

## **INTERNET USAGE BY STUDENTS IN AN ISRAELI HIGH SCHOOL**

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### **ABSTRACT**

This study examines the extent and characteristics of Internet usage among 384 junior-high and high school students in Israel. Its focus is on the purpose and patterns of Internet usage by twelve- to eighteen-year-old youngsters, and on the linkage between Internet usage and school activities. The findings show that the Internet is being used by about half of the research population, with the main use being for communication. Search for information comes only in the second place. Low degree of connection was found between Internet usage and school practice. The results show significant sex differences. In general, more boys are using the Internet, and more extensively than girls. Surprisingly, only some differences among age groups were found. The results of the study are discussed in terms of the range of Internet use among youngsters and its emerging role as an alternative knowledge resource outside school.

### **INTRODUCTION**

The rapid development of the Internet is one of the most fascinating phenomena characterizing the Information Age. This development affects the cultural, social, and economic fabric of the modern world. Internet enlarges our access to information, it enables new forms of communication, and serves as an arena for many online services in the spheres of commerce, culture, entertainment, and education. Today, the Internet is still in the midst of a process of rapid definition and change at a variety of essential levels, e.g., the technology itself, its contents, usage patterns,

and continuous increase in demand by circles of users with specific needs. Many of those who participate in the creation of the Internet culture are young people, who are growing up in the digital-technological society of the late twentieth century. Tapscott recently claimed that for the first time in history, children are more comfortable, knowledgeable, and literate than their parents about an innovation central to society [1]. The Net-Generation, as he called them, will use digital media to develop and superimpose its culture on the rest of society. However, computers and Internet not only give children powerful intellectual tools, they also shape their thinking about their own self, e.g., identity, relationship, sexuality, or evolution [2]. The characteristics of these children's involvement and interaction with novel communication technologies are the subject of the present research. The purpose of this study was to enhance our understanding of how the Internet is used by high school students, and to what extent their work with Internet is related to formal academic or school objectives.

### THE STUDY OF INTERNET USAGE

The dramatic entry of the Internet into major avenues of our society in the past five years has aroused interest and concern about the usage of electronic networks by different populations. A survey conducted in September 1997 assessed the usage, attitudes, and opinions of "Netizens"—the citizens of the network [3]. The survey, conducted among 1444 adults in the United States, focused on their use of common information processing and communication technology. Only 8.5 percent fell into the categories of *connected* and *superconnected* (i.e., use of most information technology means), 62 percent were *semi-connected* (i.e., use of only some of the technologies), and 29 percent were *not connected* at all. There were no significant gender differences: of the *connected* group 52 percent were male and 48 percent female. Several research institutions have been closely tracing Web users' preferences and usage modalities. Almost daily, new research is released, revealing the evolution of Web culture and electronic commerce. However, it should be noted that the main aim in most surveys is to estimate the economical potential of the Web and to assess its social and cultural impact (e.g., Cyberatlas, Netcraft, IDC/Link).

The number of studies regarding Web use by children under eighteen, the genuine representatives of the new Net generation, is still limited. Of these few studies, a recent Israeli survey among 2000 twelve- to eighteen-year-old youngsters revealed that 37 percent are Web users (Maariv, 2/12/98). Another study conducted at Carnegie Mellon University focused on home-computer usage by forty-eight families. In about 85 percent of the families the major users were children, and in most families youngsters were the main Internet users [1]. According to the same source, in 1996 one out of ten Internet users was under sixteen years old.

The dominant role that Information and Communication Technologies (ICT) have in the welfare of the individual, raised many issues of equity, such as those involving gender [4]. When first introduced as a personal tool in the late seventies the PC was accepted and used differentially by boys and girls. This issue has been widely studied in the last twenty years [e.g., 5, 6]. The emergence of the Internet and the new tools it provides further complicates this concern for equity of access to information and updated knowledge resources.

Research on children's use of ICT primarily describes and examines the potential of the Internet *within* the educational system [7, 8]. These research efforts seldom take into account that the real impact of the Internet on children might come from home-use rather than from school access. However, it is widely accepted that much of children's learning takes place in other-than-school settings (e.g., home, community centers, special interest groups, exposure to cultural phenomena). Emergence of electronic networks might enhance this phenomenon and lead to changes in the role and character of schools. A necessary conclusion is that new research channels should be opened to study learning processes of children, both within and outside school. Special emphasis should be given to children's use of ICT at home, and to assess the degree to which this use is connected with school-based activities and demands.

