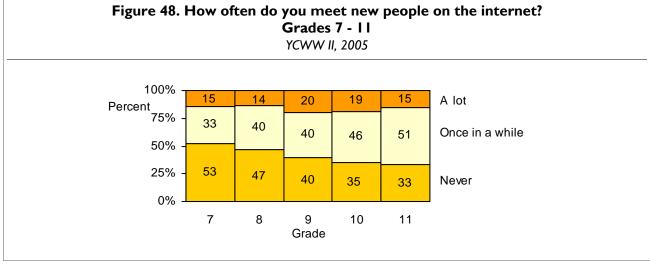
14. Social Interactions

Making friends and meeting new people

Young Canadians state that real-life environments including school, sports and parties are where most new social contacts are made; the Internet places a distant fourth among the options in Fig-

ure 47. The Internet does become a more important meeting place with age. In Grade 7, 48 percent of kids report that they meet new people on the Internet at least once in a while; by Grade 11, the figure has climbed to 66 percent (Figure 48).

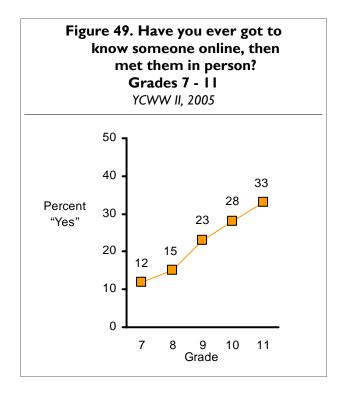


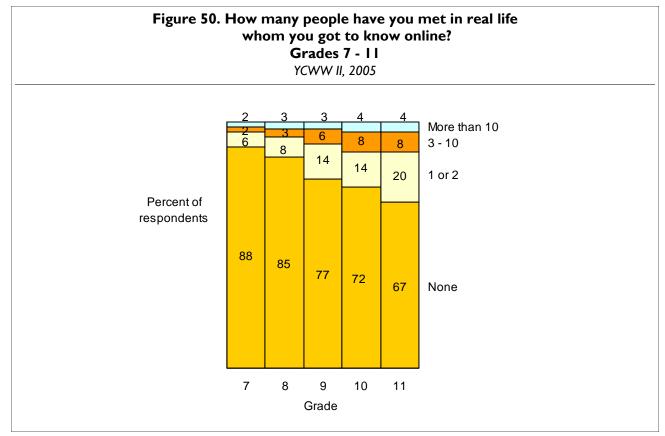


Meeting people you got to know online

With age, the Internet becomes more important as a meeting place, and it is hardly surprising that kids are interested in meeting some of their new acquaintances in person. While most families warn their children against this, it is difficult to make a blanket proscription. Many of the new acquaintances are friends of friends, so they get together. By Grade 11, one-third of both boys and girls have met others in this manner.

A striking feature of the survey results is that a large majority of kids (79 percent overall) have never encountered an online-acquaintance in the real world.





Note: Percentages for the "3 - 10" row are 2, 3, 6, 8, 8.

The nature of bad meetings

Some real-world meetings with online acquaintances are happy encounters and some are not. Kids were asked to describe their best and worst encounters meeting online acquaintances in real life. Their stories (examples follow) speak for themselves.

Reports of good experiences outweigh bad ones. Twenty-nine percent of those who had met online acquaintances described a bad experience and 72 percent reported a good one. Some reported both a good and a bad experience.

The bad experience question was asked in the 2001 survey and codes were ascribed to respon-

dents' written answers. The same codes were applied to the 2005 results for comparison. Several of the 2001 codes overlap in meaning and cannot be reliably applied to kids' comments - which tended to be very brief and were sometimes vague or ambiguous. For example, the 2001 codes "Person was fat, ugly" and "Person wasn't age claimed to be" are subsets of "Person's appearance was not as claimed". "Violent" and "Got into a fight" are also overlapping.

Combined, these overlapping codes produce the results in Table 18. The original set of 2001 codes is listed in the left-hand column. Results for the two years are highly similar. The rank ordering of categories is identical.

