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Pilar Colás, Teresa González and Juan De Pablos
Sevilla (España)

Young People and Social Networks: Motivations and Preferred Uses

Juventud y redes sociales: Motivaciones y usos preferentes

Abstract

This article presents the results of a study on the use of social networks among young Andalusians. The main objectives are: to know the uses of social networks, frequency of use and the motives for access. A questionnaire was used to collect the data. The sample includes 1,487 adolescents in Andalusia, with the results showing that young people, for the most part, consistently used social networks. We identified two motivational aspects in this use: one social and the other psychological. No significant differences between sexes were found in terms of frequency of use, but rather in the motivations for access. Boys tend to be more emotional while girls are more relational in their motivation. The results show similarities with international research in environments that vary greatly from the present work. The conclusions suggest the need for future lines of work. This study also identifies the implications of social network uses for active citizenship, and participatory training and social integration. These results are also important for the enrichment of dimensions such as social capital development and education.

Resumen

Este artículo presenta los resultados de un estudio sobre la utilización que hacen los jóvenes andaluces de las redes sociales. Los objetivos fundamentales son: conocer los usos preferentes de las redes sociales, su frecuencia y los motivos que les impulsan a su utilización. Además se estudia si existen diferencias de sexo tanto en la frecuencia como en las motivaciones de uso. Se aplica un cuestionario para la recogida de datos. La muestra es de 1.487 adolescentes de Andalucía. Los resultados muestran que los jóvenes en su mayoría usan de manera habitual las redes sociales y se identifican dos vertientes motivacionales en su uso: una social y otra psicológica. No se hallan diferencias significativas entre sexos en cuanto a frecuencia de uso, pero sí en las motivaciones para su acceso. Las de los chicos son de tipo emocional, mientras que en las chicas predomina la motivación de carácter relacional. Los resultados obtenidos muestran coincidencias con investigaciones internacionales realizadas en contextos muy diferentes al presente estudio. En la discusión de resultados se plantean futuras líneas de trabajo, a la vez que se identifican implicaciones que los usos de las redes sociales tienen para la formación e integración social de una ciudadanía activa y participativa, así como para el enriquecimiento de dimensiones como el desarrollo del capital social y la educación.

Keywords / Palabras clave

Young people, adolescence, social networks, sex, social compensation, social capital, education, citizenship. Juventud, adolescencia, redes sociales, sexo, compensación social, capital social, educación, ciudadanía.

Dr. Pilar Colás-Bravo is Full Professor of the Department of Research & Diagnostic Methods of the Faculty of Education at the University of Seville (Spain) (pcolas@us.es).

Dr. Teresa González-Ramírez is Professor of the Department of Research & Diagnostic Methods of the Faculty of Education at the University of Seville (Spain) (tgonzale@us.es).

Dr. Juan de Pablos-Pons is Full Professor and Dean of the Faculty of Education at the University of Seville (Spain) (jpablos@us.es).

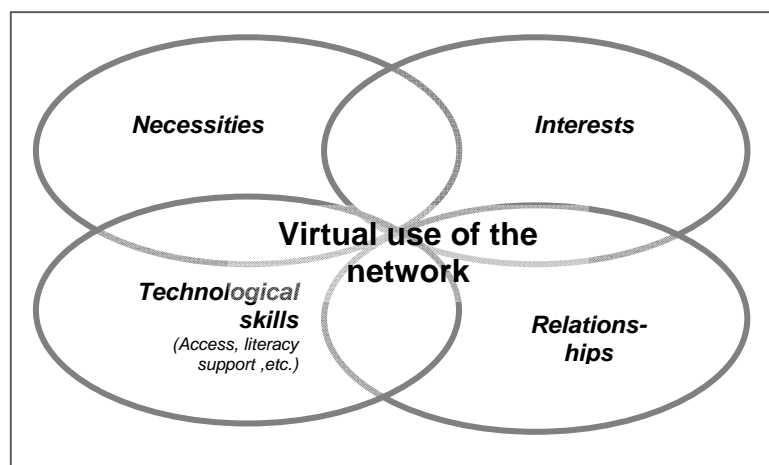
1. Introduction and state of the question

Virtual social networks constitute an important phase in the development and use of Internet, and are increasingly the focus of research although their history as a resource is relatively recent. In this regard, Boyd and Ellison (2008) reviewed the launching of social networks through their identification of three phases since 1997. The first period spans the onset in 1997 up to 2001 and is characterized by the creation of numerous virtual communities to provide space for a diverse combination of user profiles. A new era began in 2001, characterized by these networks' approach to business. In other words, professional exchange and business networks were created to become a powerful instrument in global economy. In the third stage—today—social networks attract the attention of researchers in a number of disciplines and fields with their enormous potential as an object of study. This has resulted in virtual social networks becoming privileged scenarios to carry out promising lines of research. An indicator of this tendency is the fact that international journals and magazines the Journal of Computer-Mediated Communication includes this topic in its editorial when noting that research can help us understand the practices, implications, culture and meanings of virtual spaces. From this perspective, researchers are urged to make use of the various research methodologies, theoretical focuses and treatment of the data analysed.