Despite the increasing interest of educators in Internet usage by High School students, many questions such as the purpose, the extent, the patterns of use, gender differences, and the schools' role, still deserve to be studied. Bearing all this in mind we undertook the present study of the extent and characteristics of Internet usage among twelve- to eighteen-year-old students in Israel. The primary objectives of this study were:

1. To learn about the frequency of Internet use within the twelve to eighteen age group.
2. To identify factors (e.g., sex, age, Internet accessibility from home, computer experience, the extent of use of computers for other purposes) that might affect the use of Internet.
3. To examine patterns of high school students' Internet usage (e.g., time spent on the Internet, where and when the Internet is being used, styles and modalities of usage).
4. To understand the aims of students' Internet use (e.g., information retrieval, communication, Web site creation, resource downloading, distance learning, or support for schoolwork).
5. To examine if there is a relationship between Internet usage and the school, and, if so, what is the nature of this relationship (e.g., support, guidance and encouragement, requirement for the accomplishment of academic assignments).
6. To identify gender and age differences concerning all previous issues.

We believe that these questions should be of interest to educators and should affect their attitudes and practice regarding instruction and learning processes.

## METHOD

### Subjects and Procedure

This study was conducted in one six-year high school (grades 7 to 12) in Tel-Aviv. This is a comprehensive public school attended by students from the Tel-Aviv area belonging to middle and upper SES. This school is a typical urban school similar to about 60 percent of the high schools in Israel (it may not represent the situation in rural, development towns, or orthodox religious schools). Participants were 384 students, 209 girls and 175 boys. Students' distribution among grade levels was: sixty-seven students in grade seven, sixty-eight students in grade eight, sixty-three students in grade nine, fifty-nine students in grade ten, sixty-five students in grade eleven, and sixty-two students in grade twelve.

All students were administered a questionnaire containing eighty-seven open-ended and closed questions. Some of them were interviewed to obtain a more detailed description of the students' attitude, motivation and patterns of use of the Internet.

### Instrument

The Internet usage questionnaire has two parts. The first part contains descriptive information (i.e. sex, grade level); items assessing access to computer and Internet at home and at school; items that examine the extent and character of computer usage; and items that examine the subject's computer literacy. The last question of the first part of the questionnaire is whether the subject is an Internet user.

The second part of the questionnaire is for the Internet users. It includes sixty-seven open-ended and closed questions that examine the extent of Internet usage, usage patterns, purposes for Internet usage, preferred sites, use of communication tools, use of creative tools, downloading information and software, and the role of school in Internet usage.

### Data Analysis

Data collected was self-reported by the students. Data was organized in two sets. The first included all students' responses ( $n = 384$ ) to the questions in the first part of the questionnaire. The second set of data included the responses of those students who reported Internet usage ( $n = 177$ ), to the second part of the questionnaire.

All variables in both sets of data were analyzed by descriptive statistics (i.e., frequencies, means, standard deviations). Gender and age differences (by grade

level) were analyzed using Chi square test of independence. In addition, for the first data set, a Stepwise Linear Regression was conducted on *Internet Usage* as dependent variable, and gender, age, and varied ICT usage variables as independent variables.

## RESULTS

The results will be presented by this study's objectives, namely, to learn about extent of Internet use, factors affecting usage, patterns of use, purpose of use, and relationship between Internet usage and school.

### Extent of Internet Use by High School Students

Figure 1 presents the percentage of Internet usage of the 384 students who participated in this study. About half of the students (177; 46.4%) in all grade levels use Internet to some extent. More boys use the Internet than girls: an average of 56 percent of the boys, and only 38 percent of the girls reported Internet use ( $\chi^2(1) = 12.8; p < 0.01$ ). Surprisingly, the percentage of users at the different grade levels (from sixth grade to twelfth grade) was similar ( $\chi^2(5) = 2.6; p > 0.05$ ).

