Vivat Academia. Revista de Comunicación. 15 June / 15 September, 2019, nº 147, 23-40
ISSN: 1575-2844 http://doi.org/10.15178/va.2019.147.23-40

**RESEARCH**

**Received**: 25/07/2018 --- **Accepted**: 25/02/2019 --- **Published**: 15/06/2019

# THE USE OF THE SOCIAL NETWORKS BETWEEN THE STUDENTS OF TEACHER'S DEGREE IN AN ENVIRONMENT EXCLUSIVELY ONLINE

## *El uso de las redes sociales entre los estudiantes de grado de maestro en un entorno exclusivamente online*

**Diego Calderón-Garrido**[1]**.** International University of La Rioja. Spain.
diego.calderon@unir.net

**Alicia León-Gómez.** International University of La Rioja. Spain.
alicia.leongomez@unir.net

**Raquel Gil-Fernández.** International University of La Rioja. Spain.
raquel.gilfernandez@unir.net

*This paper has been funded by the Project "Evaluation of the Teaching Digital Competence in the initial training of teachers in the area of Social Sciences and their Specific Didactics", developed within the research group EDUC-07 INCISO (Didactics of Social Sciences and Pedagogical Innovation in the Digital Society of the International University of La Rioja, Faculty of Education).*

**ABSTRACT**

The purpose of this paper is to know the use of social media in the initial training of future teachers in a University in which they operate exclusively online, and compare the results obtained according to gender, age, grades and courses. It has started from the ten most used social media: Facebook, Instagram, Pinterest, Skype, SoundCloud, Tumblr, Twitter, WhatsApp, Wechat and YouTube. The methodology has been based on design, validation and administration of an online questionnaire with a valid sample of 130 participants. Among the most noteworthy results regard to most used social media, WhatsApp, Facebook and Skype were the highlighted channels, but their academic use is not as productive as expected, considering their potential for these purposes, as Facebook for example in virtual teaching environments. However, YouTube usage data indicates that it is a regular learning resource, in spite of not being the most used by these students. It has also been found that Pinterest has more academic use than

[1] **Diego Calderón Garrido:** Doctor in History of Art from the University of Barcelona, graduated in Modern Music and Jazz, professor at the Faculty of Education of the International University of La Rioja.

Instagram, despite the greater use of the last one among young people nowadays, which is explained by the higher age of students and the versatility of Pinterest to show presentations and jobs.

**KEY WORDS:** digital educational competition - higher education – social networks – educational virtual environments – *Facebook* – *WhatsApp* – *YouTube.*

**RESUMEN**

Este trabajo tiene como finalidad conocer el uso de las redes sociales en la formación inicial de futuros maestros en una Universidad en la que se opera exclusivamente on line, y comparar los resultados obtenidos en función del género, edad, grados y cursos. Para ello se ha partido de las diez redes sociales más usadas: *Facebook, Instagram, Pinterest, Skype, SoundCloud, Tumblr, Twitter, WhatsApp, Wechat y YouTube*. La metodología se ha basado en el diseño, validación y administración de un cuestionario vía online con el que se ha obtenido una muestra valida de 130 participantes. De entre los resultados más destacables podemos señalar que las redes más usadas son *WhatsApp, Facebook y Skype*, pero su uso académico por parte de los alumnos no es todo lo productivo que cabría esperar teniendo en cuenta su potencial para estos fines, como sucede por ejemplo con Facebook, en especial en entornos de enseñanza virtuales. Sin embargo, los datos de uso de *YouTube*, denotan que a pesar de no ser la más utilizada por estos alumnos, es a la que se saca mejor partido en este sentido, constituyendo para ellos un recurso de aprendizaje habitual. También se ha podido comprobar que *Pinterest* tiene mayor uso académico que *Instagram*, a pesar del mayor uso que tiene la segunda entre los jóvenes en la actualidad, lo que se explica por la edad más elevada del alumnado y la versatilidad de *Pinterest* para mostrar presentaciones y trabajos.

