International Journal of Developmental and Educational Psychology
Psicología y sociedad: siglo XXI competencias relacionales
INFAD, año XXI
Número 1 (2009 Volumen 4)

ISSN 0214-9877

ADOLESCENTS ON THE NET: A STUDY ON THE ETHICAL REPRESENTATION

Bruschi B., Fraire M., Longobardi C., Parola A., Prino L.E. , Quaglia R. y Sclavo E.
Università degli Studi di Torino

ABSTRACT

In the last few years, literature has presented an image of a new generation characterised by an increased digital competence, the so called digital natives. The present work tries to investigate the social representation (Moscovici, 1961) of technology that young Italians possess (Digital natives or immigrants). Our attention towards this subject is not just result of the functional dimension of technology, but also because of its etiquette. We tried to include in our investigation as many on-line aspects as we possibly could: legality, transparency of the network, sociability, protection of personal data, recognition of values and protection of privacy. The aim of this work is to supply the first description of the relation between Italian adolescents and technology and to highlight the eventual specificity related to type and familiarity with the new media. The research involved 396 adolescents in the third year of high school (mean age = 16,29; ds = 564) in Piedmont. The sample was composed of 142 males and 244 females. (36,8% - 63,2%; valid percentage). Each subject has been given an individually named ETeRe questionnaire (Ethical technological representation). The data collected highlight the differences in relation to the sex of the subjects and their familiarity with technology.

Keywords:
Adolescents, Internet, Ethical representation, Media, Digital natives

INTRODUCTION

In last few years, literature (Prensky, 2001; Oblinger & Oblinger, 2005; Lardellier, 2006; Rivoltella, 2006; Mantovani, Ferri, 2008) has presented an image of a new generation characterised by an increased digital competence. A generation at least in appearance made up by people very different from those who, not only anagraphically, are part of previous ones. The digital natives - this is the name assigned to the members of this new generation - are the ones born after the spread of Internet, and grew up in a highly technological environment: as children, they not only learned to crawl in real life but also in the virtual world of the net.

The general characteristics of these subjects are:

- Having grown up in a technological environment (television, computer, mobile phone)
- Having spent thousands of hours watching television or playing videogames.
- Used to being contemporarily wrapped up in more than one technological activity (i.e. playing computer games in front of the television while listening to an Mp 3 file)

- Presenting an intuitive attitude towards different technologies.
- Having a different mindset, created through the constant interaction with technology.[1]

In short, we are speaking about subjects who are used to move themselves around in a technological context, who do not show the need to wonder about how or whether to use different technologies, but who acts entirely naturally towards them, taking for granted the existence of technological medias and their constant presence in their existential space.

Sometimes, such naturalness leads to negative developments; let's think, for instance, about the 'otoku', Japanese youths "segregated" in their room and have contact with the external world exclusively through technology, the only way in which they learn, they communicate, they inform and enjoy themselves. In a short, their universe is the only technological and, for this reason, their reality is completely and strictly mediated, in every aspect: social and personal. These are, indeed, extreme cases that verging on the pathological in relation to any manifestation of human behaviour but which, even in their paroxysm, manifests a very interesting socio-cultural change. We are, in fact, in a situation where the socio-cultural code becomes greatly intersected with that of technology (Milanaccio, 2001), which dramatically changes how the first operates, its rules, its ways of communication, its orientations and even tradition. This particular situation creates the infamous break between those who manage to share this state of things, and those who, by choice or incapability remain outside (the typical gap between digital natives and educating parents). The image obtained is of a generation composed of people who are constantly connected, through the multiplicity of media at their disposal (mobile phones, Internet Satellite TV), to a present they cannot and must not renounce. Connecting immediately becomes synonymous of existence and consequently a manifestation of the role they occupy in the world. All of this happens through communication, a communication that is obviously different to that of the previous generation, sometimes forces and unjustified and, as a result is often defined, both by experts and by those belonging to the non-digital generation, as empty. In fact, according to the given description and to national or international investigations, digital natives (ISTAT, 2007) not only spend a considerable amount of their time connected to the internet, but are especially committed to the management of conversations taking place through different means and technologies, but all tied by the common denominator of inconsistency. A lot of the SMS messages written with the aim of some sort of communication are simply sent in order to verify the presence of "the other" (are you there? Where are you? What are you doing?). In a similar manner, the constant use of Messenger (MSN) does not seem to be justified by the need to transmit Information, but rather by the need not to feel alone. In a system where meeting each other is easier than getting to know each other (Lardellier, 2006), technologies assume a fundamental role, and not to be "connected" automatically means to be left out of what is commonly known as the digital tribe. A tribe founded on communication only apparently, as to belong to it people only need to be online, not to communicate with one another.[2] This is, in all aspects, a community made out of an utopic mould, where it is easy to be accepted, because the limits and limitations of reality no longer exist.

