



# Parent's Influence on Acquiring Critical Internet Skills

La influencia de los padres en la adquisición de habilidades críticas en Internet

-  Dr. María Sánchez-Valle is Adjunct Professor in the Department of Audiovisual Communication and Advertising at CEU San Pablo University (Spain) (mvalle.fhum@ceu.es) (<http://orcid.org/0000-0003-1497-2938>)
-  Dr. Belinda de-Frutos-Torres is Associate Professor in the Department of Modern, Contemporary and American History and Journalism and Audiovisual Communication and Advertising at the University of Valladolid (Spain) (belinda.defrutos@hmca.uva.es) (<http://orcid.org/0000-0002-9391-8835>)
-  Dr. Tamara Vázquez-Barrio is Adjunct Professor in the Department of Journalism at CEU San Pablo University (Spain) (tamarav@ceu.es) (<http://orcid.org/0000-0003-2789-8554>)

## ABSTRACT

The accessibility and ease-of-use for children of Information and Communication Technologies lead us to suggest that one of the key questions for their potential empowerment is linked to their analytical use by means of the acquisition of critical skills. The family environment is considered an important factor in digital literacy and the education of critical citizens. The present paper analyzes the mediation role of the parents in their children's education. It shows a predictive model that includes parental education style and their trust in the interactive media for their children's acquisition of critical cognitive abilities. It also identifies the personal and contextual factors that are related to the parental education style. The model was tested on a representative sample of 765 families from the Madrid Community selected on the educational level, center type, and district income bases. It was found that children's educational level is the factor of greatest impact on the acquisition of critical abilities. Nevertheless, as parents adopt a less restrictive style regarding the uses of Internet, there is a more positive influence on the acquisition of critical abilities independently of the age effect. The results question the role of parental restrictions on the use of the interactive media to encourage the education of critical citizens.

## RESUMEN

La accesibilidad y facilidad de uso de las Tecnologías de la Información y la Comunicación en los menores lleva a plantear que una de las cuestiones clave para su potencial de empoderamiento está vinculada al uso crítico de las mismas a través de la adquisición de habilidades críticas. El entorno familiar se postula como un factor determinante en la alfabetización digital y en la formación de ciudadanos críticos. El presente trabajo analiza el papel mediador de los padres en la educación de sus hijos. Plantea un modelo comprensivo que recoge la influencia del estilo parental y la confianza de los progenitores hacia el medio interactivo en la adquisición de habilidades críticas por parte de los menores y se identifican los factores personales y contextuales que influyen sobre el estilo parental. El modelo se pone a prueba con una muestra representativa de 765 familias procedentes de la Comunidad de Madrid seleccionadas en función del nivel de enseñanza, tipología de centro y nivel de renta del distrito. Se comprueba que el nivel educativo de los hijos es el factor más influyente en la adquisición de habilidades críticas. No obstante, cuanto menos restrictivo es el estilo de control parental de Internet, más positivamente influye en la adquisición de habilidades independientemente de la edad. Los resultados cuestionan el papel de las restricciones en el uso del medio interactivo para la formación de ciudadanos críticos.

## KEYWORDS | PALABRAS CLAVE

Internet, digital alphabetization, parental control, educational strategies, empowerment, family, children, parents.

Internet, alfabetización digital, control parental, estrategias educativas, empoderamiento, familia, menores, padres.



## 1. Introduction and status of the issue

### 1.1. The new digital divide: empowerment

It is undeniable that Information and Communication Technologies (ICT) have become a fundamental tool and that knowing and using them at an advanced level is a priority in order to participate in a complex, globalized society. Leisure is ever more linked to the use of computers, tablets or cell phones, but also to the exercise of rights and active citizenship (Gutiérrez-Rubí, 2015); employability (Núñez-Ladevéze & Núñez-Canal, 2016) or access to permanent education depends on digital competence (Travieso & Planella, 2008). Children show great technological skills, but the same cannot be said for their capacity to critically understand the audiovisual context in which they live.