**PALABRAS CLAVE:** competencia digital docente – enseñanza superior – redes sociales – entornos educativos virtuales – *Facebook - WhatsApp – YouTube.*

## O USO DAS REDES SOCIAIS ENTRE OS ESTUDANTES DE NÍVEL SUPERIOR EM UM ENTORNO EXCLUSIVAMENTE ONLINE

**RESUME**

Este trabalho tem como finalidade conhecer o uso das redes sociais na formação inicial de futuros professores em uma Universidade na qual se opera exclusivamente online, e comparar os resultados obtidos em função do gênero, idade, séries e cursos. Para isso analisamos as 10 redes mais usadas: Facebook, Instagram, Pinterest, Skype, SoundCloud, Tumblr, Twitter, WhatsApp, Wechat e Youtube. A metodologia se baseou no desenho, validação e administração de questionário via online no qual se obteve uma amostra válida de 130 participantes. Entre os resultados mais destacados podemos apontar que as redes mais usadas são WhatsApp, Facebook e Skype, mas seu uso

acadêmico por parte dos alunos não é de tudo tão produtivo como se podia esperar tendo em conta seu potencial para estas finalidades, como acontece por exemplo com Facebook, especialmente nos entornos virtuais. Embora, os dados de uso do Youtube, revela que apesar de são ser o mais usado pelos alunos, é o que aproveita mais neste sentido, constituindo para eles um recurso de aprendizagem habitual. Também se comprovou que Pinterest tem maior uso acadêmico que Instagram, apesar do maior uso que tem o segundo aplicativo entre os jovens na atualidade. Que se explica pela idade mais elevada do alunado e a versatilidade de Pinterest para mostrar apresentações e trabalhos.

**PALAVRAS CHAVE:** competência didática digital - ensino superior - redes sociais - ambientes educacionais virtuais -*Facebook - WhatsApp – YouTube.*

**How to cite the article:**

Calderón-Garrido, D.; León-Gómez, A., and Gil-Fernández, R. (2019). The use of the social networks between the students of teacher's degree in an environment exclusively online. [El uso de las redes sociales entre los estudiantes de grado de maestro en un entorno exclusivamente *online*]. Vivat Academia. Revista de Comunicación, 147, 23-40. http://doi.org/10.15178/va.2019.147.23-40. Recovered from http://www.vivatacademia.net/index.php/vivat/article/view/1130

## 1. INTRODUCTION

This piece of research is part of a project granted by the International University of La Rioja aimed at evaluating the Digital Teaching Competence and the use of social networks in the initial training of future teachers. A questionnaire has been distributed among the students of the Degrees of Infant Teacher, Primary School Teacher and Double Degree in Infant and Primary Education Teacher, in order to obtain quantitative data through which to carry out the present study.

Our interest in knowing how teachers receive the necessary education during their initial training to be able to successfully employ digital technology and social networks is supported by scientific literature, which guides the proposals and results of their involvement in the classroom at all educational levels (Aguareles, 1988, Alshaboul, 2012, Cope and Ward, 2002, Duart and Lupiáñez, 2005, Marques, 2012, Moya, Rafael and Bravo, 2011, Salinas, 2004, Santoveña, 2012). In the case of digital competence, this is a competition included in the White Book of the Teaching Profession and its School Setting (Marina, Pellicer and Manos, 2015) that makes numerous considerations regarding the use of digital technologies and training in said field, as the future teacher must educate future citizens participating in a digitized, globalized and constantly changing society (Tourón, Martín, Navarro, and Iñigo, 2018) in which social networks

have emerged as a basic tool in daily communication (Salas, Lugo and Ruiz, 2017) and search for training among students (Fondevilla-Gascón, del Olmo-Arriaga and Sierra, 2011).

### 1.1. Social networks and their use in education

After an analysis of the aforementioned competence and the use students make of social networks, it is possible to check the adequacy of the student to the professional world in the context of a digitized society (Calderón-Garrido, Forés-Miravalles and Gustems-Carnicer, 2015). We must bear in mind that the expansion of social networks has involved many changes in that society, but one of the main areas has been education. Therefore, it seems interesting that one of the indicators of the acquisition of Digital Teaching Competence is the optimal, productive and effective use of the general social networks for educational purposes. Not in vain, the educational use of social networks by students of teacher degrees is in turn an indicator of the fusion of their outside world in the classroom, thus solving possible tensions.

For this, we must reflect on the concept "Social Networks". There are countless authors who define them, and the object of this publication is not to deepen this matter nor to realize a state of the art about them, but we must say that, in this paper, we refer to social networks as "the structure by which a person or group of people are interrelated through different types of relationships, that is, structures of exchange of an online social component" (López, 2014, p. 105). Regardless of definitions, all social networks make it possible to build a profile and establish connections with other people through different media -messages, possibility of sharing objects, group conversations, private messages, chats... - (Haro, 2011). In relation to this aspect, we consider important to highlight the idea that Serrano (2013) points out: "virtual" interactions should be considered as real as those established in the face-to-face world. As we will see, this is the case with the students in the sample.