The profile of a digital, native, although enriched through the availability of potential technology, lacks important responsibilities and meanings. In fact, while digital competence is admired, it is usually accompanied by a difficulty in the management of the most traditional communication's codes, such as the textuals. At the same time, with the emphasis laid on an existence without boundaries, the fragility of the individuals is all more evident. In fact, one cannot ignore that, from the microcosm of the bedroom, the teenager enters a world of nets and connections which are only partially related to his/her own daily reality (the classmates available online for chatting), but mostly depending on informative materials, cultural instances and, indeed, people, which are only "virtually real". It becomes therefore natural to examine the characteristics of such a net of connections, especially while attempting to determine the possibility of the birth of a new form of 'bedroom culture', and eventually ascertain what this culture is about. Moreover, it seems to be more and more appropriate to define the modes that creates and

are created by this culture: space representations, operations, rules, roles and objects which are going to strike and change the models and representations in the present day world, regardless of the will of the individuals.

Besides definitions and profiles created by the literature, it seems necessary to attempt to place digital natives within the socio-cultural system. In particular, it must be understood if the digital natives' culture, which is today at a semi embryonic state, is destined to grow and develop and possibly going to change some aspects of our cultural footprints. Or if the digital natives are the only falsely active users of a cultural-commercial system, which was exclusively established for selling products for communicating, and that does not have anything to do with culture as a whole: "of material and symbolic elements shared by the individuals as part of a social group" (Garelli, 1997, p.209).

If the first hypothesis is chosen, we cannot avoid to take into consideration the fact that, within a relatively short time, we may witness a decisive change (in part already in act) with respect to the formality of communication and the management of knowledge.

The question of the performances which comes from the constant use of technology in the daily routine, today constitutes a very interesting theme as, from their individuation and definition, in not only possible to acquire a better knowledge of the new generations' digital universe, but also to find a better answer to social and formative needs of our new generation. Moving in this direction our research here illustrated has tried to investigate which kind of social representation (Moscovici,1961) o new technologies are possessed by young Italians (Digital natives or immigrants) through semantic differentiations, scales of the attitude and projective tables. Our attention towards this subject is not just result of the functional dimension of technology, but also because of its etiquette. We tried to include in our investigation as many on-line aspects as we possibly could: legality, transparency of the network, sociability, protection of personal data, recognition of values and protection of privacy. The aim of this work is to supply the first description of the relation between Italian adolescents and technology and to highlight the eventual specificity related to type and familiarity with the new media.

METHODS

Sample

This research has involved 396 teenagers of the third year of Secondary School (mean age = 16,20; ds = 0,564) throughout Piedmont. The sample is composed by 142 boys and 244 girls (respectively 36,8% and 63,2% - valid percentage) from "Liceo Classico" and "Liceo Scientifico" (n = 172), "Liceo Psico-Pedagogico" (n = 140), or Vocational Schools. (n = 84).

