



Digital reality in Compulsory Secondary Education: uses, purposes and profiles in social networks

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Complete List of Authors:	Anzano-Oto, Silvia; University of Zaragoza Faculty of Human Sciences and Education Vázquez-Toledo, Sandra; University of Zaragoza Faculty of Education, Education Sciences Latorre-Coscolluela, Cecilia; University of Zaragoza Faculty of Human Sciences and Education, Education Sciences
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Digital reality in Compulsory Secondary Education: uses, purposes and profiles in social networks

Daily lives of adolescents have changed significantly with the incorporation of social networks. Therefore, this quantitative study aims to analyze which social networks they use, to find out the predominant type of use they make of them and to explore their connectivity profile. To carry out the study, a sample of 850 Spanish students in Compulsory Secondary Education was analyzed. The results show that adolescents spend an excessive number of hours on social networks, with little parental supervision. They mainly use WhatsApp, Instagram and Youtube for social purposes. It is concluded that adolescents in Compulsory Secondary Education, outside school hours, and with their smartphones, spend a large part of their day on social networks, suppressing other kind of activity.

Keywords: social networks; teenagers; Secondary School; profile; habits.

Introduction

Recently, the use of social social networks has increased considerably and they have become a very popular medium all across the world (de Calheiros Velozo and Stauder; Percia David et al.). These tools are fundamental in adolescents' lives because they allow them to create their identity and socialize, two crucial aspects at this stage of development (Michelli). Therefore, Coyne and others note that, nowadays, the use of social networks by this population is "a normalized part of the development". So much so that Generation Z (born from the mid-1990s to 2009) (Álvarez et al.), in other words, Compulsory Secondary Education students are characterized by the high intensity of their use of social networks in which they share content and communicate in real time (Espiritusanto; García-Ruiz et al.; Quintana). Taking into account the previously mentioned precedents, the objectives of this research are: to analyze which social networks are used by Compulsory Secondary Education adolescents, to find out the predominant type of use they make of them, and, finally to explore the connectivity profile of the youngest users and to investigate the perceptions of adolescents about their parental control.

The most popular social networks and adolescents' connectivity profile

Currently, society reveals the existence of WhatsApp, Instagram, Snapchat, Twitter, Facebook, TikTok, Youtube, Pinterest (Interactive Advertising Bureau (IAB); Varona-Fernández and Hermosa-Peña), and new ones that are incorporated from time to time as they are created. Therefore, society offers a wide range of social networks that to be used.

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3 In this study, each adolescent can decide which one want to use and the purpose for which
4 they use it.
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8 The use of social networks is influenced by the age ranges of the population, since
9 adolescents and adults have different social network preferences, considering their
10 different interests. Among the young population, the social network Facebook was the
11 most used and popular (Frison and Eggermont; Mascheroni and Ólafsson), although it
12 may also be because Facebook is the most studied social network (Rozgonjuk et al.).
13 Micheli indicates that, after this one, there were Instagram, WhatsApp and Snapchat.
14 Whereas Knight and Weedon; Stevens et al., together with Facebook, include WhatsApp
15 as the most used social network. However, Marengo and others' research disagree with
16 these data, providing that some of the social networks that stand out for their high usage
17 include Instagram and Snapchat, which surpass Facebook among the adolescent
18 population. According to Ofcom among the adolescents aged 12 to 15, Instagram was the
19 social network most likely to be used, followed by Snapchat and Facebook too. In
20 particular, in the United States, Instagram is the social network most used by adolescents
21 (Piper Jaffray). To this, Anderson and Jiang add YouTube, and again, Snapchat as the
22 most popular social networks. But, once again, as collected by Ricoy and Martínez-
23 Carrera study, the most common social network among 12-17 aged adolescents is
24 Instagram because of its multimedia format and possibility of following profiles and
25 sharing it. In addition, it is one of the most popular and downloaded all across the world.
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40 This popularity and preference for the use of one social network or another seems
41 to vary according to the geographical areas studied. Precisely, the social networks
42 Facebook and Snapchat are surpassed by the use of TikTok by teenagers aged 13 to 17 in
43 different countries around the world. In a recent study, in 2022, Vogels and others
44 obtained that adolescents prefer the social network Tik-Tok, Instagram and Snapchat
45 respectively. While Facebook has declined in this population sector. However, if we focus
46 on our country, Spain, the data does not resemble the previous ones. In this case, Snapchat
47 is the preferred social network of young people between 13 and 17 years old, followed
48 by Facebook and, in third place, TikTok. In contrast, Twitter is the social network least
49 used by these Spanish teenagers (MarketingNews). Nevertheless, Varona-Fernández and
50 Hermosa-Peña found in their study that Spanish teenagers tend to connect more to
51 Instagram, WhatsApp and Snapchat, respectively.
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3 The attractive and dynamic format that social networks possess make their users
4 stay connected to them for a considerable amount of time. According to Twenge &
5 Spitzberg (2020) teens are increasing the time that they are connected. Specifically, in the
6 study by Ballesta and others, half of their Compulsory Secondary Education adolescents
7 spend less than one hour on social networks any weekday, others connect to them between
8 1 and 3 hours, 14% stay more than 3 hours and a lower proportion includes those who do
9 not spend any time on these media. If we focus on the weekend, the time spent on social
10 networks increases, especially the "more than 3 hours" dedication, which doubles its
11 response rate compared to the one on a working day. Likewise, in another recent study,
12 Dans and others point out that Compulsory Secondary Education students connect to
13 social networks more than 6 hours per a day from Monday to Thursday and in the
14 weekend the number of students that connect so many time. These conclusion agrees the
15 previously mentioned research. All these hours spent on social networks, in most cases,
16 is time that is subtracted from training (for example, from studying), sleeping and/or
17 playing sports (Kaur et al.; Megías and Rodríguez).