Ballesteró (Fuente-Cobo, 2017) mentions four elements to summarize the digital divide concept: availability of a computer; another electronic device in the home or at work; acquaintance with the basic tools to access and surf the Internet; and the user's competence to convert the information reached on the web into 'knowledge'.

The gap regarding access and connectivity has almost disappeared among children and young people in Spain. The use of ICT is occurring at ever younger ages. The study "Minors and Mobile Connectivity in Spain" states that two- and three-year-olds habitually access their parents' terminals to use children's applications for games, music, activities, and videos. Considering ownership, the latest survey on "Equipment and Use of Information and Communication Technologies in Homes" run by the Statistics National Institute (Spain) indicates that 25.5% of 10-year-old Spanish children have a cell phone, that this percentage doubles at the age of 11 and that the figure continues to increase until, at the age of 15, it reaches almost 100%. The drop in the starting age for the use of smartphones is not an exclusively Spanish phenomenon, but it does have a high incidence in our country, where the number of minors with smartphones is the highest in Europe and is comparable to the USA. Regarding connectivity, 93.7% of Spanish children connect to the Internet from their homes (INTEF, 2016) and those who have a smartphone are permanently in connection, except when they are asleep (Cánovas, 2014).

Exclusion from digital society is no longer based on accessibility to the web or possession of devices, but rather relies on the ability to behave analytically. The real digital divide nowadays is empowerment as regards digital literacy, defined as "acquisition of the intellectual skills needed to interact both with the existing culture and to recreate it critically and freely, and consequently, as a right and need for citizens of the information society" (Area, Gutiérrez, & Vidal, 2012: 9).

The often reductionist vision that schools have of digital competence (Ferrés & Piscitelli, 2012), focusing on the technical aspects and ignoring the training of the critical spirit, grants central importance to family mediation in the process of gaining the knowledge needed for a creative and safe use of information and communication technologies, which are becoming empowerment technologies (Reig-Hernández, 2012).

On this basis, the proposal of this study does not focus on defining a profile of a mother or a father depending on the use of Internet allowed to their children. The objective is to define how the parental control style and their confidence in the medium enable the empowerment of minors in the use of the Internet. The relationship between the empowerment of minors in the use of Internet and the acquisition of critical skills is clear, as the latter is crucial in the development of an independent and responsible use of the medium.

### 1.2. Influence of parental styles on digital empowerment

It appears to be proven that parenting styles influence the use that children make of Internet. Valcke, Bonte, Wever, and Rots (2010) distinguished between different parenting styles depending on the control exercised by the parents. They observed that the way in which children approached the technology is related to their parents' Internet use, their attitude and their experience online, and stated that the parenting style, the parent's behavior on Internet and their level of education were the variables that best forecast the children's use of Internet in the home.

Among the components which influenced the educational setting of the children, the parents' age appears to be decisive. There are studies that show that the older the parents, the less level of experience in their use of the Internet, and the less regulation of their children's use (Álvarez, Torres, Rodríguez, Padilla, & Rodrigo, 2013; Valcke & al., 2010). Álvarez and others (2013), apart from the age of the parents, add the level of education as a key element in the parents' attitudes: parents with a lower level of education are those who feel more involved in the regulation of their children's activities online and show higher-quality motivation based on the promotion of social interaction and learning. Nikken and Schols (2015) point out the influence of the use the parents themselves make of Internet on its use by their children, whereas Rial, Gómez, Braña, and Varela (2014) show that the control exercised by parents over their children is significantly lower when they do not use the Internet.

Padilla, Ortiz, Álvarez, Castaño, Perdomo, and López (2015) have also drawn attention to the influence of the physical space and the attitudinal component of the parents and carers on the frequency and extent of the Internet in the home. They analyzed which variables of the socio-demographic profile of the parents and the family are related to regulating the attitudinal components of the family and the physical setting when children use the Internet, together with the frequency and diversity of its use. These authors concluded that parents with children in primary school have more regulated use of Internet because the children connect in spaces they share with their parents, which allows them to have more control over what their children see (Álvarez & al., 2013; Valcke & al., 2010).