At present, a classroom of any educational level is not conceived without the presence of social networks. The configuration of networks for work and exchange of information is necessary to meet the needs of the educational environment, and even more so -as it happens in this case- among students who do not have physical proximity and whose only way of replacing direct contact are virtual environments that break the space-time barriers. The literature that justifies that social networks are more and more linked to the formative processes of the student body has been abundant for some years and can be summed up in the fact that today it constitutes an incontestable reality (Callaghan and Bower, 2012; Bernal and Angulo, 2013).

Regarding higher education in particular, technological transformations have brought about, as a "natural" consequence, that universities recognize and highlight the

importance of social networks, as they are innovative mechanisms in teaching-learning processes (Valerio, Herrera, Villanueva, Herrera and Rodríguez, 2015, cited by Salas, Lugo and Ruiz, 2017).

Social networks configure learning networks, to Sloep and Berlanga (2011), this is the concept:

> ...The one made up of people who share fairly similar interests; any learning network offers resources that participants can use for their particular objectives and various services that help them achieve them. The main actors of any learning network are its participants. Anyone can participate and perform various functions: for example, students, teachers, "coaches", mentors, interested curious people, individuals seeking support, etc. Resources consist in files or links that can help participants to do what they consider necessary to develop their skills. (pp. 56-57)

The existence of academic and labor social networks has been intensifying in recent times. There is no doubt about the interest involved in the use of this type of network by university students, since they are a vehicle for the exchange of information. In the scientific and academic world, users are grouped in networks guided by common interests and themes, sharing content, events, disseminating topics related to their studies ... There is no doubt that in-training professionals must use these channels to communicate their initial scientific production and to share information or seek employment opportunities.

Obviously, the use of both types of networks -the educational-labor and the general networks- does not conflict, nor is it exclusive, there being great flexibility in this regard. Authors such as López (2014) studied how scientific networks interact with those of general use, analyzing networks such as *ResearchGate* or *Mendeley* to check if users also had profiles in open networks such as *Facebook* or *Twitter*, as it was, reaching the conclusion that open networks strengthen scientific networks since their diffusion power is greater, they have more scope and offer better comprehension capacity. They can act, therefore, in a complementary way.

### 1.2. The case of the online university

The students who are the protagonists of this piece of research belong to the International University of La Rioja (hereinafter UNIR), which has the peculiarity of offering a system of exclusively online teaching, as compared to other face-to-face or blended modalities. We will briefly characterize how this system works and what the profile of the students we have used for this analysis is.

UNIR works with a pedagogical model that pursues the flexibility and autonomy of students by using technologies applied to their virtual campus. Virtual teaching is based on interactivity. As pointed out by Maraver, Hernando and Aguaded (2012), it is inspired by constructivism (individual and social), which in this case is configured through the construction of learning communities. Tirado and Martínez (2010) describe the basic characteristics of learning communities: existence of a common project, possibility of sharing resources and tools (in this case related to knowledge) and existence of relationships based on mutual commitment and encouragement to achieve some goals. In this sense, social networks can play an important role.

Classes are offered online through the adobe connect platform - although they can be watched later by students who prefer so, since they are recorded and uploaded to their virtual campus. In terms of teaching-learning and evaluation activities, there is a high number of them pursuing a collaborative model with the aim of having the student participate actively in learning. This fact is intensified in the case of the students who have collaborated in the obtaining of the sample, since these degrees have an eminently practical and professionalizing character.

Therefore, communities of learning and collaborative work are the two axes used to meet the needs of students. When working in a non-face-to-face environment, the importance of the role of social networks is intensified, since it favors more intense social interrelation that in this case could not be produced by a personal-face-to-face channel, so it is especially interesting to analyze which its use is. The attitude of students when faced with the communication channels offered by the university (forums, wikis, collaborative works through *onedrive* ...), as well as the communities that they create through social networks allow them to acquire the personal-social dimension of which they would otherwise be deprived. All these questions allow this type of students to develop in more flexible educational community spaces (Gil, León and Espigares, 2016).