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20 In social networks, there are different perceptions about their security but being
21 always together with privacy (Ha and Pan), very important issues. Therefore, young
22 people should be very aware of it and thus avoid risks. This security is commonly affected
23 when young people who create an account on a social network falsify their age, since
24 some social networks require them to be 13 years old (Lenhart et al.). In addition, the
25 privacy settings of the account must be taken into account because confidential
26 information such as personal data (real or fictitious name, profile photo, etc.) is exposed
27 by default in your profile and it is a risk (Khan et al.; Yokotani and Takano). This profile
28 can be public, so that anyone with an account in that social network can see it, or private,
29 so that only those who are allowed to check it can do it. In this way, it is "friends", i.e.
30 more trusted people who view the posts, although sometimes adolescents accept friend
31 requests from strangers (Lenhart et al.; Longobardi et al.).

Adolescents' social networks uses

Adolescents have "grown up" with Internet (Webster et al.) and, consequently, social networks are an essential tool for social relationships, keeping informed, and entertainment (Ni et al.).

In education, social networks are not yet a very notable aspect (Abelairas-Etxebarria and Mentxaka Arana) although they are gradually being implemented (Maqableh et al.). These tools allow young people to acquire new knowledge, and additionally, find and exchange information and materials related to the subjects (Badenes-Ribera et al.). They are being able to keep in touch with classmates during non-school hours and to carry out teamwork (Gupta and Bashir).

As regards the social scope, social networks that "have shaped online communication" (Hayes et al. 2), allow young people to keep their contacts and even expand the list of friendships (Longobardi et al.; Rubio-Romero et al.; Vizcaíno-Laorga et al.). Because they can chat, interact, share their interests while strengthening their relationship (Balakrishnan and Griffiths; Bányai et al.; Boursier and Manna; Boursier et al.; Kircaburan and Griffiths; Monacis et al.). Likewise, these media offer them the opportunity to seek and exchange any kind of information, express themselves and comment, and/or receive advice from their followers with whom they can make their identity (Longobardi et al.). Social media are so important that one of the main reasons why adolescents use it is specifically to communicate and know about other people's lives (Malik et al.).

Follow others activities is a simple and entertaining process, since on social networks such as Instagram, adolescents share photos and videos of their daily lives. Some of these publications remain in time on their profiles, and others are temporary, which are the well-known "stories" that disappear after 24 hours (Longobardi et al.). In social networks, followers can view publications, comment about their, "like" it, and even share the content published by the users (Longobardi et al.). Not all activities have to do with posting images; young people can also play games, watch videos or listen to music (De Calheiros Velozo and Stauder).

Additionally, adolescents show how important it is for them to be informed about what is happening in society (Catalina García et al.). In these cases, social networks care as a source of information since they read the news posted on them, share them in addition to the fact that, if they are interested in a particular topic,

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3 they can activate to be notified on their mobile every new news item that is
4 incorporated on that issue (Catalina García et al.; Gupta and Bashir).

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6 Curiously, all the activities that take place in social networks can be
7 categorized into two major groups. In other words, you can take part in social
8 network in an active or passive way. The first type refers to activities in which the
9 user interacts with others on the social network, that is, there is communication
10 (Verduyn et al.). In this case, the adolescent must be able to manage responses
11 without feeling social pressure and remain constantly connected (Busch and
12 McCarthy). The passive use consists on viewing the content that other people
13 display on the social network, without any communication between users
14 (Krasnova et al.; Matook et al.; Shaw et al.).
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24 **The parental role in the digital world: mediation with their adolescent kids**