Instruments

The research was carried out by giving each subject an ETeRe questionnaire (Ethical Technological Representation). The questionnaire is divided into four parts, characterized by the different research techniques employed: graphic tables, Likert scales, semantic differential and multiple choice questions. The use of different techniques derives from the need to thoroughly investigate the attitudes and representations with regards to technology.

The first series of questions was made up of three cartoons showing some subjects placed in front of a computer (the first cartoon has only one young subject, the second has two young subjects and the third has a young subject and an adult).The participants to the questionnaire are asked to state what the different individuals in the cartoons are thinking and what they are doing.

The successive Items organised in the Likert scale and semantic differentials are drawn to allow the exploration of the following dimensions:

- aim of the use of the internet both at a personal level and as a social representation
- ownership of internet information, understanding of copyright- very often disregarded by teenagers who are used to the "copy and paste" process;
- role and understanding of privacy, one's own or of another party, especially in relation with the publication of compromising images of a third party and with the individual's need to privacy;

• internet communication, considering chat lines and network communities, with the aim of understanding how and how much the interviewees consider internet as a means to establish new relationships or reinforce those already existing, giving relevance to the issue of personal safety online;

• The safety of Internet: with this concept in mind we intend to examine 'the veracity' of what is present on the net, both in terms of knowledge (scientific validity) and the transparency of exchanges (on-line purchases, the risk of contracting a virus or incurring in fraud);

• recognition of values point towards internet behaviour, such as friendship and respecting other people's opinion.

The last group of questions intend to verify the diffusion of some technology (mobile phone, game console, Mp3 players, digital photograph machines, television, internet, computer) in order to define some aspects relative to socio cultural position, anagraphic details and provenance of the subjects.

Description and discussion of results

The analysis of the results relative to the questionnaire sections will now be presented. There will be a particular reference to the difference that emerges in relation to the sex of the subject and their familiarity with technology. Such variable, from now on the denominated "perception of the use of technologies" is an index of synthesis (that can assume a value of 0-70), obtained adding up the perceptions of the use of the different technologies considered in the questionnaire. The variable present a normal distribution (minimum = 8; maximum = 67; mean = 42,35; ds = 10,38; skewness = -0,548; Kurtosis = 0,339). Significant differences were not registered on the basis of the type of school the subjects attended. The results related to the graphic tables will not be taken into consideration here, but will be the core of successive works.

Access to the Net

Almost all of the girls (91,4%) stated they surf the web. 54,2% uses it everyday and 37,8% uses it almost everyday. Almost half of the sample declared that they use the internet three to five hours a day. The vast majority declares that they access the net between 2.00 pm and 10.00 pm. It also appears that 3,8% of girls accesses the net after midnight. Boys use the internet more than girls (U of Mann-Whitney = 12155; $p<0,01$; Mean Ranks Male = 202,42; Mean Ranks Female = 16781).

The 84,1% of the girls are connected to the internet mainly from their own room, 84% of houses having a broad band connection.13,6% of the sample are not able to access the internet from their own room; 8,6% are not connected themselves and go on line at school or in a friend's house.

Representation and Use of the Net

The participants believe that people generally use the internet in order to specifically chat and communicate, to look at photos and videos, to carry out research, to download music and films, to enjoy themselves, to amuse oneself, or to pass the time, to meet new people. In confronting such answers with relation to the personal fruition stated by the subjects (fig. 1) it can be observed a minor attribution of use per se in all the considered items, and a significant difference is shown in terms of statistics, especially for items such as on-line purchases (z of Wilcoxon = -11,070; $p<0,001$), on line downloads of videos (Z of Wilcoxon = -9,041; $p<0,001$), or the chance to create new information (z of Wilcoxon = -8,755; $p<0,001$). The tendency to carry out research is in decline: in this case the girls claimed to spend their time on the net for general use. (Z Wilcoxon = -2,162; $p<0,05$).