However, the research is not conclusive on which style of parental control is most appropriate. Some studies state that children use the Internet more when their parents adopt a more permissive style and that the opposite occurs in cases of an authoritarian

style which, incidentally, is the most predominant (Valcke & al., 2010). The idea that it is recommendable to regulate use as a preventative measure to avoid potential risks is underlying. Connecting this with conflictive situations which may arise online, Melamud and others (2009), in research carried out in Argentina with children between the ages of 4 and 18, concluded that parents have little knowledge of what their children do on the Internet and underestimate its potential risks. Lobe, Segers and Tsaliki (2009) found that in those countries in which the strategies for parental control are weak, chil-

dren run higher risks in their use of the Internet. Specifically, Spain has one of the lowest levels of risk as a result of less awareness of the risks combined with a more efficient family mediation in the form of conversation with children on their use of the Internet. Nevertheless, these studies are not conclusive as regards what the best parental control strategies are, nor on the influence they have on the acquisition of children's critical skills.

It does appear to be clear that dysfunctional parenting styles (abuse and indifference) influence Internet addiction (Matalinares & Díaz, 2013) and that intensive use by children is linked with homes where there is no parental control (Fernández, Peñalba, & Irazabal, 2015; Rial, Gómez, Braña, & Varela, 2014). The fact that parents are not Internet users also implies a risk for adolescents as they may make problematic use of the medium (Boubeta, Ferreiro, Salgado, & Couto, 2015).

On the question of how the risks to be found on the Internet should be tackled, the proposals are directed towards increasing preventive programs for responsible and safe use (Berríos, Buxarrais, & Garcés, 2015). The major challenge for the future would be to "maximize the positive effects and minimize the negative effects" of the Internet on children (Fernández-Montalvo, Peñalba, & Irazabal, 2015: 119). Tejedor and Pulido (2012: 70) recommend that the educational curriculum should include the empowerment of children regarding the risks of cyberbullying and grooming, and state that "global education strategies should be designed to consolidate skills related to media literacy", together with preventive models which include the families. De-Frutos-Torres and Marcos-Santos (2017) propose preventive actions based on the sharing of negative experiences on social networks by teenagers, and acceptable behaviors there.

The relevance of parent mediation seems obvious, and even children are aware of the importance of their parents as regulatory agents of the Internet contents they access. Nevertheless, this influence declines as children get older with a bias towards their friends and companions; this also occurs in more problematical situations (Jiménez-Iglesias, Garmendia, & Casado-del-Río, 2015).

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There are many contributions on strategies for parental control, although there is little interest in studying the factors of influence in family mediation and their effectiveness (López-de-Ayala & Ponte, 2016). Torrecillas-Lacave, Vázquez-Barrio, and Monteagudo-Barandalla (2017), in a study focusing on the “hyper-connected homes” in the Community of Madrid, conclude that parents’ opinion is very positive regarding ICT and that there are two different mediation styles: some parents use a more restrictive style which includes strategies for digital control of contents, timetables and time online; while others prefer shared surfing. They also point out that, independently of the mediation style preferred by the families, they all establish support strategies which go from intensifying family communication to awareness of the potential risks associated with publishing images and videos online. Concern about this issue is not merely the fruit of the risks Internet may imply for children, but it is also due to the enormous potential it has as a key platform to promote the autonomous learning and development of children (Kerawalla & Crook, 2002, quoted in Padilla, 2015). For

this reason, it is of interest to explore the parent/child relationship in their approach to the Internet for connection and learning, capable of making children more independent and responsible.