In this research scenario, demographic niches, that is to say, specific populations constitute sample units that are the object of scientific interest. Thus, the populations of young people and adolescents have attracted the attention of recent international studies (Zheng & Cheok, 2011, Jung Lee, 2009, Notley, 2009 (Subrahmanyam & Greenfield, 2008; Subrahmanyam and Lin, 2007; Subrahmanyam, Greenfield, and Tynes, 2004) which approach two key questions: the frequency these networks are used and the motivations for use. These researchers justify the relevance of studying this population sector based on the fact that young people increasingly prefer to express themselves through virtual communication systems while social networks are becoming more and more extensive. On the other hand, studying the social networks used by young people is especially relevant due to the fact that they favour these communication forms over other more traditional means as they offer direct personal contact.

Recently, Zheng and Cheok (2011) analysed young people's use of social networks and suggest that it is necessary for this type of information to be updated given the rapid changes these technologies generate. While in 2008 only 30% of the young people from Singapore made use of social networks, by 2011 99% of young people between 7 and 24 years of age had become social network users. In our study, we seek to obtain this type of information for a population of young people and adolescents who study in state-funded schools in Andalusia (Spain).

Another line of work focuses on the detection of factors that explain the use of social networks. In this regard, Notley (2009) identified the key factors affecting the use that young Australians and adolescents make of social networks. Through a narrative methodology, the author establishes an explanatory theoretical model composed of four dimensions: personal interests, necessities, relationships and technological competencies.



(Notley, 2009: 1214).

This research studies the concept of social digital exclusion and inclusion, to detect sectors of young people excluded from these technologies. This same topic was approached by other authors in various geographical areas (Zheng, Flygare, & Dahl, 2009, Burrow-Sanchez & al. 2011) using a quantitative methodological focus. International scientific production prefers to identify two lines of work: the first focuses on the motivations behind social network usage from the psychological point of view. In this case, individual differences in the uses of social networks (Flygare & Dahl, 2009), motivations (Leese, 2009) and identity (Calvert, 2002) are studied. The second line of work reviews more social perspective to incorporate concepts such as social capital and/or welfare.

Complementarily to these two positions, some authors (Burrow-Sanchez, Donnelly, Call & Drew, 2011) indicate the need to research social networks from a holistic perspective, establishing relationships between the psychological, social and cognitive dimensions. In this regard, some studies (Bianchi & Phillips, 2005; Eastin, 2005; Lin, 2006; Subrahmanyam, Smehal, and Greenfield, 2006; Valkenburg & Peter, 2007) show that young people's online social communication is influenced by the perception of their identity and self-esteem, as well as social compensation and environment. On the other hand, Subrahmanyam & col. (2006) research the self-construction of adolescent identity within the context of on-line social communication, establishing relationships between identity and social behaviour.

Furthermore, this connection between personal psychological characteristics and social behaviour was the object of the work by Gross (2004); Williams and Merten, (2008), who concluded that although extroverts use social networks more frequently, the potential of Internet, such as anonymity, flexibility and multiple interactions, as well as languages and means of expression, stimulate introverted people to communicate with others. In contrast, Internet reduces visual and auditory signals which could alleviate the social anxiety introverted people experience to more quickly develop positive relationships with the others.

From a social perspective, the field is currently working with a number of references and constructs. Thus, the social compensation construct has recently been recaptured to explain the behaviour of young people in social networks. This construct arose in the twenties and was attributed to Kohler (1926). It translates the idea that the achievements of a group depend on the relationship of each person with other members of that group. Authors such as Chak and Leung (2004); Valkenburg and Peter (2007); Valkenburg, Peter and Schouten, (2006) incorporate this into their social network research. Other studies suggest it is a tool to facilitate social inclusion (Notley, 2009).

Current research incorporates the term «social capital» into social networks. Despite the debates generated, there is consensus that capital stock is a set of resources or benefits available to people through their social interactions (Lin, 1999). More specifically, capital stock could be understood as accessible resources integrated into the social structure, which are mobilized by individuals through intentional actions (Lin, 1999: 35). Recent studies incorporate this construct into their research into online social networks. Greenhow and Burton (2011) approach the potential of social networks in the creation of social capital. The fact that social networks –composed of groups and networks– are generally used to share, collaborate and interact with others makes this construct especially valuable as a conceptual tool to research this subject.

The lines of work and research mentioned to date place the accent on the relationship of young people with social networks, focusing basically on variables that explain why they use them.

Our contribution seeks to add to this line of work, with the main scientific objective being to learn what young people make of social networks such as MySpace, Facebook, Twitter, etc. We specifically seek to answer the following questions:

- At what age do young people begin participating in social networks and how is the intensity of use distributed according to the age groups?
- How often are social networks used?
- Are young people free to connect to the network whenever they want to?
- What are the reasons that lead them to use social networks?
- Are there differences between sexes in the use and motivations behind the use of social networks?