25 Active parental mediation, through dialogues or discussions about the uses of social
26 media to communication, helps adolescents to be critical of the content they find
27 and their own actions (Sánchez-Valle et al.; Shin and Kang). As Nikken declares,
28 parental mediation is defined as a set of strategies developed by parents. For Sasson
29 and Mesch mediation are the variations in the interactions between parents and sons
30 or daughters about the media. However, in order to be efficient enough, this process
31 should be focused specially on the specific topic of social networks and how they
32 work. This would encourage adolescents to take more proactive actions in these
33 sites (Youn and Shin).
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41 Parents are concerned about the consequences of their children's exposure
42 to social media (Livingstone and Blum-Ross), even more so if they are minors
43 (Mustaqimet al.). However, this parental mediation often falls under obstacles, such
44 as the space for accessing social networks, as they usually connect from their
45 bedrooms (Sasson and Mesch). The use of more personal places for social
46 networking stop the implementation of appropriate strategies to monitor their
47 children's social networking activities by parents (Sasson and Mesch). That is,
48 young people access from different devices, tablets or smartphones, but away from
49 shared family places and taking advantage of privacy (Len-Ríos et al.).
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57 In addition to this barrier to effective parental supervision, parents' lack of
58 technological skills in social media use prevents them from monitoring their
59 children's social media activities and it is sometimes misinterpreted as parents not
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3 exercising sufficient control over, supervising or guiding these activities (Sasson
4 and Mesch). In contrast, some research (Anderson; Symons et al.) shows that both
5 fathers and mothers (and their relationship with social networks) influence
6 adolescent parenting patterns and they are therefore part of this mediation. These
7 studies show that fathers are more likely to supervise the sites their children visit
8 and therefore seem more committed to monitoring their children's actions online,
9 while mothers are in charge of the restrictions on the content to which their children
10 have access. These parental mediation situations create uncertainty for adult
11 mediators (Livingstone et al.) but they nevertheless but nevertheless strive to help
12 adolescents overcome any online risks (López de Ayala et al.; Shin and Lwin). That
13 is occurred because the received advice to guide their children to behave
14 appropriately in this digital world is insufficient to achieve their children's growing
15 needs (Livingstone). Thus, research suggests that parents' digital literacy is
16 necessary to mediate more effectively in the face of their offspring's greater mastery
17 of digital media (Livingstone et al.).
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29 On the other hand, there are different parental perceptions regarding
30 mediation because, according to the study of Anderson, the youngest parents are
31 the ones who most monitor the activity of their adolescent on social networks.
32 However, it is also stated that the adolescent does not accept the agreements or rules
33 established by their parents for the use of these media what mediation decreases
34 (Symons et al.). In this process of constant negotiation, parents, as their children
35 grow up, give them greater autonomy and privacy, although it is natural not as
36 much as the adolescent would like (López-de-Ayala et al., Livingstone et al.).
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43 It is clear that adults are role models for children, and so parental overuse
44 of mobile phones (Terras and Ramsay) is positively associated with addiction in
45 their offspring (Fong-Ching et al.). This may result in dangerous habits for
46 adolescents, which their parents wish to avoid, through parental mediation
47 (Anderson; Shin and Lwin). These studies indicate two typologies of mediation:
48 restrictive mediation and instructive or active mediation. Livingstone and others
49 add two more types of mediation: participatory learning and parental controls
50 technique. In the following, each of them is briefly discussed in more detail. The
51 first type of mediation, based on the imposition of rules (Ang; Garmendia et al.),
52 consists of parents setting rules about time spent and content to be explored
53 restricting young people's exposure to risky content and interactions (Garmendia et
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3 al., 2019a; Livingstone et al.). This includes blocking the access to certain websites
4 and supervising the browsing history and restricting social interactions with visible
5 or covert rules or monitoring of activities (Anderson). On the other hand, instructive
6 or active mediation consists in parents guiding their children, explaining and
7 advising them on correct behaviour in these media through comments and
8 arguments on both sides (Shin and Lwin; Livingstone et al.). The third strategy
9 refers to participatory learning, i.e. co-learning of digital media involving both
10 parents and children in this kind of mediation experiences are shared (Blum-Ross
11 and Livingstone; Livingstone et al.). Finally, there is the technique of parental
12 controls, based on the filtering, supervising and monitoring young people's
13 activities as well as regulating access to and use of these media (Dedkova and
14 Smahel; Livingstone et al.).

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24 The use of any of these strategies, i.e. the practice of mediation by the
25 parents of adolescents, does not translate into a lower use of social networks when
26 compared to adolescents whose parents do not set limits for this activity, according
27 to data obtained in Len-Ríos and others. In the same way, it should be noted that
28 greater parental concern does not implicitly entail greater parental mediation, as it
29 may be that a third person carries out this mediation (Symons et al.).

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34 In short, most adolescents feel more competent in these digital
35 environments than their predecessors (Garmendia et al.), as it is precisely for
36 Compulsory Secondary Education students that these social media are part of their
37 natural context, while adults have to train every day and make a great effort to be
38 competent in the subject (Sola et al.).