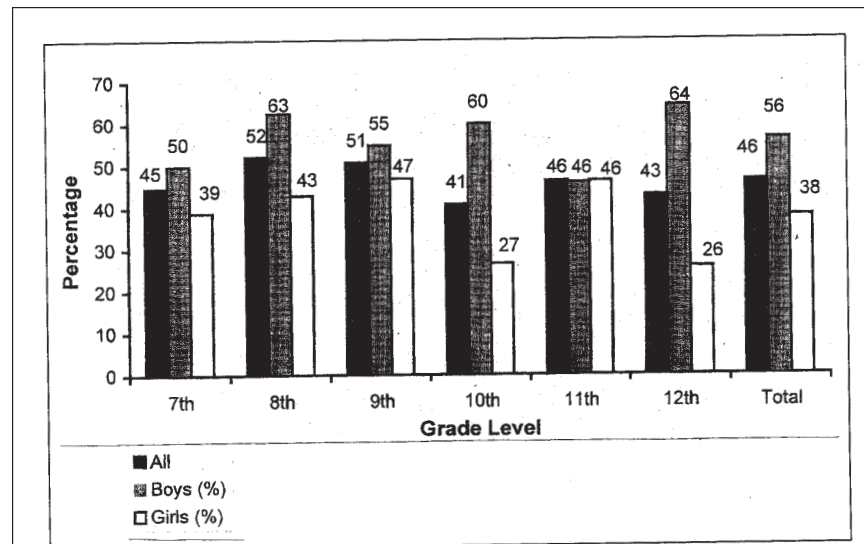


Figure 1. Distribution of Internet usage among the students ( $n = 384$ ).

### Factors Related to Internet Usage

In order to identify the major factors that might affect the use of Internet by high school students, a Stepwise Linear Regression was conducted on *Internet usage* as dependent variable, and *gender*, *grade level*, *home accessibility to computer*, *home accessibility to Internet*, and *computer experience* as independent variables. The only two factors that entered the linear regression and affected the dependent variable were *home accessibility to Internet* ( $R = 0.66$ ,  $SE = 0.38$ ) and *computer experience* ( $R = 0.71$ ,  $SE = 0.35$  for both predictors). These two variables explain 49.8 percent of the variance of the dependent variable ( $F(2,383) = 188$ ;  $p < 0.01$ ).

### Patterns of Internet Use

To identify patterns of students' Internet use, we focused on five main parameters: how much time a week do they spend using Internet, when, where, with whom they use Internet, and how they acquired the required knowledge and skills.

#### *Time Dedicated to Internet*

The distribution of time spent by the students using Internet is presented in Figure 2. The average number of hours a week students spend using Internet is 5hs.50min, i.e., less than one hour a day. A closer look at the data in Figure 2 however shows that about a third of the students work with Internet an average of more than two hours a day.

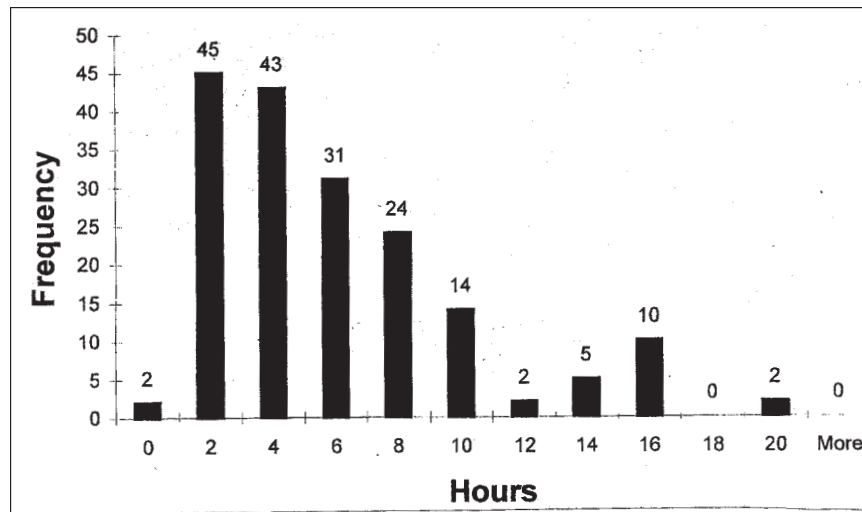


Figure 2. Distribution of time spent on Internet use ( $n = 177$ ).