2. Material and methods

Data was collected using the questionnaire we designed, based on non-excluding nominal scales. The resulting scale (table 1) was created by taking the theoretical reviews (psychological and social reasons) as a reference, as well as the ideas of information technology experts, plus direct information supplied by young people in advance through open interviews about the reasons why they use social networks. Basic general information about the study sample was collected: sex, age, nationality, type of school, educational level and year.

Questionnaire items were designed to collect information about frequency of use and reasons why they connected to the social network. The following table shows the items included.

Age when you started using the social network:	
Frequency of use: <input type="checkbox"/> Daily <input type="checkbox"/> A few days a week <input type="checkbox"/> A few days a month <input type="checkbox"/> Occasionally	
Can you connect whenever you want? <input type="checkbox"/> Yes <input type="checkbox"/> No	
MOTIVATION TO USE SOCIAL NETWORKS	
To keep in contact and share experiences with my friends	
To make new friends	
It makes me feel good when I'm sad	
I like knowing what my friends say about the photos I upload, our experiences...	
I like knowing I am liked by my friends and how they appreciate me	
I can be more sincere with my friends than when I'm with them	
The network gives me the possibility of exploring and doing things that I would not do otherwise	
Social networks are not only places where we can meet, but rather they are a way of life	
Other uses (Please specify):	

Table 1. Questionnaire items used to collect information.

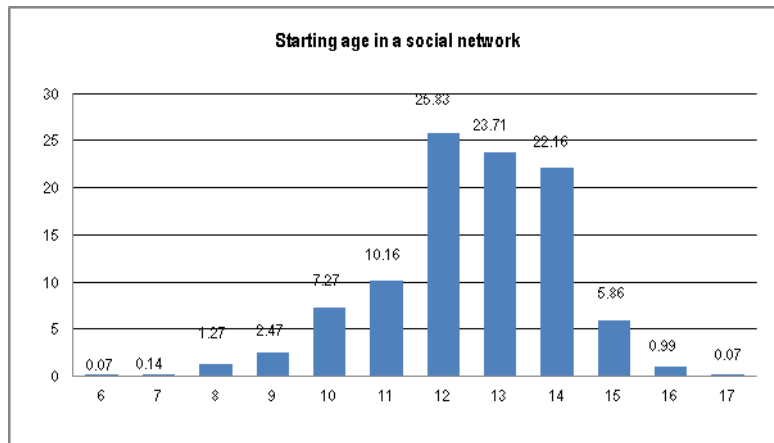
The initial version of the questionnaire was reviewed by a panel of experts (N=8) all of whom were specialist researchers in Educational Technology. This review improved the items proposed, both in content and drafting. Subsequently, an electronic version of the questionnaire was designed for completion via Internet. The schools participating in this study granted consent for the participation of their students. Students included in the sample were informed about the study and were requested to participate. The estimated completion time was 10 minutes.

The data presented in this study is representative of young Andalusians and makes up part of the Research for Excellency, financed through a public summons, titled «Scenarios, digital technologies and young people in Andalusia», which is currently on-going. Of the total population of young Andalusians, which included 283,423 subjects, a sample of 2,509 subjects was obtained using stratified probabilistic sampling and conglomerates, with an estimated level of confidence of 95% and a sampling error of $\pm 2\%$. We worked with a real sample of 1,487 young people from the Region of Andalusia between 13 and 19 years of age, with 15 years being the average age (this represents a confidence level of 95% and a sample error of $\pm 2.3\%$ for the total population). The discrepancy between the theoretical and real sample is due to incidences that frequently converge in field work: null questionnaires, questionnaires with incomplete items, forgetting the identification, etc. Participants in this research studied at IT centres (schools integrating Information Technologies into the curriculum). This sample includes 49.5% boys and 50.5% girls. Most subjects included were studying secondary education: 54.14% in 4th ESO and 44.12% in 3rd ESO (years 11 & 10 of secondary school, respectively).

3. Analysis and results

For the first objective of our research –identify the age when young people begin using social networks– the data obtained indicates that the average age is approximately 12 and a half years, the median being 13 and mode 12.