	Desagree (Self)	*Desagree (All)*	Neutral (Self)	*Neutral (All)*	Agree (Self)	*Agree (All)*
To look at videos and images	2,54	*1,53*	7,12	*7,16*	90,33	*91,30*
To carry out research	1,52	*2,60*	8,38	*8,57*	90,10	*88,83*
Chat and communicate	3,82	*2,30*	11,70	*5,88*	84,48	*91,82*
To download music and films	5,66	*3,34*	10,80	*8,23*	83,55	*88,43*
To enjoy, amuse oneself, to pass the time	6,39	*5,13*	23,53	*13,33*	70,08	*81,54*
to meet new people	15,60	*6,96*	33,50	*15,98*	50,90	*77,06*
To update blogs	12,76	*7,67*	38,78	*28,64*	48,47	*63,68*
To work	16,33	*11,34*	35,46	*26,29*	48,21	*62,37*
To play games	12,53	*10,26*	39,39	*29,23*	48,08	*60,51*
To organize a journey	15,60	*11,86*	36,83	*32,73*	47,57	*55,41*
To make on-line purchases	36,90	*14,07*	31,30	*19,18*	31,81	*66,75*
To upload on-line videos	34,35	*14,10*	37,40	*24,87*	28,24	*61,03*

Fig. 1, table: The result of those who use the Internet for personal and general use.

With reference to male ad female use, the social representation of internet use only differentiates in the realms of games (U = 12646; p <0,001) considering this is the most frequent topic amongst boys. Gender differences are more evident in personal use with regards to a multitude of areas (fig. 2). The obtained results also appear to be in line with what psychological research has suggested in regard to the distinctive characteristics of the friendships established by adolescents (Palmonari, 1997): the girls invest more resources in the creation and management of personal blogs (Female: 55,3%; Male: 37,8%) therefore using the net in order to give themselves greater space to better develop their own individuality and intimacy.

	Sex of the subject	N.	Mean Ranks	Sum of ranks	U Mann-Whitney	Sig. Asint. 2 tails
To play games	*Male*	140	238,04	33326,00	10564,000	,001
	Female	243	165,47	40210,00		
To look at videos and images	*Male*	141	214,04	30180,00	14235,000	,002
	Female	244	180,84	44125,00		
To enjoy, amuse oneself, to pass the time	*Male*	140	213,96	29955,00	13935,000	,002
	Female	243	179,35	43581,00		
To download on-line videos	*Male*	141	212,06	29901,00	14514,000	,008
	Female	244	181,98	44404,00		
To make on-line purchases	*Male*	141	217,13	30616,00	13799,000	,001
	Female	244	179,05	43689,00		
To download music and films	*Male*	140	207,29	29020,00	14590,000	,016
	Female	241	181,54	43751,00		
To carry out research	Male	142	176,36	25042,50	14889,500	,010
	Female	244	203,48	49648,50		
To update blogs	Male	140	166,83	23356,50	13486,500	,001
	Female	244	207,23	50563,50		

Fig. 2, table: The result of those who use the Internet: differences between males and females

For what concerns the insight into the use of technology significant correlations can be observed, with exception for downloading videos and on-line work. Such considerations can be extended to a personal area in which the only non-significant items being investigated are researching, working and orga-

nising holidays on line. Therefore, it can concluded that such differences are not linked to activities with a clear practical outcome, but to activities that are regarded as a relaxing or social, especially chatting on line (_ Spearman = 0,354; p<0,001), meeting more people (_ Spearman = 0,320; p<001), enjoyment (_ Spearman = 0,306; p<0,001) and downloading music and films (_ Spearman = 0,233; p<0,001).

Taking the relative information into consideration with relation to the semantic differential (fig. 3), which intends to investigate through couples of adjectives the investigation the use of the net, as a positive outlook of the medium prevails, although there is a clear inversion of tendency with respect to the risky/secure couple, in which opinions move towards the negative pole. Utility and enjoyment of the means is, in percentage, equally shared by boys and girls.