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43 This self-perception of their competences in the use of any technological
44 tool, added to the need of 12-year-old adolescents to start socializing and to achieve
45 greater social presence (García-Ruiz et al.), leads to the beginning of a continuous
46 participation in social networks that offer a multitude of possibilities. In order to
47 understand the social network activity carried out by these young users, this study
48 aims to find out which social networks are used by Compulsory Secondary
49 Education adolescents, to find out the predominant type of use they make of them
50 and, finally, to explore the adolescents' connectivity profile.

51 52 53 54 55 56 57 **Methods**

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59 This work has been developed using a descriptive quantitative approach for which data
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3 collection has been used to measure the variables in a specific context (Sáez-López). This
4 type of descriptive study, which is very common in educational research, is carried out
5 through surveys or observation (Sáez-López). To obtain objective results (without the
6 influence of the researcher), statistical methods have been used in their analysis. This
7 process has made it possible to draw conclusions from the research that will contribute to
8 the generation of new knowledge (Hernández et al.).
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14 *Sample*

16 The population subject to analysis was the adolescents studying Compulsory Secondary
17 Education at 13 schools in the province of Huesca (Spain). These students aged between
18 12 and 17 years old. For this purpose, participant selection was carried out via simple
19 random sampling, with the school being considered as a unit. A total of 850 responses
20 were attained from secondary school students in the province of Huesca, from 13
21 secondary schools. For a confidence level of 95%, the margin of error was 3.19. Table
22 3.1. presents the socio-demographic and personal variables of the students.
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29 As can be seen in Table 3.1., a high proportion (89.3%) of the pupils surveyed
30 studied in public schools, compared to 10.7% who were studying in private-subsidised
31 schools. Also, more than half of the participants studied in urban areas (63.2%) and the
32 rest of the students (36.8%) in rural areas. With reference to the academic year of
33 Compulsory Secondary Education, 15.5% were first year students (n=132), 23.8% were
34 second year students (n=202), 28.0% were third year students (n=238) and 32.7% were
35 fourth year students (n=278). The representation of women (51.4%) and men (48.6%)
36 was very similar. As for the age of the participants, they were classified into seven
37 categories, ranging from "12 years" to "17 years", with 15, 14 and 13 years being the most
38 predominant ages of the participants. The age at which almost 10% of the participants
39 started using social networks was before the age of 10. However, the age range for starting
40 to use social networks could be set at between 10 and 12 years of age, as more than 70%
41 of the adolescents were in this age group. Of the total sample, approximately 60%
42 requested permission from their legal guardians to register on social networks as required
43 by law, while 19.2% did not do so and a similar percentage (21.9%) requested permission
44 only on some occasions to register on certain networks.
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Instrument

After reviewing literature and different data collection instruments used in other studies (Gupta and Bashir; IAB; Sabater et al.; Peris et al.), certain indicator blocks were selected to create an ad hoc questionnaire adapted to the proposed objectives of this research. As a result, an instrument was designed that used 53 indicators distributed across two differentiated categories. The initial part consisting of 7 indicators, and in a second part, 46 indicators were included, divided into 3 categories. The first category is that of “Type of social networks used” there was a list of current social networks; the next category was called “Type of use of social networks” in which a list of different uses was presented according to their purpose (academic, social, entertainment or informative); and finally, the category of “User connectivity profile” included connection times, times of greatest connection, access device and parental control. Each item was measured using a Likert-like assessment scale with eleven potential responses (0-10), except for the socio-demographic information and the third category that required selecting one option among all those provided.

Research procedure and data analysis

After conducting a thorough review of the literature and defining the research questions and objectives of the study, the questionnaire items that would be useful when it comes to the objectives were selected. Once a first version of the questionnaire was developed, an expert opinion was programmed and conducted by professionals of different disciplines: education, psychology, technology and educational research methods. These experts fundamentally evaluated the coherence, relevance, clarity and sufficiency of every questionnaire indicator, with the aim of ensuring a good understanding by the students. To guarantee that the language used was appropriate and to check the time needed to complete the questionnaire to avoid fatigue or discomfort, some adolescents from the same educational stage also tested the questionnaire. All of suggestions provided, both by the expert judges and the students, were taken into account to improve the quality of the data collection instrument. Finally, the Research Ethics Committee of the Autonomous Community of Aragón was asked to evaluate the present research, which was resolved with a favorable judgment.

During the fieldwork phase, first of all, contact was established through the telephone call with each center to propose the participation of their Compulsory Secondary Education students in the study. Also, they were sent by e-mail the necessary

documentation to provide them with a more detailed view of the proposal. Subsequently, once the decision had been made, they were provided with a web link to access the questionnaire. After the data collection, an analysis was performed using the SPSS version 24.0 statistical package, specifically applying descriptive statistics.