**The learning opportunities do not necessarily have to be delimited by the children’s age. Although it is true that as the children advance academically they acquire greater skills to apply to the interactive setting, the results of the model lead us to affirm that parents may become the agents of change in the experience, by enabling their children to explore the web and by adopting a nonrestrictive tutelary style that allows the child to surf freely on those sites which are adapted to his/her level of maturity.**

## 2. Material and method

### 2.1. Study

The first objective of the work is to identify which personal, attitudinal and behavioral variables are associated with the parental style which regulates Internet access. Among the personal factors, we include the age of the parents, their level of education, the number of children in the family unit, the age of the children, the type of home and

the parents’ experience of using the Internet for either work or personal reasons. The attitudinal variables gather the parents’ confidence in the interactive medium and their concern regarding the risks which may affect their children. Finally, in the behavioral variables, we include prior authorization for access to the Internet, subsequent control after its use and limitation of the time online.

The second objective of the work focuses on identifying the variables which make a significant contribution to children’s acquisition of critical skills in the use of Internet in the family setting. After reviewing the literature on the subject, we hypothesize that the parental style will affect the acquisition of critical skills, together with the remaining personal, attitudinal and behavioral factors already mentioned.

To explore the factors associated with the parents’ style of control for the use of the Internet, the Chi-squared statistic has been used for the categorical variables and the analysis of variance I (ANOVA) for the continuous variables. The predictive model has been tested through a linear regression analysis organized hierarchically by blocks using the stepwise method which is appropriate for the identification of the variables that make a significant contribution to the acquisition of critical skills in the use of the Internet. The interpretation of the results is based on the statistical F-test, the proportion of explained variance (standardized R<sup>2</sup>) and the standardized parameters of the regression equation<sup>2</sup>.

### 2.2. Sample

The population is defined by schoolchildren from the municipality of Madrid. The extraction of the sample has followed multistage sampling stratified by clusters using the school as a sample unit. The strata were defined by educational levels (Preschool/Primary, Secondary/ Baccalaureate), the type of school (public or private/semiprivate)

and income level of the district (above average, average or below the average for the municipality of the city of Madrid). The schools were selected randomly within each stratus using the school register of the Education Board of the Community of Madrid. The collaboration of the school in the study was requested by telephone. The collaboration of the parents was organized through the school. The questionnaire was completed online. 765 valid questionnaires were gathered. Participation was 57% which indicates a good level of response according to the criteria of Baxter and Babbie (2004). 32% of the responses came from public schools and the remaining 68% from private schools.

### 2.3. Measurement tools

To collect the data an ad hoc questionnaire was created for this study. The personal data included were: age of parent, gender, the academic level reached, the frequency of use of Internet for work or personal (leisure) reasons and academic year of their child. The parents' confidence on Internet was measured on a 4-point Likert-type scale with scores which went from skepticism to confidence in the web (Mean =2.46; typical deviation 0.61).

To measure the parents concern with Internet risks, they were asked about the level of concern created by 10 situations in relation to their children: that they might be contacted by strangers, that crimes could be committed against their child, that they might be bullied or harassed by other children, that they might see inappropriate material, that their child might commit a crime, that it takes away opportunities for other activities, that he/she spends a lot of time online, that he/she does not have criteria to assess what he/she may find, that he/she does not control its use, that he/she misses opportunities for real contact with his/her friends. The answers were arranged on 4-point Likert-type scale grading the concern from low to high. The answers present a high degree of internal consistency (Alpha de Cronbach=0.92). For the analyses, a global score was calculated based on the mean sum of the ten situations (mean =3.27; standard deviation 0.66).