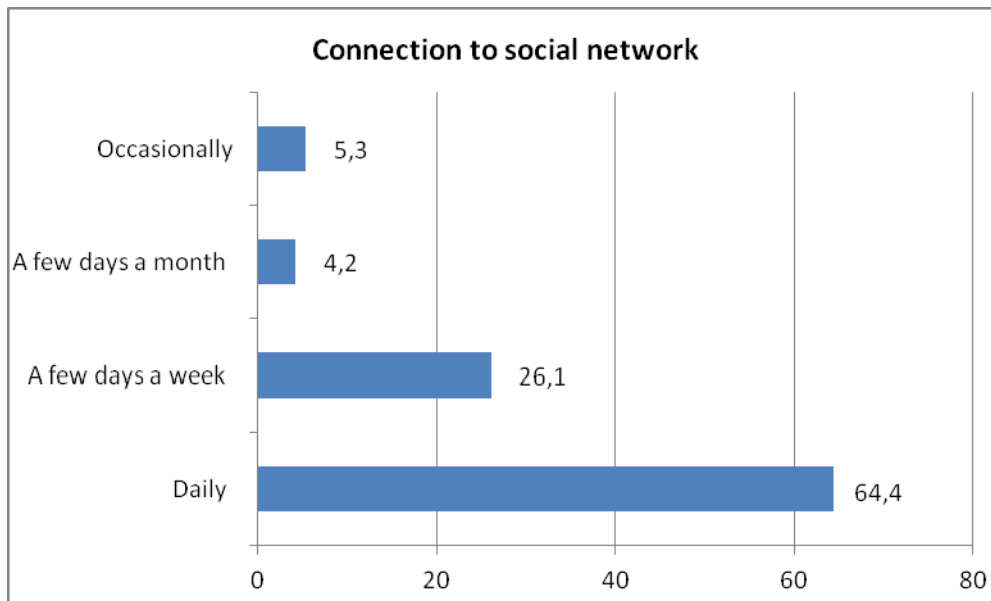
Graph 1 illustrates this variability. As indicated, 71.7% of Andalusian youth join social networks between the ages of twelve and fourteen; a percentage that reaches 94.99% upon expanding the age range from 10 to 15 years old. The remaining 5% is distributed between prior periods that range from 6 to 10 and another later section, ranging from 15 to 17 years of age.



Graph 1. Ages when young people join social networks, in percentages.

Therefore, this indicates that it is, in fact, during the onset of puberty when young people begin online social relationships. This data coincides with psychological developmental theories that consider this stage the beginning of their social relationships and the value given to friendship among peers. However, a limited percentage begins at an earlier or later age.

The data obtained about the frequency of social network use indicates that 64.4% of all young people connected to social networks daily; this added to the 26% who connect a few days a week accounts for a total of 90% of young Andalusians who habitually use social networks. These results coincide with those obtained in other recent studies into the population of young Andalusians (Gomez, Roses & Farias, 2012), which indicated that 91.2% of young university students, with an average age of 21 years, use social networks. It also coincides with international studies by Zheng and Cheek, (2011) in which the percentage is even higher – 99%; or related studies by Greenhow and Burton (2011), referring to various international populations, around 90%. Graph 2 indicates the percentages obtained in all the response ranges.



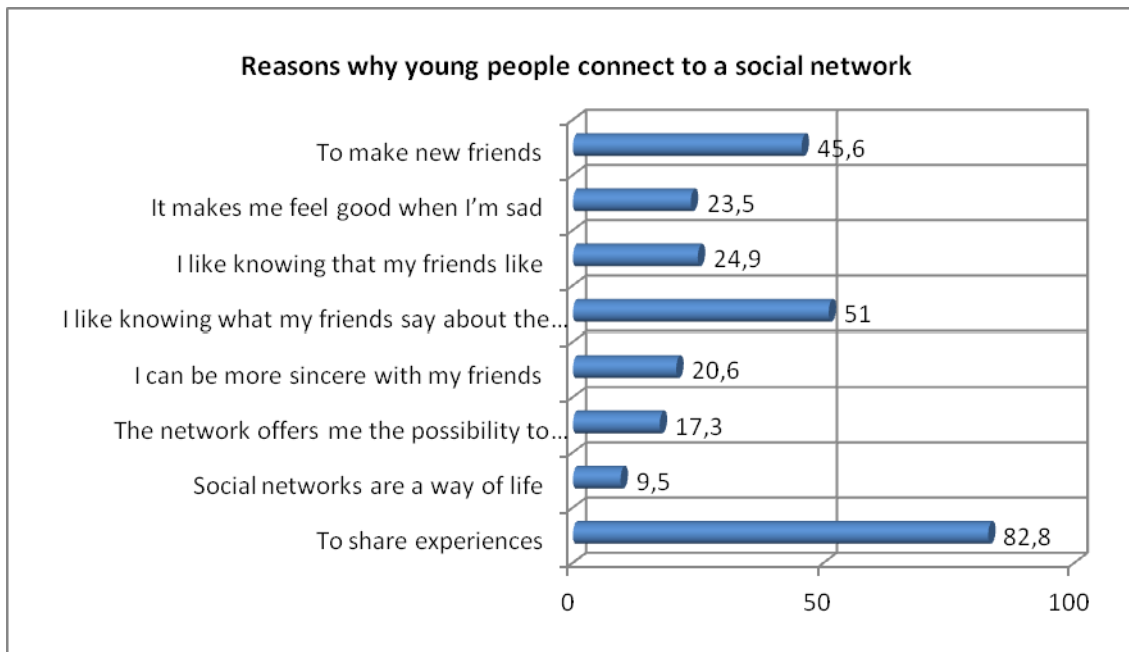
Graph 2. Frequency percentages when young people connect to Social Networks.