Results

The results of this study have been structured according to three categories of the questionnaire: type of social networks used, type of use of social networks and user connectivity profile. In the same order the results of each them are explained. Table 3.2., Table 3.3. and Table 3.4. show the descriptive statistics of the three dimensions. The first two tables (Table 3.2. and Table 3.3.) show the means and standard deviations for each item, and Table 3.4. shows the frequencies.

Of all the social networks asked about their usability, WhatsApp obtained the highest score ($M= 6.12$, $SD= 3.052$), but with average scores close to this were Instagram ($M= 6.01$, $SD= 3.678$) and YouTube ($M= 5.78$, $SD= 3.027$). Furthermore, the social networks that obtain much lower mean scores (all of them less than one point) are LinkedIn ($M= 0.11$, $SD= 0.854$), Tinder ($M= 0.18$, $SD= 1.117$), Facebook ($M= 0.45$, $SD= 1.428$), and even Telegram ($M= 0.82$, $SD= 2.051$). What's more TikTok, which is a social network whose rise is recent, has high scores ($M= 5.36$, $SD= 3.962$), although in relation to the scale used for the evaluation of each item, they are medium-low scores. In addition, other social networks they use are Twitch, Pinterest, Discord, Wattpad or Spotify, which are included in the open response option "Other".

(Insert Table 2.)

The statistics descriptive presented in Table 3.3. are organized into four categories of use: academic, social, entertainment and informative. The mean and standard deviation are shown for each of items that make up these categories.

First, among the academic uses, the use of social networks to maintain contact with classmates through class groups ($M= 6.04$, $SD= 3.056$) stands out for its score. They also help each other with homework, assignments and exam preparation ($M= 5.45$, $SD= 2.995$), and share notes and resources ($M= 5.02$, $SD= 3.108$). A much lower score is associated with participants using social networks to maintain contact with teachers ($M= 1.76$, $SD= 2.361$).

As for the second category, related to the social uses of social networks, adolescents gave the highest scores to "meeting or dating friends" as well as "keeping in

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3 touch with family and friends", $M= 7.16$, $SD= 3.016$ and $M= 7.15$, $SD= 2.921$
4 respectively. In contrast, the sample makes minimal use of social networks for dating
5 ($M= 1.93$, $SD= 2.968$).
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10 Thirdly, in relation to the use of social networks for leisure or entertainment
11 purposes, "listening to music" predominates ($M= 7.28$, $SD= 3.142$). Closely linked to this
12 use is "watching films, series, videos, music videoclips" ($M= 6.79$, $SD= 3.114$) and with
13 a certainly lower score is "playing online games" ($M= 5.27$, $SD= 3.678$). The least
14 common entertainment activity among adolescent participants is "watching sex online"
15 ($M= 1.24$, $SD= 2.712$), which is the lowest score in the category.
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19 Finally, young people's informational use of social networks does not have high
20 scores. The answers provided indicate that social networks are little used for searching
21 and reading news ($M= 3.78$, $SD= 3.123$) and even less used for sharing ($M= 2.62$, $SD=$
22 3.028).
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26 (Insert Table 3.)
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29 In relation to the usage time, participants spend time on social networks on a daily
30 basis, regardless of the day, from Monday to Friday. In more detail, 18.9% spend 2 hours
31 a day, 3 hours (15.2%), 4 hours (10.6%) and 5 hours (11.5%) and, in addition, 7.6%
32 indicate that they spend 10 hours on social networks on a weekday. The time they use
33 social networks the most every day is in the afternoon, from 15-19h and at night from 19-
34 24h, as 56.5% and 39.2% of teenagers say. As for the time they spend daily, coinciding
35 with the weekend, the figures are practically identical, around 16%, who spend 2, 3 and
36 4 hours a day. Around 10% of the sample is on social networks for 5 hours, and 9.6% for
37 6 hours. Even more time, 10h, is spent on social networks by 7.3% of the participants on
38 a Saturday or Sunday. In this case, the time slot with the highest connection is also in the
39 afternoon, from 5-19h with 41.9% of the participants, and 10% connect in the early hours
40 of the morning, 00-6h.
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44 (Insert Table 4.)
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49 Almost all of the participants (92.7%) access social networks from their
50 smartphones and 85.4% use them safely. In relation to privacy, 62% say that only people
51 to whom they give permission can consult their profile on social networks. In the same
52 way, but with regard to parental control, almost 25% of teenagers do not have their parents
53 control the time they spend on social networks at all. A similar proportion (27.2%) rate
54 this control as low. These data indicate that more than half of the sample have virtually
55 no parental supervision of the time spent on social networks. And based on the content
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3 they consume on these media, 34% say that they have no control at all by their parents or
4 legal guardians, however, approximately 20% rate their control as high.