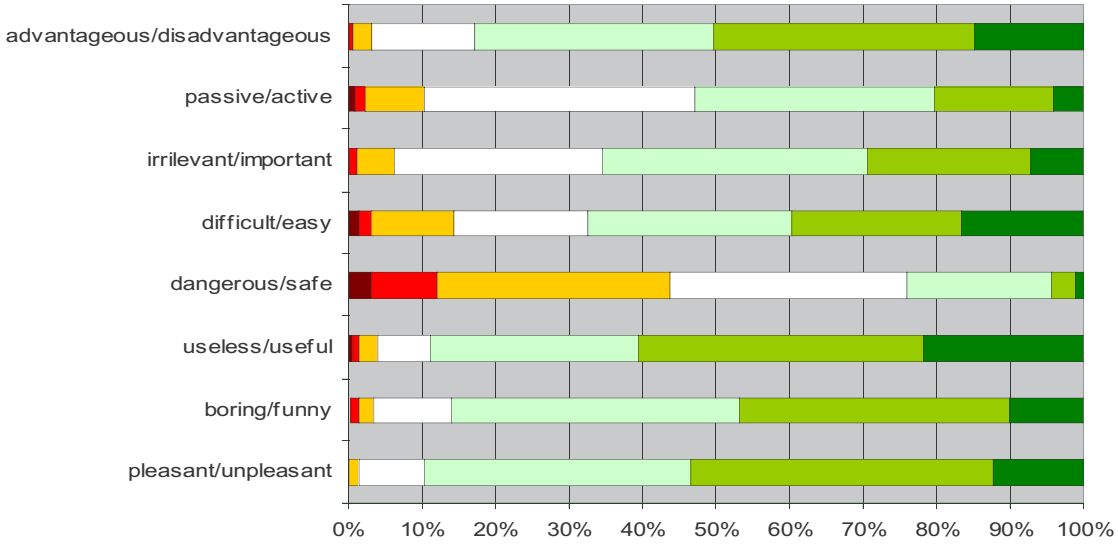

Fig. 3, graph: semantic differential (from 1, negative, to 7, positive)

For girls, the use of the net seems to be more difficult (U = 12934; p<0,001; Mean Ranks M= 210,40; Mean Ranks F =173,57) and less advantageous (U = 13937,5; p<0,05; Mean Ranks M = 204,02; Mean Ranks F = 178,06). The more the Internet is valued the greater the use of technology correlates with an Internet representation leaning towards positive poles, with particular reference to the pleasantness (_ of Spearman = 0,339; p<0,001), enjoyment (_ of Spearman = 0,313; p<0,001), importance (_ of Spearman = 0,219; p<0,001) and to the ease of use (_ of Spearman = 0,215; p<0,001).

Ethical attitude towards the net

With regards to the ownership of Information, around half the sample show they do not possess clear ideas, do not examine copyright or think about this argument. (The information that one finds on the internet belong to sites where are published/ …to the author /…they do not have any copyright) placing themselves in the centre of Likert (neutral). Such indecisiveness turns into a state of disagreement about the illegal or unlawful viewing or the copying of a text from the internet or a book. With regards to gender, females show a greater degree of agreement about the illegality of copying a text both from a book (U = 13903,5; p<0,05; Mean Ranks M = 170,99; Mean Ranks F = 196,83) and from the internet (U = 13575,5; p<0,001; Mean Ranks M = 167,47; Mean Ranks F = 203,2).

The teenagers involved in the research appear attentive tot the necessity of protecting one's privacy;

most of them, girls in particular (U = 14069; p<0,01; Mean Rank M = 171,45; Mean Rank F = 200,62), view free access by another party, especially a parent, to their own mobile phones. Moreover, 70,5% of boys considers the online publication of compromising pictures without previous consent as extremely incorrect. Girls seems to be more in disagreement when it comes to the publication of such pictures (U = 12748,5; p<0,01; Mean Rank M = 207,27; Mean Rank F = 178,57).