Several indicators have been used to evaluate parents' intervention in their children's activities on the Internet. A general question regarding whether parents' permission was required or not to use the Internet at home during non-vacation periods. A question about time limits for Internet use with answers that go from the most restrictive time periods to the least (less than an hour; between one and two hours; between two and three hours; over three hours and unlimited). Thirdly, data was gathered on the authorization for Internet use in eight different situations or scenarios: use of instant messaging, watching videos, surfing, having one's profile on a social network, downloading music or films, sharing photographs, music or videos with others, online shopping and installing apps from the web. Each response alternative reflects a parent/child relationship style which goes from the possibility of access only with permission, access with permission and supervision, and restricted access. The answers to these situations, which have a high internal consistency (Alpha de Cronbach=0.86) have been added to create a global indicator of the degree of regulation of Internet use which has been used to establish the parental style (mean=24.4 and standard deviation=4.5). Based on response distribution, three groups of approximately the same size have been established: the first has been called "free/somewhat restrictive access style" (scores up to 20 points), the second called "negotiated style" (scores between 21 and 25) and the third called "restrictive style" (scores over 25). Finally, in the parent-child relationship, we asked if the children's behavior after using the Internet was controlled. The actions included were: reviewing sites the child has visited, the WhatsApp groups, friends who have been added, the contents of his/her profile, the messages received or sent and the files downloaded. The positive answers have been added to obtain a global indicator of control (mean=2.97; standard deviation=2.26).

The acquisition of critical skills on the use of ICT has been used as a model dependent variable. This question reflects the number of critical skills acquired in Internet use the parents' opinion, disregarding where they were acquired (home or school). The issues included were: the importance of verifying Internet information, that there are good websites and others which are not good, how to use reliable sources when downloading Internet content, where to find information to address homework tasks, encouraging the child to explore and learn things online. The affirmative responses to each of these questions were added and formed a single indicator. The mean for affirmative responses is 3.67, and the standard deviation is 1.65.

## 3. Results

### 3.1. Factors associated with parenting style

The gender of the respondent is associated with the parenting style for Internet access. The differences are produced in the free or little-restricted style which appears more frequently in men than women, and in the

restrictive style where there is a higher proportion of women (77.9%) than men (22.1%). Taking into account the personal projection in the responses, it could be argued that mothers tend to place more restrictions on their children's habits. The age factor also shows statistically significant differences. The fathers and mothers who practice a free and negotiated control of Internet are older (49 and 46.3 years old on average, respectively) than the parents of a more restrictive style (mean age= 41.7). The level of education completed shows some significant differences, although there is no clear tendency. In the freestyle relationship, there is a higher proportion of parents with university studies, while in the restrictive-style relationship there is a lower proportion of parents with university studies and a higher proportion of parents with vocational training and baccalaureate. The number of children under 18 and the type of household does not return statistically significant differences. Finally, the children's

level of education is a point that is related with the parenting style. Of interest is the fact that, at the first stages of academic learning (primary), there is a greater proportion of parents who adopt the restrictive style, compared to the period of secondary education and baccalaureate, when there is a higher proportion of negotiated and free access. In addition, the number of children in the household and the type of family (single-parent, spouses and children) is not associated with the style of family relationship.

The relationship between the confidence and concern regarding Internet risks and the style of parental control on the Internet is coherent with the original hypothesis. Parents who adopted a free style tend to show a greater degree of confidence in the interactive medium (mean=2.56) compared to those who show a more restrictive style (mean=2.41). The awareness of the risks that children can run online also has a significant relationship with the style of parental control. Those who adopt a freestyle relation tend to show a lower degree of concern regarding the risks their children may run (mean=3.11), compared to those who are more restrictive in their relationship with the medium who show greater concern in this sense (mean=3.36).