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6 The last question in this category, the one most closely linked to the educational
7 sphere, seems to indicate that teachers do not propose activities in which social networks
8 are used, as more than half of the sample stated that this action is non-existent or low. On
9 the contrary, approximately 6% rated it with the highest score. This data seems to indicate
10 that there is a small number of teachers who include social networks as teaching tools in
11 the activities they implement in secondary schools.
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17 (Insert Table 5.)

18 Discussion

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20 The presence of social media in our society is increasing, mainly among teenagers,
21 whose social media activity is perceived as normative (Kerestes and Stulhofer). This
22 young population is looking for a more social appearance which social networks can help
23 them to achieve with all the possibilities they offer such as posting pictures or videos of
24 what they are doing at that very moment, commenting or giving feedback (e.g. "like") to
25 pictures, videos or texts that other users have posted on the network as also revealed by
26 Longobardi and others in their research. In addition, they can stay in constant contact with
27 other people either via writing, audio or video, and of course, instantly view what other
28 people post to keep up to date with their lives.
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36 As for the preferences of adolescents for some social networks or others, they vary
37 according to the activities they offer and the interest of adolescents in them. So, it is here
38 that adolescents choose the social network according to their personal interests at the time,
39 as this preference may vary over time and is likely to evolve with their maturity and
40 development. In this research, in line with the results of Stevens and others, and Ricoy
41 and Martínez-Carrera, it is clear that the most used social networks are WhatsApp,
42 Instagram and Youtube. However, other studies, such as the one carried out by Micheli,
43 obtained different results. In his case, the most used social network was Facebook,
44 followed by Instagram and, in third place, WhatsApp (Micheli). However, recently
45 Vogels and others show that the most used networks are TikTok, Instagram and
46 Instagram.
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55 In relation to the predominant use of social networks by the young population, the
56 use of social networks to relate and communicate with others stands out. As reflected in
57 this study, young people use social networks basically to develop their more social side,
58 that is, for the friendships and new relationships they can form on them rather than for
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3 the information it can provide them with as Manca and Ranieri highlight. In turn, they
4 keep up to date on the lives of their friends by viewing their daily posts (Russmann and
5 Svensson). Another type of use that could be made of social networks is academic or
6 educational use, for which, according to the data collected, they are practically not used.
7 Perhaps this fact, as Gómez-Aguilar and others point out, is largely caused by the minimal
8 importance given to social networks as a teaching tool from the institutions and/or from
9 the teachers' point of view. This last statement could be supported by taking into
10 consideration the evaluations of the sample in this study. In this sense, more than half of
11 the adolescents give zero or very low scores to the proposal of academic tasks to be
12 carried out using social networks by their teachers.
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20 **Regarding the connectivity profile, adolescents during the week are connected to**
21 **social networks 2, 3, 4 and 5 hours a day, and even connect to social networks for 10**
22 **hours on a** working day. These figures, which are higher than those obtained by Ballesta
23 and others, indicate a high use of social networks. In this sense, it should be taken into
24 account that their school day as Compulsory Secondary Education students is 6 hours a
25 day. According to the results, if they dedicate a similar or even greater number of hours
26 to social networks, they have approximately 10 or 12 hours left in a day to cover basic
27 needs such as eating or sleeping (being aware that the recommended minimum is 9 hours).
28 Thus, between their education at school and sleeping, they spend a total of 15 hours a
29 day. If they also spend 6 hours on social networks, they only have 3 hours a day left for
30 food, hygiene and some leisure time. But if, as in some cases, they spend 10 hours on
31 social networks, they have the whole day, neglecting specific time for eating habits and
32 hygiene or leisure activities, among others. **Therefore, this daily weekly use of social**
33 **networks for fear of missing something is considered excessive as it affects their**
34 **individual well-being (Cao et al.; Dhir et al.; Rosen et al.; Salo et al.)**
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46 Related to this are the times of connection, which are most frequent in the
47 afternoons, from after lunch to before bedtime (15h to 00h), coinciding with time frames
48 when schoolwork or leisure time is being carried out. With reference to the weekend, the
49 data do not vary much. However, there are some people who spend one hour during the
50 week and 2 or 3 hours at the weekend, but without altering the results any further. These
51 data suggest that, in general, adolescents spend a lot of time on social networks every
52 day, that is, they alert us to excessive use, as found by Dans and others.
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58 The results also show that privacy and security should be taken into account in
59 social networks. The age when they start using social networks, according to the data
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3 from this research, is around 10 years old, and the interactive user profile is consolidated
4 from this age onwards (Garmendia et al.). This information shows that, although there is
5 a requirement to be 13 years old to access some social networks (Ofcom), this rule is not
6 complied with even at ages below the 10 years determined in this study. **Along these lines,**
7 **42% of children aged 5 to 12 currently have a profile on social networks (Ofcom).**
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11 Therefore, parents play a fundamental role in monitoring and limiting the time of
12 use of social networks, content and supervision of activities (Giménez et al.), using
13 parental mediation strategies (Livingstone et al.). According to the data obtained,
14 adolescents do not usually ask adults for permission to create an account on social
15 networks, stating that their parents control them little about this use, coinciding with the
16 current research by Dans and others, in which adolescents state that there is no parental
17 control in terms of connection time on social networks, which is not even negotiated
18 between the two parties. The same is revealed by the data obtained in the study by Díaz-
19 López and others, in which more than half of the participating Spanish adolescents had
20 no supervision over the use of social networks. Despite being so similar in the three
21 studies, these ratings could be underestimated in order to show greater autonomy in these
22 media, therefore, it could be considered a limitation of the study on parental mediation as
23 expressed by Ergin and Kapci.
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34 Finally, **as stated by Ou and others, social networks are highly integrated in the**
35 **lives of the people, especially young's people** (Frison and Eggermont) Even more so
36 thanks to the emergence of the smartphone, which has increased their participation
37 (Viñals) due to the facilities it provides for accessing them, becoming, as this study
38 shows, the main device for connecting to social networks.
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43 **Conclusions**