Despite the high percentage identified, almost 10% fail to use these resources with any degree of frequency. A possible explanation may be due to paternal or family control, or the digital gap. However, this small percentage of non-users was also indicated in a previous study when referring to a university population (Gómez, Roses & Farias, 2012). This coincidence leads us to believe that the digital gap may be a plausible explanation, together with other factors such as the origin of the subjects, gender, or their personal characteristics, etc.

Analysing the degree of family control could shed light on this variant; thus we researched this question further. The results obtained indicate that more than three quarters of all young people connect to social networks whenever they want to, with no limitations being imposed by the family; 22.3% appear to have certain limits. This would explain the previous 10% and would leave another 12% who break family rules in this regard.

Consequently, we could state that 94.99% of young Andalusians connect to social networks at an age ranging from 10 to 15 years, and that 90% routinely use social networks. Only 22.3% have rules for use; the rest access the network with no limits of any type.

The high percentage of social network usage by Andalusian adolescents led us to think about another important question: What drives this use? The results obtained are presented in graph 3:



Graph 3. Reasons identified by young people for connecting to a social network, in percentages.

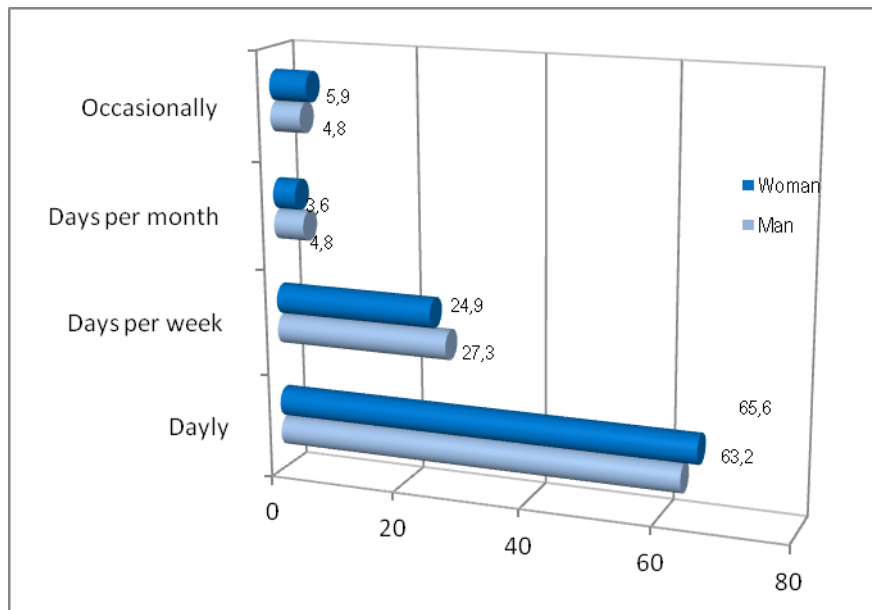
As seen in graph 3, the main reason is «to share experiences with friends» (82.8%), followed by «knowing what my friends say about the photos I upload and our experiences» (51%) and «make new friends» (45.6%). These three reasons have a common denominator: cover young people's social need to interact with peers. This is followed by 20-25% in which the responses are linked to the more psychological and affective aspects; for example «I am satisfied to know that my friends like and appreciate me» (24.9%), «it makes me feel good when I am sad» (23.5%) and «I can be more sincere with my friends than when I am with them» (20.6%).

The least indicated reasons are: «the network gives me the possibility to explore and do things that I would not do otherwise» (17.3%), followed by: «social networks are a way of life» (9.3%). These last two options could be understood as an intense level of use of social networks, or an innovative and creative use which may be the reason why they were chosen less.

In summary, we can conclude that there are two basic motivational areas why youth use social networks: one social –covering 50% of the population– and another psychological which accounts for 20% of the sample studied. These two dimensions cover young people's basic needs during this developmental phase. These results are coherent and coincide with the current lines of research and conclusions reached. International studies show that young people's on-line, social network behaviour is motivated by factors such as self-identity, self-confidence, social compensation and social environment (Williams & Merten, 2008; Bianchi & Phillips, 2005; Eastin, 2005; Lin, 2006; Subrahmanyam, Smehal & Greenfield, 2006; Valkenburg & Peter, 2007).