Boys are conscious of the associated risks with supplying their own personal details in chat rooms, particularly with regards to their home address, (85,2%), mobile phone number (79%) and their own surname (68.4%). In addition, boys are also aware of the possibility of lack of transparency in relations to the intentions of someone who they met in a chat room.: "It is easy to find people with bad intentions in chat rooms" (74,5%), "it is easy to deceive people in chat rooms" (71,5%), "it is difficult to know who you are talking to in chat rooms" (69,4%). The internet in general is considered neither secure nor transparent; 83,1% of boys believe that it is easy to pick up a virus online and 81,2% that fraud is a serious risk. It is the girls in particular who show a distrust towards the net in general , believing that it is not very safe to make on-line purchases (U = 13682,5; p<0,01; Mean Ranks M= 210,35; Mean Ranks F =177,51) and to give out their mobile number (U = 13755; p<0,01; Mean Ranks M = 210,04; Mean Ranks F = 177,55) and permanent details through chat rooms (fig. 4).

	Sex Subject	N.	Mean Ranks	Sum of Ranks	U Mann-Whitney	Sig. Asint. a 2 tails
It is easy to be deceived by people in chat rooms.	Male	139	176,32	24508,00	14778,000	,044
	female	241	198,68	47882,00		
It is better not to make friends with people who you met in chat rooms.	Male	140	176,96	24774,00	14904,000	,051
	female	241	199,16	47997,00		
It is better to know who you are talking to in chat rooms	Male	140	150,22	21030,50	11160,500	,001
	female	239	213,30	50979,50		
It is difficult to know who you are talking to in chat rooms.	Male	138	170,54	23535,00	13944,000	,010
	female	238	198,91	47341,00		
It is better to give false details in chat rooms.	Male	136	174,24	23696,00	14380,000	,039
	female	240	196,58	47180,00		
It is easy to meet people with bad intentions in chat rooms	Male	139	159,14	22121,00	12391,000	,001
	female	241	208,59	50269,00		
It is ok to give out your own surname in chat rooms.	*Male*	136	214,57	29181,00	12775,000	,001
	Female	240	173,73	41695,00		
It is safe to give out your mobile number in chat rooms.	*Male*	136	218,04	29653,00	12167,000	,001
	Female	239	170,91	40847,00		
It is safe to give out your home address in chat rooms.	*Male*	138	215,89	29792,50	13056,500	,001
	Female	241	175,18	42217,50		
It is nice to get to know people in chat rooms	*Male*	137	214,80	29427,50	12905,500	,001
	Female	240	174,27	41825,50		

Fig. 4, table: Behaviours in chat rooms: differences between males and females

With reference to the Values, 49,2% believe that a friendship formed through the net cannot be as genuine as those formed in school across the classroom. In addition to this, freedom of speech is considered of great value; 53,5% believe that a considerable virtue of the net is the chance to say what they think without being afraid of being judged by others.

With regards to the differences on the basis of the insight into the use of technologies", it is noticed that teenagers tend to thrust the net more when the fruition is higher: in fact significant correlation are evident with regards to the veracity of Information on the net (_ of Spearman = 0,140; p<0,01) and

with regards to the use of chat rooms and their security. Such intentions register significant values about specific items such as "it is better not to meet people known in chat rooms" (_ of Spearman = -0,141; p<0,001), *It is easy to deceive people in chat rooms* (_ of Spearman = -0,190; p<0,001), *it is difficult to know who you are talking to in chat rooms* (_ of Spearman = -0,213; p<0,001), *it is not safe to give out your mobile phone number in chat rooms* (_ of Spearman = 0,159; p<0,01), *real friendships can be established in chat rooms* (_ of Spearman = 0,180; p<0,001), *a true friendship formed through the internet cannot be as genuine as those formed across the classroom* (_ of Spearman = 0,177; p<0,001).