In the free and negotiated styles, there is a lower proportion of parents who require prior permission before Internet use, compared to 92% of the restrictive-style parents who demand approval before surfing. The regulation of the time connected shows differences in the lower time band where there is a higher proportion of parents with a restrictive style (65.2%). Finally, in the free style, there are fewer subsequent controls than in the negotiated and restrictive ones. On the whole, a coherent scenario appears in which the parents' confidence leads to the adoption of parent/child relationship styles which are more relaxed and the concern regarding risks results in greater limi-

**Table 1. Personal factors related to parental control style for Internet**

|                                                                        | Parental control style regarding Internet |                |                 |             |
|------------------------------------------------------------------------|-------------------------------------------|----------------|-----------------|-------------|
|                                                                        | Free (%)                                  | Negotiated (%) | Restrictive (%) | Total (%)   |
| Gender                                                                 |                                           |                |                 |             |
| Men                                                                    | 35.4**                                    | 29.7           | 22.1**          | 27.7        |
| Women                                                                  | 64.6**                                    | 70.3           | 77.9**          | 72.3        |
| Statistical Chi-squared                                                | Chi-squared=11.601 sig.=0.003 (g.l.=2)    |                |                 |             |
| Mean age (SD)                                                          | 49.0<br>(4.16)                            | 46,3 (4.75)    | 41.7 (5.22)     | 44,9 (5.7)  |
| Statistic                                                              | F=155.420 sig. =0,000 (g.l.=2)            |                |                 |             |
| Level of education reached                                             | Free (%)                                  | Negotiated 8%) | Restrictive (%) | Total (%)   |
| Elementary/Intermediate vocational training or equivalent              | 4.6                                       | 6.3            | 4.9             | 5.2         |
| Advanced vocational training/ High School                              | 25.6                                      | 21.6**         | 30.7*           | 26.8        |
| University (graduate/engineer, etc.)                                   | 45.1*                                     | 42.8           | 39.1*           | 41.7        |
| Postgraduate (master/doctorate)                                        | 24.6                                      | 29,3           | 25.3            | 26.3        |
| Statistic                                                              | Chi-squared=23.180 sig.=0.184 (g.l.=18)   |                |                 |             |
| Mean number of children under 18 in household (SD)                     | 1,8 (0.78)                                | 1,96 (1,0)     | 1.90 (0.88)     | 1,91 (0.88) |
| Test statistic                                                         | F=1.442 sig.=0,155 (g.l.=2)               |                |                 |             |
| Household type                                                         | Free (%)                                  | Negotiated (%) | Restrictive (%) | Total (%)   |
| Single-parent                                                          | 8.2                                       | 8,1            | 6.3             | 7.3         |
| Spouse and children                                                    | 89.2                                      | 88.3           | 90.5            | 89.5        |
| Other                                                                  | 2.6                                       | 3,6            | 3.2             | 3.1         |
| Statistic                                                              | Chi-squared=1.307 sig.=0.860 (g.l.=4)     |                |                 |             |
| Child's academic year                                                  | Free (%)                                  | Negotiated (%) | Restrictive (%) | Total (%)   |
| 3 <sup>rd</sup> Preschool, 1 <sup>st</sup> and 2 <sup>nd</sup> Primary | 1.0**                                     | 7,8**          | 47.5**          | 24.0        |
| 3 <sup>rd</sup> and 4 <sup>th</sup> Primary                            | 1.0**                                     | 6,9**          | 20.9**          | 11.7        |
| 5 <sup>th</sup> and 6 <sup>th</sup> Primary                            | 6.7**                                     | 17,4           | 19.5**          | 15.6        |
| 1 <sup>st</sup> and 2 <sup>nd</sup> Secondary                          | 21.8**                                    | 33,0**         | 9.4**           | 19.5        |
| 3 <sup>rd</sup> and 4 <sup>th</sup> Secondary                          | 31.1**                                    | 21,6**         | 1.2**           | 14.8        |
| 1 <sup>st</sup> and 2 <sup>nd</sup> Baccalaureate                      | 38.3**                                    | 13.3           | 1.5**           | 14.4        |
| Statistic                                                              | Chi-squared=444.138 sig.=0.000 (g.l.=10)  |                |                 |             |

\*\*Significant difference in the level 0.01 \*significant difference in the level 0.05

tations. In this sense, both the freedom granted and the restrictions are coherent in the uses, in the freedom of access, and the time of use and in the subsequent controls.