44 This study aimed to respond to three fundamental objectives: to analyze which
45 social networks are used by Compulsory Secondary Education teenagers, to find out the
46 predominant type of use they make of them, to explore the connectivity profile of the
47 youngest users and **to investigate their perceptions about their parental control.**
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51 In terms of the first two objectives, teenagers mainly use WhatsApp, Instagram,
52 YouTube and the social network that is trending, TikTok. On these, they spend a large
53 part of their time on the social side of their lives. They mainly contact friends and family,
54 check what other people are posting on their social networks to find out about their day-
55 to-day lives, post photos and make comments. However, their use for academic or
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3 informational purposes is in the minority. In fact, they hardly use these media to share
4 resources, to do homework or to see the latest news.
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6 As for connectivity profile, there is an almost homogeneous response regarding
7 the device used to access social networks, which is the smartphone. Likewise, adolescents
8 say that they use social networks safely, so that the large majority only allow their social
9 profiles to be consulted by people to whom they grant permission, promoting their
10 privacy. In relation to the time spent on these social media, adolescents say that they
11 spend between 2 and 10 hours a working day, in many cases, and mainly in the afternoons.
12 It should be considered that Compulsory Secondary Education is taught in the mornings
13 and teenagers are in class. However, as this study has shown, when they are not in class,
14 teenagers spend a high amount of time on social networks. It could be said that those who
15 use them the most spend their afternoons from Monday to Friday connected to social
16 networks. When the weekend arrives, there is not much variation in terms of time spent
17 on social networks, but there are more changes in the time period, with increased use in
18 the morning and also in the early hours of the morning. This is somewhat curious, as well
19 as worrying, since at weekends teenagers have more free time to go out, enjoy time with
20 their friends, rest, do sport, go to the cinema, parties, etc., and the data seem to indicate
21 that they are still very much connected to social networks despite the fact that they can
22 enjoy any other "face-to-face" alternative. It is therefore concluded that social networks
23 are the main socialization mechanism for these adolescents.
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37 It is well known that smartphones offer great freedom for teenagers to create their
38 own social network accounts and access them whenever and wherever they want. This
39 can be compounded by the little or no parental control that teenagers in Compulsory
40 Secondary Education seem to enjoy. Sometimes, parents do not set a timetable for their
41 children to connect to social networks during this time, nor do they monitor the use and
42 content that minors may encounter. It is true that with the ubiquity offered by the
43 smartphone it is not an easy task. Perhaps this stage could be better tackled if adults had
44 or acquired useful strategies to share aspects related to this subject with their children in
45 such a way as to encourage a good use of these media and avoid risks.
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53 From the perspective of a necessary dedication of efforts to training, it is shown
54 that in Secondary Education classrooms the use of social networks as a didactic tool is
55 promoted very minimally. Teachers do not propose activities in which social networks
56 should be used to complete them, so that they are deprived of applying this everyday
57 medium as an attractive resource in the academic sphere. All of this goes beyond the
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3 simple resolution of an activity with social networks, as this educational use would favour
4 the development of competences and skills necessary for life in the 21st century. In this
5 sense, it would be interesting to investigate the reasons for the inhibition of the didactic
6 use of this resource.
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10 Finally, and with regard to a limitation found in this research, one of the
11 difficulties identified is the lack of studies about this topic in which the participants are
12 adolescents, specifically those aged between 12 and 16. This is probably due to the fact
13 that they are minors. Specifically, there are surveys by INE, Statista or other sources that
14 provide global population data on Internet, technology, smartphones, etc. whose sample
15 is made up of people of older ages (16 years and older).
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22 **Disclosure statement**

23 The authors report that there are no competing interests to declare.
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Table 1.*Sample characterization (N=850)*