Table 18. The nature of bad experiences

Grades 7 - 11

YCWW II, 2005

YCWW II, 2005				
	Percent of experiences			
Perception of the experience	2005	2001		
Person's appearance was not as claimed Person wasn't age claimed to be Person was fat, ugly	31	26		
Person was freak, weird, crazy Person was asshole/mean Annoying Person was moron/stupid/idiot	20	25		
Did not like, interests did not match	15	17		
Person wanted to or made sexual contact Person used vulgar sexual language	12	14		
Violent Got into fight	8	9		
Other	16	10		

Examples of bad online experiences

Following is a representative selection of kids' responses to the question, "What is the worst experience you ever had meeting an online acquaintance in real life?"

- We got close and I just ended up getting hurt in the end. (no gender, Grade 7, ON)
- He ended up being gay and he called me sexy. (boy, Grade 7, ON)
- J'ai été déçu, il n'était pas comme il le prétendait, il se disait beau, et pourtant...pas du tout. (girl, Grade 7, QC)
- My friend went on a chat room and met this guy. They talked on the phone and the Webcam. They went to the movies and he saw her from the neck down and left. I felt bad for her. (girl, Grade 7, ON)
- They said they could do all these really cool things and they owned all these really cool things. But they turned out to be losers and were lying about all this stuff. (boy, Grade 7, NL)
- The worst experience was the fact that some of these people were involved in drugs and gangs and I was asked to try drugs and join a gang. (boy, Grade 8, MB)
- Un gars qui allait à l'école et qui m'a menti en ligne (aussitôt qu'on s'est parlé en vrai, il avait une blonde, etc.....). (girl, Grade 8, QC)
- I met a guy from Texas online. He came to PEI to his grandma's cottage. He turned out to be 17 not 14! He wanted to date me. (girl, Grade 9, PE)

- I thought I was going on a date with a girl, but it was really a guy. (boy, Grade 9, NS)
- La personne était complètement différente de ce qu'elle avait dit sur l'Internet. (boy, Grade 9, QC)
- They weren't really what they said they looked like. They didn't act the way they "acted" on MSN or email. (girl, Grade 9, SK)
- C'était une fille et je bavardais avec elle, puis au moment quand on s'est rencontré, elle ne m'intéressait pas du tout. J'étais mal à l'aise. (boy, Grade 10, QC)
- He was a jerk who wanted me for sex. (girl, Grade 10, SK)
- L'homme était plus vieux qui'il m'avait mentionné et il m'a invité chez lui, j'ai refusé et je suis partie. (girl, Grade 10, QC)
- He was so ugly, I had to lie to get away from him. (girl, Grade 11, ON)
- Il a fallu que je bloque la personne après plusieurs reprise une fois qu'on s'était rencontré en personne. (girl, Grade 11, NB)
- The person I met had a bad attitude and she tried to get someone to beat me up. (boy, Grade 11, NF)
- They were the crudest person that I have ever met. (girl, Grade 11, BC)
- They weren't who they said they were. (girl, Grade 11, YT)

The nature of good online meetings

A positive outcome when meeting an online acquaintance is that you make a new friend. Most of the types of comment in Table 19 are variations on this theme. This question did not appear in the 2001 study so there is no comparative data.

Examples of good online experiences

The "six degrees of separation" theory applies to many of the examples given by students who responded to this question about the best experience they ever had when they first met someone online and then in real life. Most experiences describe meeting friends of friends or family members, often located close to the respondent geographically, and sometimes belonging to the student's sports group or school.