Regarding the profile of the students who attend this University, according to the official website, 61% are women versus 39% men. This difference by sex is much more accentuated in the Faculty of Education degrees, as we will see below. Although the age range is very wide, the average age of students is much higher than in the face-to-face university, specifically an average of 33 years for the entire University. Many of the students have previously done other studies and most are already inserted in the labor market and study to improve their position in it or simply to expand their knowledge.

## 2. OBJECTIVES

The objective of this piece of research is to analyze the educational use of social networks by students of a university that operates completely online, as well as to compare these results according to gender, grade, course and age.

## 3. METHODOLOGY

The methodology used in this piece of research is based on the quantitative approach. To this end, an *ad hoc* questionnaire has been designed and validated (available at https://reunir.unir.net/123456789/6695). Its administration was through the platform *formsite,* establishing a period of three weeks for its response. Participating students signed a free, prior and informed consent implicit in the questionnaire itself, and they were informed that they could leave the study at the time they wanted. The emptying and subsequent analysis of results has been done with the quantitative analysis software *Statistic Package for Social Science* (SPSS) in its version 21.0.

The social networks chosen for the analysis have been, in alphabetical order, *Facebook*, *Instagram*, *Pinterest*, *Skype*, *SoundCloud*, *Tumblr*, *Twitter*, *WhatsApp*, *Wechat* and *YouTube*. The cause of choosing these 10 social networks is their constant appearance in various international rankings as the most used social networks. At the beginning, *Google+* and *Viber* were also included, but the responses of the students suggested their lack of understanding as social networks. So, for example, in the case of *Google+*, the answers were referred to its use as a search engine.

The analyzed sample was made up of 130 participants, 111 (85.4%) women and 19 (14.6%) men. The average age is 33.35 (SD = 7.32) from 21 to 50 years. The distribution by grades and courses was as follows:

| | Childish | Primary | Double Degree | **TOTAL** |
|---|---|---|---|---|
| First | 6 (13.6%) | 12 (14.8%) | 2 (40%) | **20 (15.4%)** |
| Second | 12 (27.3%) | 5 (6.2%) | | **17 (13.1%)** |
| Third | 17 (38.6%) | 22 (27.2%) | | **39 (30%)** |
| Quarter | 9 (20.5%) | 42 (51.9%) | 1 (20%) | **52 (40%)** |
| Fifth | | | 2 (40%) | **2 (1.5%)** |
| **TOTAL** | **44 (33.8%)** | **81 (62.3%)** | **5 (3.8%)** | |

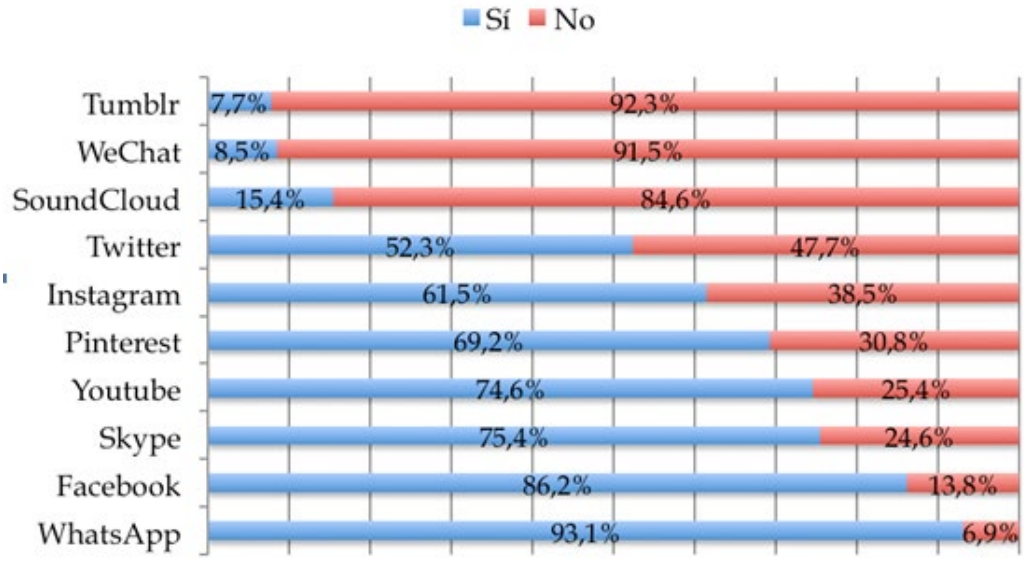
***Graph 1:*** Use of the various social networks.
**Source:** own elaboration.