VARIABLES	N	% of sample
Type of center		
Public	759	89.3
Private-Concerted	91	10.7
Location		
Rural (Less than 10.000 habitantes)	313	36.8
Urban (More than 10.000 habitantes)	537	63.2
School year		
1 st -year Compulsory Secondary Education	132	15.5
2 nd -year Compulsory Secondary Education	202	23.8
3 rd -year Compulsory Secondary Education	238	28.0
4 th -year Compulsory Secondary Education	278	32.7
Gender		
Male	413	48.6
Female	437	51.4
Age		
12	89	10.5
13	186	21.9
14	198	23.3
15	247	29.1
16	109	12.8
17	21	2.5
Age at which social networks are initially used		
4-6	12	1.4
7-9	73	8.5
10-12	612	71.9
13-15	147	17.3
16	6	0.7
Permission to register in a social network		
Yes	501	58.9
No	163	19.2
For some yes and for others no	186	21.9

Table 2.*Type of social network used*

	Mean	SD
WhatsApp	6.12	3.052
Facebook	0.45	1.428
YouTube	5.78	3.027
Instagram	6.01	3.678
Twitter	1.61	2.768
Linkedin	0.11	0.854

Telegram	0.82	2.051
Snapchat	1.82	2.760
Tinder	0.18	1.117
TikTok	5.36	3.962
Other: _	0.22	0.417

Table 3.*Type of social networks used*

	Mean	SD
Talking and helping each other about homework, assignments and exams.	5.45	2.995
Doing group work.	4.25	3.021
Share notes and resources.	5.02	3.108
Keeping in touch with my classmates: I have class groups.	6.04	3.056
Keeping in touch with the teacher.	1.76	2.361
Sharing ideas, beliefs, exchanging opinions, etc.	4.34	3.304
Checking my friends' profiles.	4.95	3.311
Following influencers.	4.78	3.486
Getting to know new people and making friends.	4.14	3.526
Keep in touch with my family and friends.	7.15	2.921
Meeting up with friends.	7.16	3.016
Looking for hook-ups.	1.93	2.968
Finding old friends.	3.44	3.191
Uploading photos and/or videos.	3.91	3.331
Participating in group calls.	4.66	3.429
Playing online.	5.27	3.678
Following a brand, a person, a series, etc. (I am a follower).	4.91	3.604
Listening to music.	7.28	3.142
Watching movies, series, videos, music videoclips...	6.79	3.114
Watching sex online.	1.24	2.712
Sharing series and comment on them	2.91	3.206
Uploading content (photos, videos, text documents...).	3.32	3.296
Viewing and downloading content (photos, videos, text documents...).	3.81	3.255
Searching and reading information about current affairs.	3.78	3.123
Sharing current news.	2.62	3.028

Table 4.*User connectivity profile (I)*

Variables	N	% of the sample
Daily time Monday-Friday connection		
Less than 1h	55	6.5
1h	98	11.5
2h	161	18.9
3h	129	15.2
4h	90	10.6
5h	98	11.5
6h	65	7.6
7h	43	5.1
8h	34	4.0
9h	12	1.4
10h	65	7.6
Time Monday-Friday higher connection		
Morning from 6-8h	11	1.3
Morning from de 8-14h	8	0.9
Afternoon from 15-19h	480	56.5
Night from 19-24h	333	39.2
Early morning from 00-6h	18	2.1
Daily time Saturday-Sunday connection		
Less than 1h	44	5.2
1h	67	7.9
2h	144	16.9
3h	136	16.0
4h	132	15.5
5h	86	10.1
6h	82	9.6
7h	47	5.5
8h	42	4.9
9h	8	0.9
10h	62	7.3
Time weekend higher connection		
Morning from 6-8h	8	0.9
Morning from de 8-14h	155	18.2
Afternoon from 15-19h	356	41.9
Night from 19-24h	244	28.7
Early morning from 00-6h	87	10.2

Table 5.*User connectivity profile (II)*

Variables	N	% of the sample
Acces device		
Smartphone	788	92.7
Tablet	15	1.8
Laptop	23	2.7
Smartwatch	1	0.1
Desktop computer	23	2.7
I make safe use		
Yes	726	85.4
No	7	0.8

Don't know	83	9.8
Don't care	34	4.0
Who can view my profile		
Only my friends	168	19.8
My friends and their friends	33	3.9
Everybody	92	10.8
Only to whom I give permission to visit it	527	62.0
I don't remember	30	3.5
Parental control of time on social networks		
No	208	24.5
Low	231	27.2
Medium	215	25.3
High	196	23.1
Parental control of social media content		
No	289	34.0
Low	223	26.2
Medium	171	20.1
High	167	19.6
Teachers propose networking activities		
No	336	39.5
Low	299	35.2
Medium	168	19.8
High	47	5.6