### 3.2. The acquisition of critical skills

In the hierarchical regression analysis using the stepwise method, only those variables which make a significant contribution with the dependent variable are included in the model 3. Therefore, the analysis will permit us to identify which variables make a significant contribution to the acquisition of critical skills on the Internet. In the first block, only the children's academic year enters into the regression model. This variable explains 27.2% of the variance. In the second block, neither the confidence in the interactive medium nor the parent's concern regarding Internet risks influences the acquisition of the children's critical skills. Consequently, none of the attitudinal variables play a significant role in the regression despite their relationship with the parenting style. In the final block, the parental style of control of Internet, the control of subsequent activities and the time limit make a significant contribution. Taken as a whole, the model explains 35.6% of the critical skills in the interactive medium.

Regarding the parameters of the regression equation (table 4), it is found that the variable with greater predictive capacity is the academic year. As is to be expected, when the children go on to higher educational levels they acquire greater skills in the use of interactive media. The subsequent control of children's activities online is the second most influential variable in the acquisition of critical skills. The sense of the relationship is positive, that is to say, the more control parents have, the greater is the skill acquired by the children. The parenting style on the Internet is shown to have a significant effect on the dependent variable but in reverse order. The more the parents adopt a more restrictive style in access to Internet applications, the lower is the level of acquisition of critical skills by the children. Finally, the period allowed for the use of Internet shows a positive relationship with the acquisition of critical skills. The more time, the better acquisition of critical skills, although this variable has the least effect on the regression equation.

### 4. Discussion and conclusions

The parental style of control emerges as crucial in the empowering of children in the acquisition of critical skills, which coincides with earlier works which had shown the importance of parental mediation in the adoption of Internet (Valcke & al., 2010; Ihmeideh & Shawareb, 2014; Nikken & Schools, 2015). The wide variety of styles associated with the use of the interactive medium shows the importance of giving children opportunities to grow and acquire skills. The learning opportunities do not necessarily have to be delimited by the children's age. Although

it is true that as the children advance academically they acquire greater skills to apply to the interactive setting, the results of the model lead us to affirm that parents may become the agents of change in the experience, by enabling their children to explore the web and by adopting a non-restrictive tutelary style that allows the child

**Table 2. Intervention in the online activity associated to parental control style**

|                                                                  | Parental control style on Internet       |                |                 |                |
|------------------------------------------------------------------|------------------------------------------|----------------|-----------------|----------------|
|                                                                  | Free (%)                                 | Negotiated (%) | Restrictive (%) | Total (%)      |
| Confidence in Internet<br>Mean (Typical Deviation)               | 2.56<br>(0.58)                           | 2.46 (0.62)    | 2.41 (0.61)     | 2.46<br>(0.61) |
| Statistic                                                        | F=3.707 sig.=0.025 (g. l.=2)             |                |                 |                |
| Concern for Internet risks<br>Mean (Typical Deviation)           | 3.11<br>(0.70)                           | 3.27 (0.61)    | 3.36 (0.65)     | 3.27<br>(0.66) |
| Statistic                                                        | F=9.315 sig.=0.000 (g. l.=2)             |                |                 |                |
|                                                                  | %                                        | %              | %               | %              |
| Requires parental authorization to use Internet<br>% column      | 31.3**                                   | 58.6**         | 92.0**          | 66.8           |
| Statistic                                                        | Chi-squared=216.996 sig.=0.000 (g. l.=2) |                |                 |                |
| Limitation of time of use                                        | %                                        | %              | %               | %              |
| Less than one hour                                               | 14.4**                                   | 34.4**         | 65.2**          | 43.3           |
| Between one and two hours                                        | 35.9**                                   | 37.1           | 24.7**          | 31.2           |
| From 2 to 3 hours                                                | 9.2**                                    | 6.3            | 4.0**           | 6.0            |
| Over three hours                                                 | 3.1**                                    | 0.5            | 0**             | 0.9            |
| Unrestricted                                                     | 37.4**                                   | 21.7*          | 6**             | 18.6           |
| Statistic                                                        | Chi-squared=176.200 sig.=0.000 (g. l.=8) |                |                 |                |
| Number of subsequent parent controls<br>Mean (Typical Deviation) | 2.05 (1.98)                              | 3.32 (2.12)    | 3.26 (2.56)     | 2.97 (2.36)    |
| Statistic                                                        | F=20.897 sig.=0.000 (g. l.=2)            |                |                 |                |