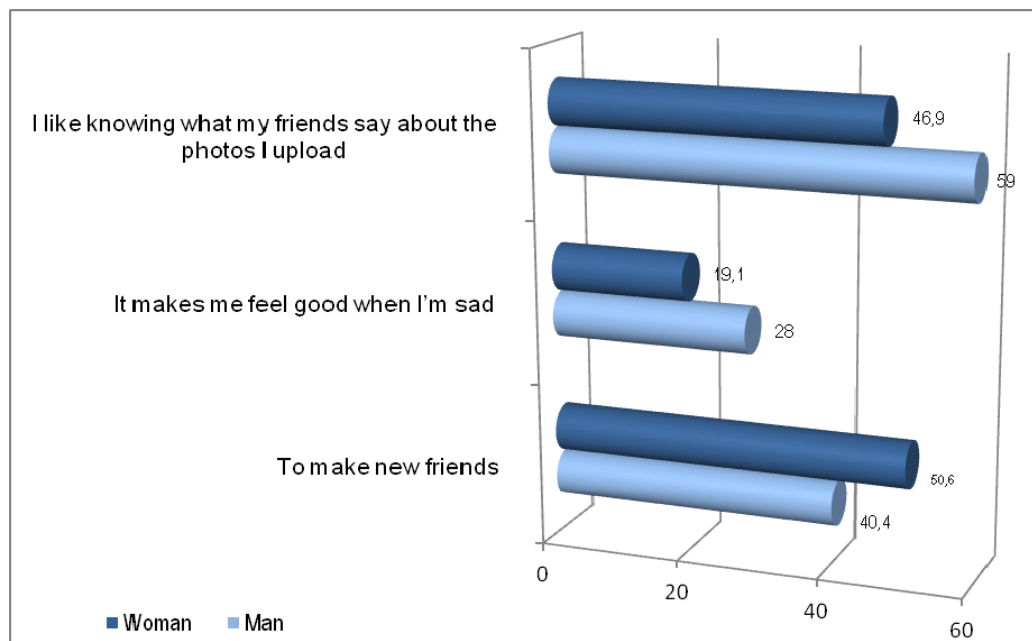
Given the strong impact of the sex variable in a large proportion of the current research, we proceeded to study whether this variable constitutes a significant differential factor, both in the frequency of use of social networks and in the usage types and motivations for use. Given the nominal scale of data collection used, we applied the χ^2 for contingency to test these hypotheses.

The results obtained indicate that there are no significant differences between sexes when it comes to the frequency of social network usage ($\chi^2=2.005$; $p=.367$). The correlation between the sex variable and uses of social networks is not significant either (contingency Coefficient=.046 $p=.367$). Graph 4 illustrates the positions of both genders on this question. This visualization shows the similarity of behaviour between sexes.



Graph 4. Frequency of use of virtual social networks based on gender.

Nevertheless, the differences between sexes may lie with uses rather than frequency, in which case, we decided to statistically compare whether there were differences in the reasons for connecting to social networks. The results obtained indicate that there are significant differences in three variables: to make new friends ($\chi^2=10.033$; $p=,002$), with a significant correlation (contingency Coefficient= $.102$ $p=,002$); it makes me feel good when I am sad, ($\chi^2=13.267$; $p=,004$), with a significant correlation (contingency Coefficient = $.117$ $p=,004$); and I like knowing what my friends say about the photos that I upload ($\chi^2=13.920$; $p=,00$), with a significant correlation (contingency Coefficient= $.120$ $p=,000$). These differences are presented in graph 5:



Graph 5. Variables where there are significant difference between genders.

Graph 5 shows that girls use social networks to make friends to a greater extent than boys. However, boys surpassed girls in the reasons: I like knowing what my friends say about the photos I upload and it makes me feel good when I am sad. Therefore, these results seem to indicate that in the case of boys, the motivation is basically psychological in nature and for personal recognition, while a relational/social use prevails in girls. These results could be interpreted from the perspective of gender roles and/or gender psychology. Previous works (Ertl & Helling, 2011; Lawlor, 2006) show the relevance of the gender variable in the study of young people's behaviour in social networks.

There is another possible interpretation of the results from the social capital theory. For young people, on-line social networks are a source of resources used to fulfil needs, both psychological and social. However, the differences between genders in these variables demonstrate that they play a compensatory role; males generally use them to cover emotional aspects and reinforce their self-esteem, while for young women, the relational function prevails

4. Discussion and conclusions

The results obtained in this work allow us to verify, and therefore establish the main conclusions of the study, which is that 94.99% of young Andalusians connect to social networks at an age ranging from 10 to 15 years. 90% routinely use social networks. Only 22.3% have some rules for use; the rest have unlimited access. The driving force behind this use falls between two extremes: seeking to cover the social need young people have to share experiences, and activity being recognised by others, thus establishing new social relationships.

Regarding young people's motivations, these are preferably of an individual nature, aimed at covering an emotional dimension; the social network is a virtual space that is emotionally gratifying and allows young people to express their intimate feelings through the perception others have of them. Comparing these results based on sex, we saw that there are no differences regarding the frequency of use; however, there are differences with regards to the reasons behind this use. Three variables are statistically significant: «I like knowing what my friends say about the photos that I upload», «it makes me feel good when I am sad» and «to make new friends». In the case of Andalusian girls, the fundamental reason for use is social and relational (to make new friends), while for boys, it is more individual in nature, aimed at reinforcing internal variables of the subject as an individual, specifically reinforcing self-esteem (I like knowing what my friends say about the photos that I upload) and emotional (It makes me feel good when I am sad). These results fit the model by Notley (2009) to the extent that the motivations to use social networks falls within the sphere of personal interests, as well as social needs of a relational nature. But they are also in keeping with other international studies such as those by Costa, (2011), Flores, (2009) and De Haro (2010), which impact on the social and personal value of social networks for young people.