In addition, no significant difference was found in the extent of Internet use per week among grade levels ( $\chi^2(20) = 11.77; p > 0.05$ ). A significant difference in time usage was found between boys and girls ( $\chi^2(4) = 33.19; p < 0.05$ ), with the former spending more time than the latter: an average of 6hs.38min. per week for the boys, and 4hs.37min. for the girls.

#### *Working Time*

Subjects were asked to indicate one or more time slots. The time slots preferred by most students were: in the morning (4%), around noon (20.9%), in the afternoon (23.4%), in the evening (42.3%), at night (37.1%). No significant differences were found between sexes and among the different age groups.

#### *Preferred Location for Use*

Subjects were asked to indicate one or more locations. The most preferred location was home (82.4%). Other locations mentioned were at friends' home (33%), in school (17%), at parents' work (4.5%). A significant sex difference was found: more boys (90%) indicated that they prefer to surf the Internet at home than girls (72.7%) ( $\chi^2(1) = 8.8; p < 0.01$ ); more boys (39.4%) indicated that they prefer to surf the Internet at friends' home than girls (24.7%) ( $\chi^2(1) = 4.2; p < 0.05$ ); and more girls (26%) prefer to surf the Internet at school than boys (10%) ( $\chi^2(1) = 7.7; p < 0.01$ ).

A significant age difference was found regarding preference to surf the Internet at home: 92.6 percent of high-school students as opposed to 73.7 percent of junior-high students ( $\chi^2(5) = 13.5; p < 0.05$ ).

#### *With Whom Do Students Prefer to Surf*

Subjects were asked to indicate one or more answers regarding surf partners. Responses showed that 72 percent surf alone, 47.4 percent surf with a friend, and 3.4 percent surf with their parents. No significant gender or age differences were found.

#### *How Did the Students Learn to Use the Internet*

More than half of the users learned to use the Internet by themselves, using manuals (53%). About a quarter (25.7%) learned from friends, 7.4 percent in school, 5.7 percent from their parents, 4.6 percent from elder siblings, and very few took an Internet course outside school (3.5%). Significant gender and age differences were found. Overall, boys learned more autonomously than girls, and older students learned more autonomously than younger students.

### Purpose of Internet Usage

Table 1 provides a summary of six main uses of Internet by high school students: information gathering, communication, creation of their own Internet site, distance learning, downloading resources and school work. Students ranked the extent of their usage on a scale of 5 (0 to 4), namely, *not at all*, *very seldom*, *seldom*, *frequent*, and *very frequent*. In Table 1 (as well as in Tables 2 to 6) the students' answers are presented in two ways: the distribution of answers recoded into a three-level scale (columns 3 to 5), and the mean score and standard deviation calculated according to the original five-level scale (columns 6 and 7).

The data presented in Table 1 suggests that the most common and frequent use of the Internet is for communication. Gathering information, downloading resources and writing school work were quite frequent as well. Using the Internet for creation and for distance learning scored considerably low.

The following sections (including Tables 2 through 6) focus on each of the usage categories described in Table 1.

#### *Use of the Internet as a Source of Information*

*Aims for information manipulation*—Table 2 presents the subjects' aims for using the Internet as a source of information. Almost 90 percent of the students look for information related to their hobbies and specific interests. More than 80 percent look for general information, and about 70 percent visit game sites. Many students reported that they surf the net without any predetermined purpose.

*Use of search engines*—About 60 percent of the students use search engines (e.g., Altavista, Yahoo, Excite). A significant gender difference was found regarding the use of search engines (70% of the boys and 50% of the girls;  $\chi^2(1) = 10.99$ ;  $p < 0.05$ ). No significant age difference was found ( $\chi^2(5) = 26.99$ ;  $p > 0.05$ ).

*Site languages*—Table 3 presents the languages of the sites visited by the users. English is the language of the most frequently visited sites. Hebrew sites are frequently visited by about half of the students, and sites in other languages (e.g., Spanish, French, Arabic) are seldom visited. Girls surf less sites in the English language than boys, and there is a consistent increase in preference of English language sites with age.