- There was a girl who started talking to me online and we found out that we go to the same camp. Then we got to hang out during the summer. (girl, Grade 7, BC)
- They were really nice! I'm glad I met them. I
 met one of my best friends on the online game
 I played. (boy, Grade 7, BC)

Table 19. The nature of good experiences when meeting an online acquaintance in the real world Grades 7 - 11

YCWW II, 2005

Outcome	
They were a friend of a friend	20
We had lots in common, they were nice	18
They became my best friend, or I made a new friend	17
Formed a romantic relationship and it worked out	12
They attend my school, play on my team, go to my camp, etc.	10
Went out to a movie, basketball game, etc.	8
They were exactly who they said they would be	5
We had sex	4
They were known to someone in my family	3
I met them in a safe place	I
They were better than online	I
Drugs were offered or involved	<
Total	100

- My friend told me to add a friend of hers to my MSN, so I did, and I like him. She came over a week later and we went to the mall and he was there. Now we are going out. (girl, Grade 7, NB)
- J'ai appris à la connaître comme il le faut et puis après on dirait que le coup de foudre nous a frappés car elle est devenue ma copine. (boy, Grade 7 QC)
- Il y avait un gars qui m'avait écrit un courriel. C'était le chum de ma cousine! On est des très bons amis maintenant. (girl, Grade 7, QC)
- Échange de maison. On les a rencontré sur internet, puis aprés en vrai, ça c'est très bien passé. (girl, Grade 8, QC)
- It was my friend's friend that I met, so I knew it was safe and he was fun to hang out with. (girl, Grade 8, SK)
- They looked like what they said they would look like. What a relief that was. (boy, Grade 9, AB)
- I really only had one experience with a boy slightly older than me, who lived nearby. My friend and I went to see x2 with him and then we went out to lunch with him and my mum. He was nice. (girl, Grade 9, BC)
- It was fun. I thought the person would act in a cool way, but actually he was just like me. (boy, Grade 9, BC)
- He came to my house, and then we went skidooing with my uncle. We had a lot of fun, now his family and my family are really close. I only met one person from the Internet. (girl, Grade 9, NS)
- J'ai sorti avec le gars que j'avais d'abord connu sur l'Internet. (Mais j'était prudente car il était l'ami d'un ami.) (girl, Grade 10, NB)

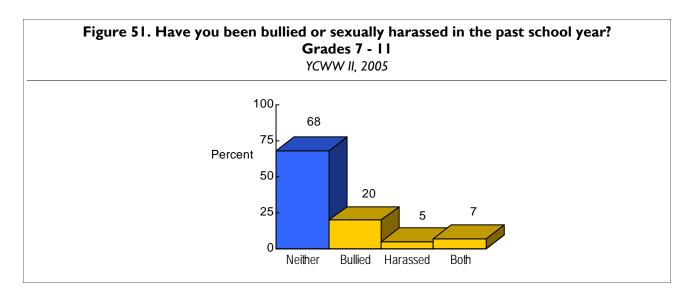
- It was excellent. At first I had many pictures of them and talked to them on the phone.
 Also, my friend already knew them. (boy, Grade 10, NL)
- I make sure they are my age and females, by using the Webcam or talking to them on the phone. (boy, Grade 10. ON)
- It was somebody that was friends with one of my friends, so I knew that he was normal. (girl, Grade 10, ON)
- On est de bons amis aprés plusleurs jours de blahblah sur l'Internet et aprés 2 jours de rencontre face à face. (girl, Grade 10, QC)
- Celle que je suis en train de vivre, c'est avec une fille et ca fait maintenant 8 mois et 1 jour. (boy, Grade 10, QC)
- When I'm sure about men and know that they aren't lying about themselves, it can be a great experience. (girl, Grade 11, MB)
- C'était un ami d'enfance que j'avais complètement oublié. C'est seulement quand il m'a montré ses photos d'école qu'on a décourvert que j'étais dans ses classes. (girl, Grade 11, NB)
- I made sure I knew who I was talking to before I met them and always took a friend with me to be safe. I went to meet this guy I had been talking to for a few months and he was exactly what I thought he was and we dated for a while. (girl, Grade 11, ON)
- We had friends who knew each other, so we could hang out and connect. The Internet was like an icebreaker to get to know the other person's likes and dislikes. (girl, Grade 11, ON)