These results could also be interpreted in the light of the three constructs that have supported the realization of this research: social compensation, social capital, and online atmosphere.

From the «social compensation» construct, given the extensive use of social networks by young Andalusians from a very early age, the results obtained indicate the potential that this resource could have to train young people in social construction and inclusion processes. Today's society demands that young people develop collaboration-related skills; from this perspective, social networks are a platform to research how group achievements are obtained, starting with the relationship established by each individual with other members of the group. In this sense, it would connect with the work by Watts, (2006) and Christakis and Fowler (2010). This aspect has immense prospective value when faced with how to educate young people to attain achievements, both personal and professional, in group construct processes and finally, social improvement.

This result, verified in our study, is directly related to another construct that has been the basis for the data obtained, which is social capital. In this regard, social networks not only «train» young people in group processes aimed at attaining achievements, but they also become resources where each one «looks for or uses» what they need at any given moment. This result is not only important in training social capital, as suggested by Greenhow and Burton (2011), but also, it can be an important educational resource to favour equality and the development of more inclusive schools (Notley, 2008).

Our results coincide with other international studies (Rudd & Walker, 2010). This research indicates that young people make extensive use of the 2.0 technologies, essentially relating with their peers and channelling their opinions. However, there is a minority of young people who do not use these technologies, which must be explained by economic factors or other barriers. Thus, the resulting recommendations are of interest to agencies dedicated to understanding young people's behaviour in social networks, and who are working with inclusion. The study by Notley (2009) clarifies this question.

There is also international data about the spheres where young people make use of social networks. It has been concluded that most young people use their social networks outside of school. Based on such results, the recommendations for professionals are aimed at promoting greater informal development of «e-skills». These practices are seen as beneficial for education in democratic citizenship values, since they facilitate knowing the opinions of young people, who in turn become active agents, not only in the local policies, but also at the regional and national level, thus reinforcing participative democracy. In this regard, there are already a number of good practices, as the idea is to incorporate these technological resources into the organizational structures of educational centres to grant students a voice through a means that is a standard aspect of their communication, while at the same time breaking down personal barriers found at that age: shyness, insecurity, embarrassment, etc. Recent studies (Gil de Zúñiga, Jung & Valenzuela, 2012) into how social networks can contribute to democratic processes and the creation of social capital. In conclusion, the ideas expressed herein back up the claim that social networks are of major educational value in addition to being an important resource for education, both in personal and social values, as indicated by De Haro (2010) and Bryant (2007). Although research into these subjects is still scarce, it could shed light on the processes that shape social interaction as the basis for personal and social improvement.

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References

- Bianchi, A. & Phillips, J. (2005). Psychological Predictors of Problem Mobile Phone Use. *CyberPsychology & Behavior*, 8 (1), 39-51.
- Boyd, D. & Ellison, N. (2008). Social Network Sites: Definition, History, and Scholarship. *Journal of Computer-Mediated Communication* 13, 210-230.
- Burrow-Sanchez, J., Call, M., Zheng, R. & Drew, C. (2011). Are Youth at Risk for Internet Predators?: What Counselors Need to Know. *Journal of Counseling and Development*, 89 (1), 3-10.
- Bryant L. (2007). Emerging trends in social software for education. In Becta. *Emerging Technologies for learning*, 2. Coventry: Becta.
- Calvert, S.L. (2002). Identity Construction on the Internet. In S.L. Calvert, A.B. Jordan & R. Cocking (Eds.), *Children in the Digital Age: Influences of Electronic Media on Development* (pp. 57-70). Westport, CT: Praeger.
- Chak, K. & Leung, L. (2004). Shyness and Locus of Control as Predictors of Internet Addiction and Internet Use. *CyberPsychology & Behavior*, 7(5), 559-570.
- Costa, J. (2011). Los jóvenes portugueses de los 10 a los 19 años: ¿qué hacen con los ordenadores? *Teoría de la Educación. Educación y Cultura en la Sociedad de la Información*, 12 (1), 209-239.
- Christakis, N. & Fowler, J. (2010). *Conectados. El sorprendente poder de las redes sociales y cómo afectan nuestras vidas*. Madrid: Taurus.
- Eastin, M.S. (2005). Teen Internet Use: Relating Social Perceptions and Cognitive Models to Behavior. *CyberPsychology & Behavior*, 8 (1), 62-75.
- Ertl, B. & Helling, K. (2011). Promoting Gender Equality in Digital Literacy. *Journal Educational Computing Research*, Vol. 45(4) 477-503,
- De Haro, J.J. (2010). *Redes sociales para la educación*. Madrid: Anaya.