## 4. RESULTS

We present below the results obtained in the study. Regarding the use of social networks, the data show how all students use at least one social network and all claim, at least, to use it from time to time for educational purposes.

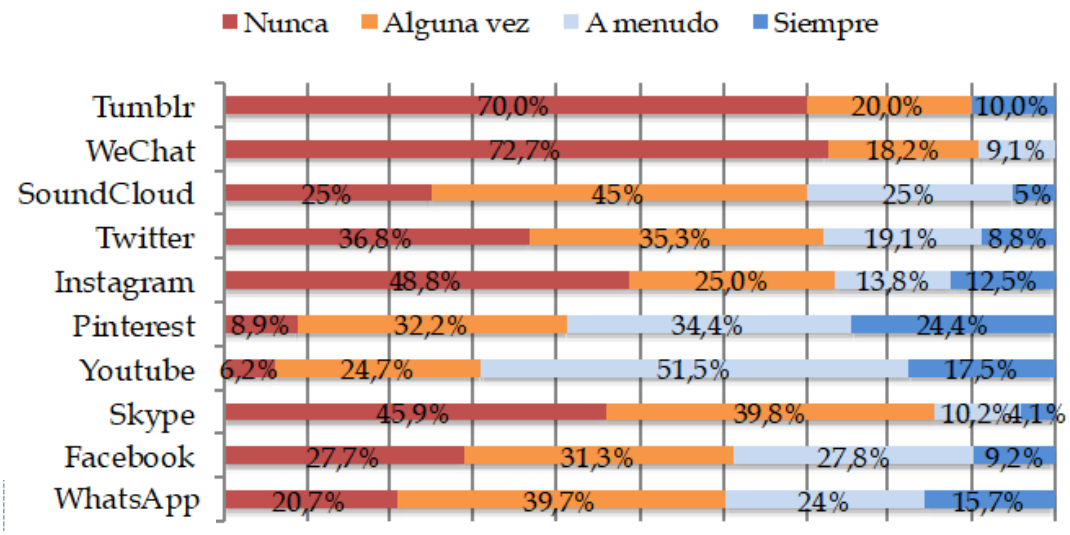
In this sense, the most used social networks are *WhatsApp* (n = 121), *Facebook* (n = 112) and *Skype* (n = 98), while the least used are *Tumblr* (n = 10), *WeChat* (n = 11) and

*SoundCloud* (n = 20). In Figure 2 we show all the results expressed percentage by percentage.




***Graph 2:*** *Use of the various social network.*
**Source:** own elaboration.

Based on this use, in Figure 3 we show how this is referred to academic purposes. As we can see, *Youtube* is the social network that, more often, is used for academic purposes (n = 67, 69% of those who use this network use it "often" or "always" for such purposes), followed by *Pinterest* (n = 53, 58.8% of those who use this network use it "often" or "always" for such academic purposes), *WhatsApp* (n = 48, 39.7% of those who use this network use it "often" or "always" for such academic purposes) and *Facebook* (n = 46, 37% of those who use this network use it "often" or "always" for academic purposes).




***Graph 3:*** Use of various social networks for academic purposes
**Source:** own elaboration

Depending on the gender, the Mann-Whitney U test shows significant differences in having a *Pinterest* account ($Z$ = 2,762; $p$ =, 006), or a *Twitter* account ($Z$ = 2,011; $p$ =, 044). In both cases, men are the ones who use these social networks more.

The Kruskal-Wallis test shows that there are significant differences according to the degrees in the case of the use of *Facebook* ($X^2_{(2)}$= 15,693; $p$ < ,001). In this case, it is the students of the double degree who use this social network more in their training.

Regarding the course, the Kruskal-Wallis test shows that there are significant differences in the case of the use of *Facebook* ($X^2_{(4)}$ = 12,429; $p$ = ,014), the second-year students being those who use this social network more, and how to use *Pinterest* ($X^2_{(4)}$ = 9,678; $p$ =, 046), with third-year students using it the most.

The data shows that there is an inverse correlation between age and having an *Instagram* account ($r$ = -, 270; $p$ =, 002), as well as between age and having a *Skype* account ($r$ = -, 235; $p$ = , 007). On the other hand, there is a positive correlation between age and having a *SoundCloud* account ($r$ =, 190; $p$ =, 030).