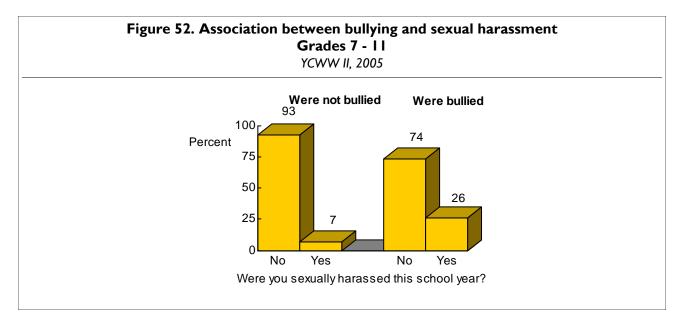
Bullying and sexual harassment

About one-third of kids in Grades 7 to 11 report being either bullied or sexually harassed within the school year (Figure 51). There is an association between bullying and sexual harassment (Figure 52):

 Among kids who are *not* bullied, seven percent report being sexually harassed. Among kids who have been bullied, 26 percent also report being sexually harassed.

The following sections examine separately kids' experience of being bullied and sexually harassed, then return to the links between them.



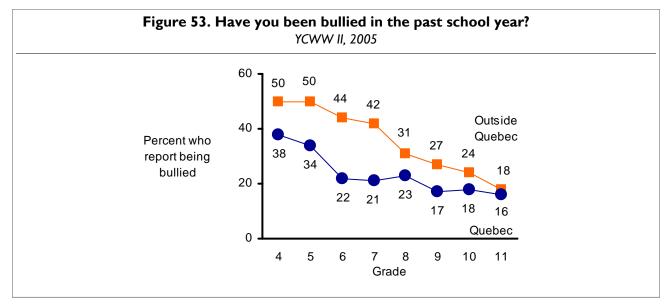


Bullying

Survey questions on bullying were asked of all students; questions on sexual harassment only of those in Grades 7 to 11.

There is a strong decline in reports of bullying across grades, but the remarkable feature of Figure 53 is the difference between students in Quebec

and elsewhere. (There are not meaningful differences among Atlantic Canada, Ontario and the West.) This implies either that the incidence of bullying is much lower in Quebec than elsewhere or that there is a cultural difference in the way bullying is defined. Such a difference might arise from the ways in which parents and the educational systems in Quebec and elsewhere treat the issue.



Note: In Quebec elementary education spans Grades 1 to 6 and secondary education spans levels 1 to 5.

Grade 7 = Secondary 1

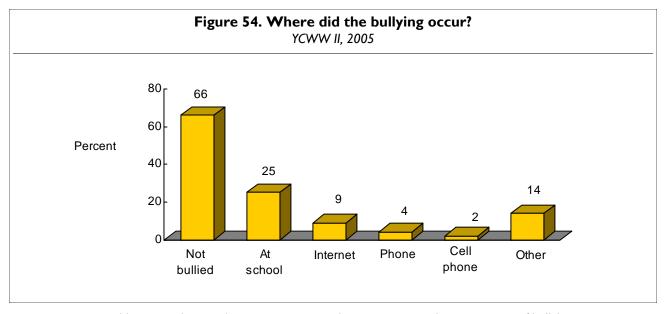
Grade 8 = Secondary 2

Grade 9 = Secondary 3

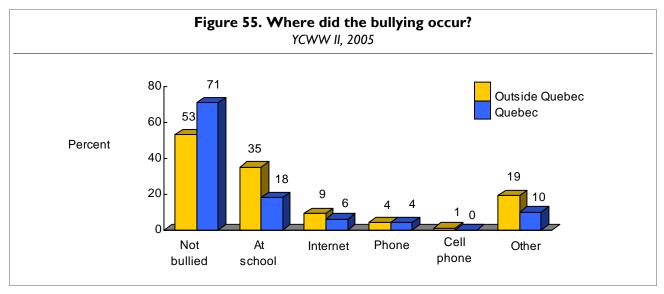
Grade 10 = Secondary 4

Grade 11 = Secondary 5

Boys and girls report similar amounts of bullying. School is the single most common context, followed by "Other places", which could include the street, parks, malls and so on. Nine percent of kids report being bullied over the Internet and two percent on a cell phone.



Note: Percentages add to more than 100 because some respondents report more than one source of bullying.



Note: Percentages add to more than 100 because some respondents report more than one source of bullying.