- Flores, J.M. (2009). Nuevos modelos de comunicación, perfiles y tendencias en las redes sociales. *Comunicar*, 33, XVII, 73-81.
- Gil de Zuñiga, H., Jung, N. & Valenzuela, S. (2012). Social Media Use for News and Individuals' Social Capital, Civic Engagement and Political Participation. *Journal of Computer-Mediated Communication* 17, 319-336.
- Gómez, M., Roses, S. & Farias, P. (2012). El uso académico de las redes sociales en universitarios. *Comunicar*, 38, XIX, 131-138.
- Greenhow, C. & Burton, L. (2011). Help from my 'Friends' Social Capital in the Social Networks Site of Low-Income Students. *Journal Educational Computing Research*, 45 (2), 223-245.
- Gross, E.F. (2004). Adolescent Internet Use: What We Expect, What Teens Report. *Applied Developmental Psychology*, 25, 633-649.
- Hrastinski, S. (2009). A Theory of Online Learning as Online Participation. *Computers & Education*, 52(1), 78-82.
- Jung Lee, S. (2009). Online Communication and Adolescent Social Ties: Who Benefits More from Internet use? *Journal of Computer-Mediated Communication*, 14, 509-531.
- Kleitman, S. & Stankov, L. (2007). Self-confidence and Metacognitive Processes. *Learning and Individual Differences*, 17(2), 161-173.
- Lawlor, C. (2006). Gendered Interactions in Computer-mediated Computer Conferencing. *Journal of Distance Education*, 21(2), 26-43.
- Leese, M. (2009). Out of Class - Out of Mind? The Use of a Virtual Learning Environment to Encourage Student Engagement in Out of Class Activities. *British Journal of Educational Technology*, 40 (1), 70-77.
- Lin, H.F. (2006). Understanding Behavioral Intention to Participate in Virtual Communities. *CyberPsychology & Behavior*, 9(5), 540-547.
- Lin, N. (1999). Building a Network Theory of Social Capital. *Connections*, 22 (1), 28-51.
- Mottram, A.J., & Fleming, M.J. (2009). Extraversion, Impulsivity, and Online Group Membership as Predictors of Problematic Internet Use. *CyberPsychology & Behavior*, 12 (3), 319-321.
- Nagel, L., Blignaut, A.S. & Cronje, J.C. (2009). Read-only Participants: A Case for Student Communication in Online Classes. *Interactive Learning Environments*, 17(1), 37-51.
- Notley, T. (2009). Young People, Online Networks, and Social Inclusion. *Journal of Computer-Mediated Communication*, 14, 1208-1227.
- Notley, T. (2008). Online Network Use in Schools: Social and Educational Opportunities. *The Journal of Youth Studies Australia*, 27, 20-29.
- Schellens, T., Van Keer, H., Valcke, M. & De Wever, B. (2007). Learning in Asynchronous Discussion Groups: A Multilevel Approach to Study the Influence of Student, Group and Task Characteristics. *Behavior & Information Technology*, 26(1), 55-71.
- Sheeks, M.S. & Birchmeier, Z.P. (2007). Shyness, Sociability, and the Use of Computer mediated Communication in Relationship Development. *CyberPsychology & Behavior*, 10 (1), 64-70.
- Subrahmanyam, K. & Greenfield, P. (2008). Online Communication and Adolescent Relationships. *Future of Children*, 18(1), 119-146.
- Subrahmanyam, K. & Lin, G. (2007). Adolescents on the Net: Internet Use and Well-being. *Adolescence*, 42, 659-667.
- Subrahmanyam, K., Greenfield, P. & Tynes, B. (2004). Constructing Sexuality and Identity in an Internet Teen Chatroom. *Journal of Applied Developmental Psychology*, 25, 651-666.
- Subrahmanyam, K., Smehal, D., & Greenfield, P. (2006). Connecting Developmental Constructions to the internet: Identity Presentation and Sexual Exploration in Online Teen Chat Rooms. *Developmental Psychology*, 42(3), 395-406.
- Valkenburg, P.M. & Peter, J. (2007). Preadolescents and Adolescents Online Communication and their Closeness to Friends. *Developmental Psychology*, 43, 267-277.
- Valkenburg, P., Peter, J., & Schouten, A.P. (2006). Friend Networking Sites and their Relationship to Adolescents Well-being and Social Self-esteem. *CyberPsychology & Behavior*, 9(5), 584-590.
- Watts, D. (2006). Seis grados de separación. La ciencia de las redes en la era del acceso. Barcelona, Paidós.
- Williams, A.L., & Merten, M.J. (2008). A Review of Online Social Networking Profiles by Adolescents: Implications for Future Research and Intervention. *Adolescence*, 43, 253-274.

- Zheng, R. & Cheok, A. (2011). Singaporean Adolescents' Perceptions of On-line Social Communication: An Exploratory Factor Analysis. *J. Educational Computing Research*, Vol. 45(2) 203-221.
- Zheng, R., Flygare, J., & Dahl, L. (2009). Style Matching or Ability Building? An Empirical Study on FDI Learners' Learning in Well-structured and Ill-structured Asynchronous Online Learning Environments. *Journal of Educational Computing Research*, 41(2), 195-226.