#### *Use of the Internet to Download Resources*

Downloading was found a relatively frequent activity of almost 85 percent of the respondents. A significant gender difference was found ( $\chi^2(4) = 26.7$ ;  $p < 0.01$ ). Boys download significantly more resources than girls do, 52 percent of the boys and only 27 percent of the girls often download resources from the Web. No significant difference was found among age groups ( $\chi^2(20) = 14.4$ ;  $p > 0.05$ ).



Table 1. Main Uses of Internet by High School Students

Use of Internet for	<i>n</i>	Not at All (%)	Seldom (%)	Frequent (%)	Mean	S.D.	Gender Difference $\chi^2(4)$	Age Difference $\chi^2(20)$
Information	177	17.5	48.6	33.9	1.95	1.27	2.1	30.6
Download resources	177	24.3	33.9	41.8	1.98	1.46	15.6**	24.0
Communication	177	12.4	35.0	52.6	2.42	1.38	1.2	29.1
Web site creation	177	91.5	0.0	8.5	0.34	1.12	3.8	16.9**
Distant learning	177	77.4	16.9	5.7	0.41	0.89	3.8	26.17
School work	175	30.3	33.1	36.6	1.83	1.51	5.3	28.9

\*\**p* < 0.01

Table 2. Aims for Information Search and Retrieval

Aims for Internet Information Use	<i>n</i>	Not at All (%)	Seldom (%)	Frequent (%)	Mean	S.D.	Gender Difference $\chi^2(4)$	Age Difference $\chi^2(20)$
No aim	177	18.1	52.5	29.4	1.80	1.20	5.6	12.6
Game sites	177	31.1	40.6	28.3	1.55	1.33	19.0**	23.1
Hobby sites	177	10.7	35.6	53.7	2.41	1.36	3.6	23.8
Information search	177	17.5	48.6	33.9	1.95	1.27	2.1	30.6

\*\**p* < 0.01

Table 3. Languages of Most Frequently Visited Web Sites

Site Language	<i>n</i>	Not at All (%)	Seldom (%)	Frequent (%)	Mean	S.D.	Gender Difference $\chi^2(4)$	Age Difference $\chi^2(20)$
English	177	0.0	16.4	83.6	3.40	0.89	12.4**	47.1**
Hebrew	177	9.0	44.0	47.0	2.26	1.25	9.5	38.4**
Other languages	177	91.0	7.3	1.7	0.18	0.61	2.5	0.6

\*\**p* < 0.01

Table 4 presents the kinds of resources downloaded by the users. Picture downloading is more frequent than text, games, or software downloading. A significant gender difference was found regarding games downloading (frequently downloaded by 38% of the boys and only 13% of the girls); audio and video files (downloaded by 40% of the boys and only 11% of the girls); and software, e.g., plug-ins and utilities (downloaded by 33% of the boys and only 8% of the girls).

#### *Use of the Internet for Communication Purposes*

The most frequent usage of Internet as a communication tool is for e-mail exchange. We found that 57.1 percent of the students have a personal e-mail account. No significant gender difference was found ( $\chi^2(1) = 1.2; p > 0.05$ ), but a significant age difference could be discerned ( $\chi^2(5) = 26.9; p < 0.01$ ). About 38 percent of the junior high students and 78 percent of the high school students have personal e-mail accounts.

Table 5 presents detailed information about Internet usage as a mode of communication. Chat is unquestionably the most frequent medium of communication. E-mail is used by about 70 percent of the students, but only half of them use it on a regular basis. Other modes of communication, including discussion groups, are seldom used by the students. No significant difference was found between age groups, and the only significant difference was between boys and girls in using discussion groups: three times as many boys (17%) use discussion groups than girls (5%).

#### *Use of the Internet as a Medium for Creation*

A clear indication of a person's creative and active involvement with Internet is the creation of a personal Web site. Only 8.5 percent of the Internet users have their own Web site (15 students out of the 177 Internet users; three from junior high school and 12 from high school). Twelve of them are boys and only three are girls. Thirteen of them had created the Web site by themselves, one with parents' help, and one with friends. An average of 3.6 hours a week was devoted to the creation of the Web site and 2.3 hours for its maintenance.