Regarding the use of social networks in education, the dendrogram shows us three different groups. The first relates the use of *Pinterest* and *YouTube*; a second group is formed by the use of *Facebook*, *WhatsApp*; and a third group formed by *WeChat, Instagram, Tumblr, Twitter, Skype and SoundCloud*.

## 5. DISCUSSION

The analyzed data are in agreement with what was expressed by Rojas (2014), who considers that social networks used in non-face-to-face educational environments allow a much more personal human connection than other platforms, being much more motivating. In addition, such use favors, as Siemens (2004) considers, the maintenance of connections, which is fundamental for learning and knowledge. In the case of our sample, all students have at least one social network active and everyone uses it for educational purposes. Therefore, we can consider social networks a more integrated resource in the training process.

But the object of this paper is not exclusively educational networks. We have also proposed to study the educational use that is given to generic networks, in which this working or academic element does not prevail and which normally - or in other areas - have an exclusively social use. In this sense, the most widely used generic social network is *WhatsApp* (n = 121, 93.1%), although its use for educational purposes is not very widespread (20.7% never use it for such purposes and the 39.7% only sometime). This data contrasts with the multiple studies on the benefits of this network in the various educational processes (Bensalem, 2018) and, especially, in the initial teacher training (Tang, Wen and Wei, 2017).

A similar case is that of *Facebook*, which, despite its well-known origin, transcended from its first function as an academic network to be extended to this generic use to which we have just alluded. To Martínez (2014) "the use of network tools not explicitly designed for learning has great potential" (p. 275). Although the author makes this assertion referring to the didactic use of teachers, we can extend it to the strategies of learning -and of socialization in the academic field- of students. In this sense, UNIR has an official and institutional profile of *Facebook* but also a complementary page managed by a community manager of that institution, helped by some students on a voluntary basis. The acceptance among the students is very broad because, to date, it has some 4,700 members. It is a page that is offered as a space for turning off, facilitated to socialize between students and teachers who do not have physical proximity -the students get in touch to travel together to exams, meetings are organized...-, but in which, unfailingly, also generic academic subjects are dealt with -administrative questions, opinions on what studies to study, study techniques, personal experiences ...-. It also offers a list of all the groups that exist, classified by subjects, that do have an eminently educational use: exchange of notes, comments on exams, teaching resources and other related issues. This suggests an intensive use of this resource; however, and although 86.2% (n = 112) of the analyzed sample have a profile in this network, its use for academic purposes is not so widespread (almost 60% of students state that they use it for this purpose only sometime or never). So, this shows that students do use this resource for social but not educational purposes. Therefore, this is a waste of resources,

especially those related to the benefits of collaborative learning through *Facebook* shown by Al-Samarrie and Saed (2018), especially in remote areas (Wamuyu, 2018) as in the case of the students of a non-face-to-face university.

In the case of *Skype*, it is a very simple and effective communication tool. It allows communication through video calls and can also exchange files of any type at the same time. Something a priori very useful to any student, and especially to those who, as in the case of UNIR, live in different parts of the national and even international geography. In this strange sense, despite 75.4% of the sample (n = 98) have an account in this network, only 14 people consider that they use it for educational purposes often or always (10.2% and 4, 1% respectively). Therefore, we are again facing a waste of the proven resources that *Skype* offers us in collaborative learning (Mnkandla and Minnar, 2017).

Regarding *YouTube*, it is a network so popular among students that the term "*YouTube* generation" has been coined (Barry et al., 2016). Rodríguez and Fernández (2017) analyzed *YouTube* as an online learning resource in a non-face-to-face postgraduate study, reaching the conclusion that the students who had this tool obtained better results, being therefore an interesting resource for obtaining content. In our case, we have not analyzed the results obtained when working with this network, but we can affirm that of the 97 students who have an account (74.6%), 67 use it for educational purposes often (n = 50, 51.5 %) or always (n = 17, 17.5%). This data is consistent with the pedagogical model proposed by UNIR, since it seeks student autonomy, active learning and flexibility in their instruction. Students, habitually, use it both to look for tutorials that help them in their work - citation rules, questions related to presentation formats, use of different platforms ...– and to consolidate conceptual contents. In addition, it is not strange that they choose it as a tool at the service of their learning strategies, since a large number of their teachers choose it as a didactic tool in this type of virtual teaching, where visual elements that facilitate comprehension predominate (Marchetti and Valente, 2018), therefore, the material that is on *YouTube* occupies a fundamental presence.