CONCLUSIONS

From the analysed information it emerged that the interviewed adolescents use the internet frequently and, in general, purposes, all new medias, although such a tendency is not homogenous. It is difficult to present only one image of an adolescent who uses technologies, since the variables in what is recorded about their relations with new medias are different.

Although teenagers appear to be conscious consumers of technology it seems to early to talk about a true technological culture equally shared by all youths, which would allow us to define them digital natives.

Amongst the participants It can be noticed that those who intensely use this technology have a more trustworthy attitude towards the net, especially with regards to the veracity of on-line information and security. Naturally one notices that the interviewed teenagers present a different use of technologies in relations to their free time (chatting, meeting new people, enjoying themselves, downloading films and music). There were no significant variations regarding the approach to technology and one's capacity to conduct research. This information would confirm what has already been believed by many due to international literature; today the internet is one of the main instruments used by young people, not only to communicate but also to access information. The high frequency in which young people use the Internet with the aim of research (90,10%) does not correspond to the development in competence and knowledge with regards to the ownership of on-line information and the right of the author. In the light of this information, a desirable education campaign highlighting the rules that govern the right of the author could be promoted. This would also favour the development of one's vital critical thinking, and also help teenagers to evaluate the veracity of traceable information.

The internet does not seem to change any distinct characteristics of male or female behaviour during adolescence and exhibits a different use with regards to satisfying their various demands. For example girls mainly turn to blogs, the design and nature of which mainly satisfy typically feminine demands, that is, research for intimacy, talking about themselves, sharing of experiences.

The net is often lived and shown as a sort of high tech 'far west', where rules or laws do not exist and practically anything is possible thanks to virtual space and virtual situations (Lardellier, 2006). It is, indeed, an extremely delicate dimension which has often attracted attention, especially following episodes of 'cyber bullying' that have occurred in the last few years. From the research, it emerged that adolescents believe certain behaviour as unacceptable ("It is acceptable to put up compromising photos of people without notifying it"/ "it is acceptable to put up a photo in the internet of a person without notifying it"), demonstrating knowledge of a unity of rules which should control on-line behaviour. Teenagers state a higher responsibility in real life than on-line: 61,2% of youngsters believe that it is right to help out someone who is bullied in real life, with respect to only 38,5% who would participate in the defence of someone else in a chat room.

This investigation is continuing, and is currently reconsidering the whole questionnaire in light of other characteristics of the participants, such as geographical and socio-cultural factors (educational level, parent's age, parent's occupation), presence of older brothers or sisters, presence of rules within the family regarding Internet access, all with the final aim of delineating a more detailed profile of teenagers and their relationship with the net.

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NOTAS

[2] "IT IS NOW CLEAR THAT AS A RESULT OF THIS UBIQUITOUS ENVIRONMENT AND THE SHEER VOLUME OF THEIR INTERACTION WITH IT, TODAY'S STUDENTS THINK AND PROCESS INFORMATION FUNDAMENTALLY DIFFERENTLY FROM THEIR PREDECESSORS. THESE DIFFERENCES GO FAR FURTHER AND DEEPER THAN MOST EDUCATORS SUSPECT OR REALIZE". (PRENSKY, 2001, P. 1)

[2] Young people communicating in our "digital era"appear to sail further and further from the image of the "homo comunicans" envisaged by Breton: "The homo communicans does not possess insight nor body, lives in a society without secrets, he is a being entirely and solely interested in the social, who exists only through information and exchange, in a society which became suddenly sheerly transparent thanks to "the new communicating machines".

Fecha de recepción: 28 febrero 2009
Fecha de admisión: 19 marzo 2009

International Journal of Developmental and Educational Psychology
Psicología y sociedad: siglo XXI competencias relacionales
INFAD, año XXI
Número 1 (2009 Volumen 4)

ISSN 0214-9877