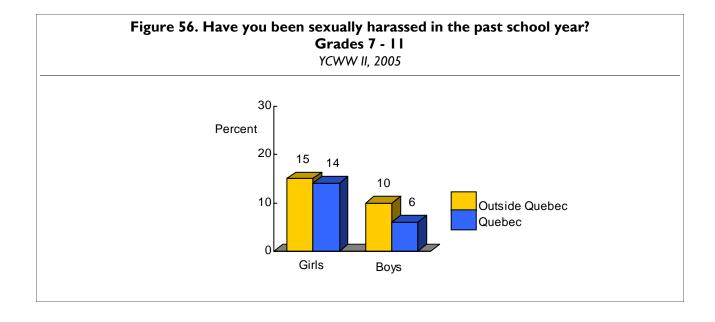
Sexual harassment

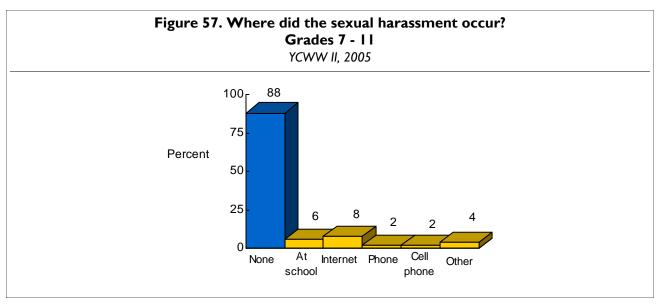
Students in Grades 7 and higher answered the survey questions on sexual harassment.

Overall, 12 percent of the students report being sexually harassed in the current school year. There is a significant gender difference – nine percent of boys and 14 percent of girls report sexual harassment. There are two notable differences from the bullying data:

- There is not a statistically-significant difference in the amount of sexual harassment reported in Quebec and elsewhere.
- There is not a significant change in the incidence of sexual harassment across Grades 7 to 11.

The Internet is the single most frequent medium for sexual harassment, by a small margin (Figure 57).

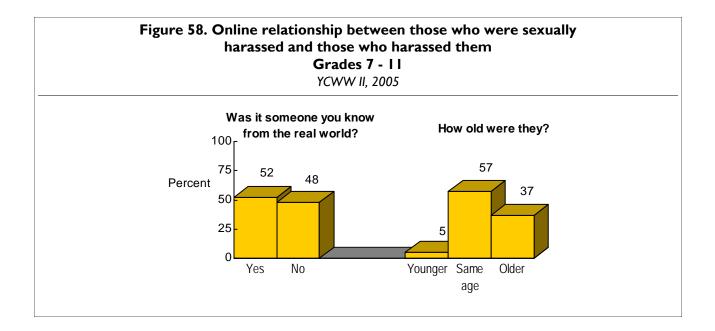




Note: Percentages add to more than 100 because some respondents report more than one source of sexual harassment.

Those who reported sexual harassment on the Internet (eight percent of all respondents) were asked about the person who had harassed them.

About half said it was someone they knew in the real world. Just over one-third said it was a person older than they were.



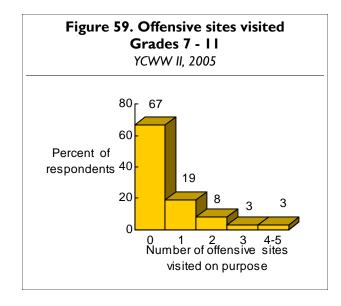
Risky behaviour

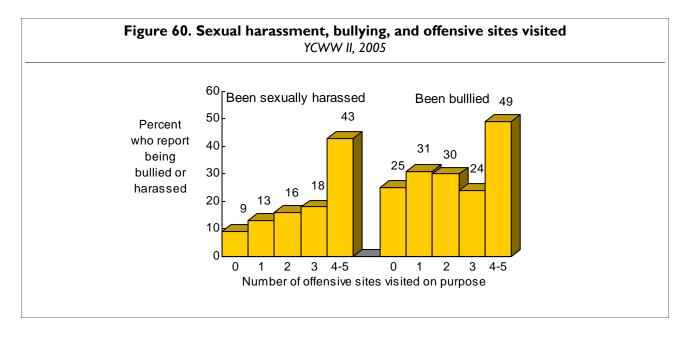
Parents and teachers typically discourage visiting the set of offensive sites described in previous chapters, i.e. sites offering porn, hate and gore as well as adult chat rooms and gambling sites.