### **Relationship between Internet Usage and School**

Table 6 presents the extent of Internet use as part of school learning. About 70 percent of the Internet-using students use it to support schoolwork. Sixty percent use it to enrich what they learn in school, 17 percent to prepare exams, and only 13 percent participate in discussion groups related to school activities.

To the question whether teachers encourage them to use the Internet, only 30.9 percent of the students responded affirmatively. No significant gender difference was found ( $\chi^2(1) = 0.3; p > 0.05$ ), but a significant age difference was found ( $\chi^2(5) = 27.6; p < 0.01$ ). Students from the eighth grade (48%) and the tenth grade

Table 4. Kinds of Resources Downloaded by the Students

Kinds of Downloads	<i>n</i>	Not at All (%)	Seldom (%)	Frequent (%)	Mean	S.D.	Gender Difference $\chi^2(4)$	Age Difference $\chi^2(20)$
Pictures	176	24.6	22.3	53.1	2.23	1.59	1.9	13.9
Games	176	39.8	33.5	26.7	1.46	1.45	26.6**	16.6
Video/audio files	176	50.3	22.3	27.4	1.34	1.54	26.2**	23.9
Animation	176	52.8	27.8	19.4	1.06	1.34	4.8	11.8
Text	176	34.7	38.6	26.7	1.56	1.43	1.0	35.3*
Software	176	54.0	24.4	21.6	1.16	1.45	24.3**	28.3

\**p* < 0.05\*\**p* < 0.01

Table 5. Use of Communication Means

Use of Communication Means	<i>n</i>	Not at All (%)	Seldom (%)	Frequent (%)	Mean	S.D.	Gender Difference $\chi^2(4)$	Age Difference $\chi^2(20)$
E-mail	177	29.4	35.0	35.6	1.80	1.52	8.7	29.4
List serves	177	83.1	11.8	5.1	0.37	0.93	6.8	25.4
Discussion groups	177	88.1	8.5	3.4	0.25	0.78	13.1*	26.1
News groups	177	91.5	5.1	3.4	0.19	0.70	2.8	12.1
Chat	177	19.8	33.9	46.3	2.21	1.42	0.6	22.9
Video conference	177	94.3	4.5	1.2	0.05	0.44	3.5	27.8

\**p* < 0.05

Table 6. Use of Internet for School-Related Work

Use of Internet for School-Related Work	<i>n</i>	Not at All (%)	Seldom (%)	Frequent (%)	Mean	S.D.	Gender Difference $\chi^2(4)$	Age Difference $\chi^2(20)$
Homework	175	30.3	33.1	36.6	1.83	1.51	5.3	28.9
Preparation for exams	175	83.4	13.2	3.4	0.30	0.78	1.7	15.6
Enrichment	175	40.6	31.5	27.9	1.41	1.43	12.6*	28.8
Discussion groups	175	87.4	9.2	3.4	0.25	0.72	4.3	15.6

\**p* < 0.05

(58%) recognized the teachers' role in supporting their use of the Internet (this could be explained by the fact that in these grade levels the students in this school learn an information literacy course as part of their curriculum).

When students were asked whether the Internet is accessible for them in school, only 19.4 percent stated that it is often accessible for them, 59.5 percent said that it is seldom accessible, and 21.1 percent that it is not accessible at all. No significant gender difference was found ( $\chi^2(4) = 5.3; p > 0.05$ ) regarding accessibility of Internet from school. Older students reported less Internet accessibility from school than younger students ( $\chi^2(20) = 35.7; p < 0.05$ ).

Most students view the Internet as important, and as a potential tool for education (48%), or at least with some potential for education (48%), and only 4 percent view it with no potential at all for education. No significant difference was found between boys and girls ( $\chi^2(4) = 4.3; p > 0.05$ ) or among age groups ( $\chi^2(20) = 7.8; p > 0.05$ ) regarding this issue.

## DISCUSSION

This study aimed to characterize the extent and modes of use of the Internet among high school students in Israel based on their self-report. Within these constraints, however, the results reflect major trends of Internet usage in urban schools in Israel, and might be used as a basis for comparison for similar studies in other countries.