\*\*Significant difference in the level 0.01 \*significant difference in the level 0.05.

| Table 3. Linear regression equation statistics on the acquisition of critical skills stepwise method |                    |                                       |                    |                  |
|------------------------------------------------------------------------------------------------------|--------------------|---------------------------------------|--------------------|------------------|
|                                                                                                      | R squared adjusted | Statistic of change in R <sup>2</sup> | Change in F (g.l.) | Sig. change in F |
| Step 1                                                                                               | 0.273              | 0.274                                 | 278.85 (1, 739)    | 0.000            |
| Step 2                                                                                               | 0.279              | 0.007                                 | 7.129 (1,738)      | 0.008            |
| Step 3                                                                                               | 0.352              | 0.074                                 | 84.476 (1, 737)    | 0.000            |
| Step 4                                                                                               | 0.359              | 0.004                                 | 5.005 (1,736)      | 0.026            |

to surf freely on those sites which are adapted to his/her level of maturity. When parents adopt a restrictive style of relationship, the acquisition of skills deteriorates. At the same time, the subsequent controls by the parents monitor the learning process.

The acquisition of critical skills is not affected, directly at least, by the level of education in the family background, nor by the parents' age. In accordance with what has been stated by other studies (Álvarez & al., 2013), younger parents tend to adopt more restrictive relationship styles on the interactive medium. Likewise, it is found that confidence in Internet and concern about its risks do not directly affect the acquisition of skills, although they have a mediating role in the parental relationship styles. The parents with greater concern about the risks which are most critical of the interactive medium are less amenable to the idea of online exploration by their children.

At an applied level it would be interesting if, apart from the actions of parental guidance in indicating online risks, there were the insistence on the importance of granting opportunities for access to the children under parents' control for their empowerment. Along the same lines, Ihmeideh and Shawareb (2014) state the importance of schools and preschools working together with parents so that the Internet can be used appropriately in schools and at home.

**Table 4. Standardized parameters of the linear regression equation on the acquisition of critical skills stepwise method**

| Variables included                 | Regression parameters              |        |       |
|------------------------------------|------------------------------------|--------|-------|
|                                    | Standardized Beta                  | T      | Sig.  |
| Child's academic year              | 0.392                              | 8.841  | 0.000 |
| Parental control style on Internet | -0.162                             | -3.549 | 0.000 |
| Number of subsequent controls      | 0.283                              | 9.415  | 0.000 |
| Time limit                         | 0.075                              | 2.237  | 0.026 |
| Statistic for model (step 4)       | F=103.151 sig.=0.000 (g. l.=1.740) |        |       |

## Notes

<sup>1</sup> Before carrying out the ANOVA, the equality of variances was assessed using Levene's test.

<sup>2</sup> In the linear regression equation, the independence of the residuals was tested by means of the Durbin-Watson test, the quality of variances with Levene's test and the absence of the co-linearity of the variables. The entrance criteria for the variables in the regression is 0.05.

<sup>3</sup> The first block of the equation includes the personal variables: the parents' ages, an academic level reached, the frequency of Internet use, children's ages, number of members in the family unit and household type. The second block includes the confidence in the interactive media and the concern about Internet risks. The third block includes the variables relative to parental control activities: parental control style on the Internet, the requisite of authorization for the use of the Internet, limitation of time of use and the number of subsequent controls of the online conduct.

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