The question of interest is whether there is a link between risky online behaviour and kids' experience in the real world. One possibility is that kids who engage in risky online behaviour are "out there" and exposed to a greater degree than others and will experience more bullying and sexual harassment.

This is indeed the case. Being bullied and being sexually harassed are both associated with risky online behaviour, but the effect is greatest for the small minority – three percent of kids – who have visited either four or five of the risky sites on pur-

pose during the current school year. These young people are at least twice as likely as others to report being bullied or sexually harassed. Note that this does not imply any causal link. All these behaviours may be manifestations of other underlying circumstances.





Appendix: Analysis of Favourite Sites

Respondents listed their three top sites. Most of the 5,000 respondents listed three sites, but a few listed just one or two. In all, approximately 13,000 site names were submitted, representing about 2,800 different sites. In examining the results, one can look at either:

- The percentage of respondents who listed a site
- The percentage of the 13,000 choices that any site accounts for

Both appear in Table 20. Across all sites the percentage of choices adds to 100 percent, while the percentage of respondents adds to about 300 percent because each respondent had three choices.

The first line of Table 20 shows that Addicting Games was a choice of 18.2 percent of all respondents. Addicting Games accounted for 6.8 percent of all the 13,000 choices, i.e. more than 800 choices. Minicip was a close second, also with about 800 choices. Together, Addicting Games

Table 20. Choose your three favourite Internet sites
All respondents

YCWW II, 2005

Site	Primary content	Percent of respondents	Percent of choices	Cumulative percent of choices
Addicting games	games	18.2	6.8	6.8
Miniclip	games	16.3	6.1	12.9
Neopets	virtual pet site	9.8	3.7	16.6
eBaumsworld	humour: jokes, photos, animation	5.7	2.1	18.7
Newgrounds	flash animation, jokes	4.2	1.6	20.3
Runescape	an online game	4.2	1.6	21.9
Candystand	games	3.7	1.4	23.3
Funnyjunk	humour: jokes, photos, animation	3.7	1.4	24.7
YTV	TV channel info, games	3.3	1.2	25.9
Launch	streaming radio	3.3	1.2	27.1
Family channel	TV channel info, games	3.0	1.1	28.2
eBay	ecommerce site	2.6	1.0	29.2
Coffeebreakarcade	games	2.4	0.9	30.1
Bonus	games	2.4	0.9	31.0
Habbohotel	virtual community: games, chat, messages	2.4	0.9	31.9

and Miniclip account for 12.9 percent of the total number of choices.

Figure 61 plots the cumulative percentages in Table 20. The individual data points for Addicting Games and Miniclip are visible at the lower left; after this, the data points overlap to give the appearance of a solid line.

Figure 61 shows only the first 200 sites in the series. As 2,800 individual sites were listed, this represents only a small portion of the full chart. Beyond the 200 mark it climbs very slowly in what appears to be almost a straight line to the 100 percent mark.

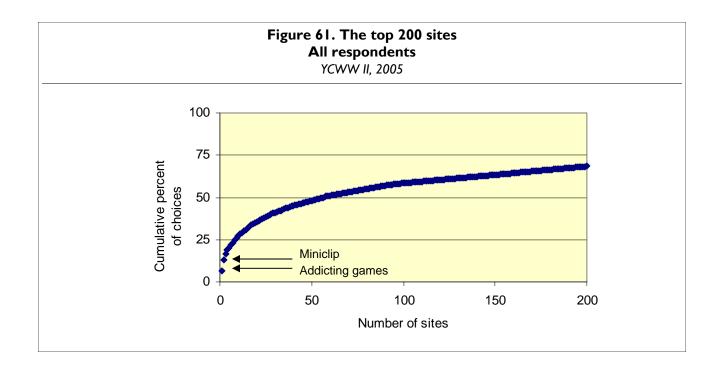
The top eight sites (down to Funny Junk) account for one-quarter of the entire set of 13,000 choices. The top 54 sites account for one-half of all choices.