The context for the study is the massive eruption of the Internet into the youngsters' social and cultural life. Four years after the onset of Internet's widespread accessibility, we found that about half of the youngsters in this study were already involved to some extent in using it in their everyday lives. Since a variety of indicators (e.g., technological innovations, economical indices, growth in extent of Internet services providers) show a dramatic increase in Internet use, it seems that in a few years from now Internet access will no longer be a question, at least in the developed countries. Instead, major questions will focus on the feared prediction that the Internet revolution will splinter society into subcultures based on people's mindful and resourceful use of the technology [1]. Our study suggests that this threat is real and immediate. We found out that only a small group of students (5 to 10%) use the Internet as a powerful tool (i.e., Web site creation, participation in discussion groups, distance learning). The vast majority of the students use Internet for entertainment and leisure (e.g., games, hobby sites). This raises an additional question regarding the automatic association between novel technologies and cultural transformations or, in terms of this study, between youngsters access to Internet and their potential role in shaping culture and society. This study imply that "access for all" does not automatically implicate "participation for all": Many will remain passive consumers of the new media offerings. To incorporate major portions of the population to circles of active and creative



participation in the digital society, might become an important challenge for educators and educational policy makers.

One salient finding in the study related to the main purposes for students' Internet use. The Internet is primarily conceived as a huge repository of hyperlinked units of information. It could be expected that surfing, retrieving, and using information would be the main reason for children's use of it. However, their primary use of the Internet turned out to be for communication (e.g., e-mail, chat), and only second for information manipulation. The social interactions allowed by the new technology, particularly the synchronic (e.g., chat) rather than the asynchronic communication forms (e.g., forums), seem to meet significant needs of this population [9, 10]. This social aspect of the youngsters' Internet use deserves a more detailed study. Other uses, such as Web site creation or distance learning, are still of less relevance for those participants.

Previous studies regarding the initial phase of implementation of novel information technologies reported significant gender differences in usage. These findings are interpreted in terms of the psychological and cultural characterization of information technology use as masculine activity [4, 11]. By this view, both sexes perceive males to be more computer proficient than females. Therefore, males will be more motivated to acquire computer-related skills, and develop less anxiety toward technology than females [12]. A similar phenomenon was encountered in this study, regarding Internet technology. More boys (56% of the boys) use Internet than girls (only 38% of them). Among the Internet users, significant differences were found between genders for most variables considered in the study, e.g., time spent on the Internet, preferred location for use, resources downloading, Web site creation, participation in discussion groups. The assimilation process of the Internet technology (in its initial stages) seems to replicate the assimilation process of personal computing. In this regard, a crucial question to be addressed in following studies is whether and how the cultural bias, by which the Internet use is perceived as a male activity, will disappear as the technology becomes more integrated in people's lives.

Another surprising finding was that no significant differences in extent and modes of use were found among age levels. It could be expected that because of the complexity of the technology and the skills required for working with it, its use would be more frequent among older students. The findings suggest that children are being exposed to the new technologies at a very young age, and learn to use them at a very fast pace.

A central question to be addressed regarding the interaction between Internet technology and educational processes relates to the role of the school in the evolution of the Internet culture among youngsters [13, 14]. In this study we observed that the center of gravity of this cultural development is not in the school, but in the child's home. Among all possible factors affecting the youngsters' use of Internet, the most significant was accessibility from home. One possible explanation for this finding could lie in the gap between the (limited) technological

facilities and support which most schools offer, and the complex demands of work with the new communication technologies (i.e., hardware, software, knowledge, skills). But this is too simplistic of an explanation. An alternative explanation should try to unveil the deeper cultural issues raising the potential conflicts between the school and Internet cultures. Among other characteristics, school culture can be characterized as a mainly hierarchic organization, which is highly structured, pursuing a highly defined set of objectives, while fostering social equity. On the other hand, the Internet culture is perceived as highly democratic, open-ended, nonstructured, and highly individualized and without any commitment to social equity [15]. One can think of two possible outcomes of this conflict between these two different cultures. The first is that significant change in the school's values and structure might take place through assimilation of key components of the Internet culture. In an alternative scenario, the Internet will remain outside the school world, while staying a central activity for youngsters in non-school settings [16], thereby changing the school's status as main knowledge provider and communication facilitator. Both scenarios however will entail major changes in educational processes, resources and configurations. as the Internet is reshaping the ways we learn, work, and communicate.

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