The first 50 or so sites, where the curve rises steeply, represent sites that have wide common

appeal to the Grade 4 to 11 group. Looking at this set of sites, it is clear that there is a strong collective component to kids' Internet experience. They all seem to flock to the same sites.

But this is only one side of the story. Looking beyond at the flat portion of the curve, it is clear that kids pursue individual interests to a great degree. Consider the following:

At the bottom of the curve (Addicting Games and Miniclip), each site represents about 800 of the 13,000 choices. In other words, one in every six respondents listed each of these sites as a favourite. One can assume that many other kids know of these sites and use them occasionally, even if they are not one of their three favourites. It seems likely that the vast majority of kids are familiar with these sites — they are part of the youth culture in the same way as popular TV shows like *The Simpsons* or *That 70s Show*.

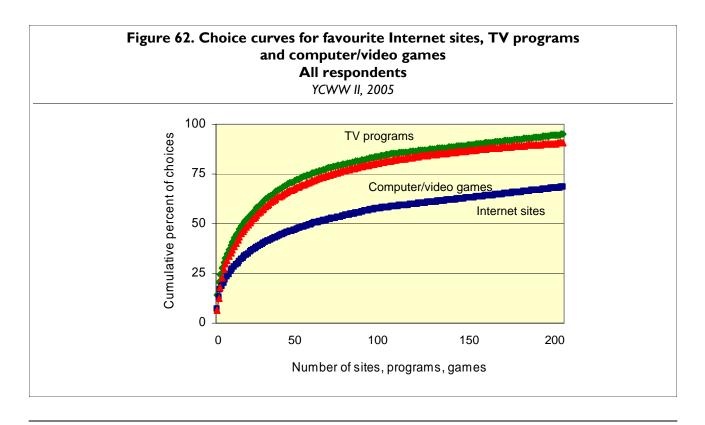


- At the 50th site along the curve, each site represents 36 of the 13,000 choices. This represents about one respondent in every 140. One would have to assemble six school classrooms to find a single individual who listed a given site in this range as a favourite. It seems likely then, that many kids will never have heard of sites in this range. A few sites in this range, like Disney and NFL, are familiar names outside the Internet context, while others such as Nick, Flowgo, and hi5 are not.
- By the 100th site, each site represents 16 choices. This is about one respondent in every 300.
- By the 200th site, each site represents seven choices. This is about one respondent in every 700. There are familiar names in this range too (Star Wars, Tribute), but many others that are probably unfamiliar to many kids (Skyblog, Paperdollheaven, Gurls, Soundclick, etc.).

Beginning with the 900th site and continuing to the end of the 2,800th, each site represents the choice of a single respondent.

In a study conducted for the Canadian Teachers' Federation in 2002, ERIN Research asked kids to list their favourite television programs and computer/video games. The sample was similar in size and age range to the present sample. Figure 62 adds the curves for favourite television programs and favourite video games to the present favourite sites data. Again, only the first 200 points are shown, but the TV and game curves each extend to approximately 600 sites.

Each curve conveys a similar message: there are a few sites, programs and games that command a wide following, but the tail of the curve shows that individual preferences are also very important. The Internet curve is lower overall than the others, indicating that the more popular sites account for considerably less activity than the more popular



TV programs and computer games. Part of the reason may be that the Internet offers more choices than the other media. There are millions of Internet sites, compared to hundreds or perhaps a few thousand available TV programs and games.

Each of the curves closely approximates a logarithmic function (y = 13Ln(x) -2 for the Internet sites). Curves such as these are useful in marketing where they indicate, for example, the relative value of advertising on different outlets, and also in communications research where they serve to quantify aspects of media behaviour.¹¹

Chris Anderson of *Wired* magazine has recently explored the implications of the long tail for marketing and communications in the Internet age. His article, titled "The Long Tail", is available online at www.wired.com/wired/archive/12.10/tail.html