In the case of *Pinterest*, the scientific literature shows diverse experiences in its use, almost all referring to the metaphorical use of photographs to support an affirmation (Ahmed, Lee and Struik, 2016). However, Baker and Hitchcock (2017) conclude that their subsequent use, once the student joins the world of work, is not so effective. In our case, 90 students (69.2%) have an account in this network, of which more than half use it for educational purposes often (n = 31, 34.4%) or always (n = 22, 24 ,4%). This makes us think of a use in the presentations of daily tasks or even in the slides that they use in the defenses of their Final Degree Projects. Regarding its use in terms of gender, in our sample men use *Pinterest* more, showing statistically significant differences ( $Z$ = 2,762, $p$

=, 006), which contrasts with the study conducted by IAB on the use of social networks in 2017.

*Instagram* is possibly the social network most used by young people today, being the protagonist of numerous social movements (Kidd and McIntosh, 2016). However, as we have shown, our sample has a wide age range (from 21 to 50 years) with an average age of 33.35 years. This "old" age, apart from being a feature of UNIR, justifies that *Instagram* is not the most used network, which is also understood when observing the correlation between said network and age ($r$ = -, 270; $p$ =, 002). In any case, despite its metaphorical use in the classroom is similar to *Pinterest*, of the 80 students (61.5%) who have *Instagram*, about 75% never use it (n = 39, 48.8% ) or only sometime (n = 20, 25%) for academic purposes. Which shows less use than *Pinterest*.

In the case of *Twitter*, there are multiple experiences about its academic use in the field of initial teacher training and its motivational benefits (Köseo ğ lu, 2018). However, the use in UNIR is limited to 52.3% (n = 68) of the analyzed sample, of which 25 (36.8%) never use it and 24 (35.3%) only sometime for academic purposes. Regarding its use according to gender, in our sample, men use *Twitter* more, showing statistically significant differences ($Z$ = 2.011; $p$ =, 044), which coincides with the study conducted by IAB on the use of social networks in 2017.

The use of *SoundCloud is* striking. It is a social network widely used in the recording of voice notes, podcasts and audio guides that has been used by numerous universities to hold master classes of open content (Nwosu, Monnery, Reid and Chapman, 2017). However, its use in UNIR is anecdotal - only 20 students (15.4%) have an open account - and it is also more typical of older students ($r$ =, 190; $p$ =, 030). This may be due to the commitment to audiovisual use in the transmission of content that makes them prefer graphic formats more and that it is the students who have studied in other universities who still use *SoundCloud*.

In the case of *WeChat* and *Tumblr*, their use in our sample is almost anecdotal with 8.5% (n = 11) and 7.7% (n = 10) respectively. In addition, they have an almost negligible academic use.

## 6. CONCLUSIONS

The most used social networks among our students are *WhatsApp*, *Facebook* and *Skype*, and only two of them are also used for educational purposes. These two networks are *WhatsApp* and *Facebook* and they belong to the group of social networks most used for these educational purposes in a generic way, but despite this, they are not used very intensively in our sample. They are social networks with great benefits for the educational environment and yet they do not get the maximum performance in the

studied environment. The same happens with *Skype*, which provides an adequate space for collaborative learning, but it is only used mainly as a social network and is not used as a learning community.

Within the group of social networks most used for educational purposes we can highlight *YouTube* and *Pinterest,* which, in turn, coincide with their less use in the social field. In the case of *YouTube*, we must emphasize that its format concurs with some audiovisual materials that are used as a basis for learning in the UNIR pedagogical model. On the other hand, the use of *Pinterest* stands out among the students of third year of the Double Degree with a clear objective focused on the preparation of material for the defenses of their Final Degree Projects. These Double Degree students are those who use these social networks more for educational purposes, as also happens with *Facebook* by the 2nd year students.

We must emphasize that *Instagram*, despite being one of the social networks most used by young people, is not one of the most used by our students, neither in the social nor in the educational field. Possibly it is due to the average age of the students, 33.5 years, higher than in the universities. Like *Instagram*, *Twitter* is one of the most used social networks and, especially, within the educational field, by teachers who defend its great educational potential. However, a minimum of students (mainly men) use it for these purposes. And the case of the network *SoundCloud*, its use is minimal and only by those students who come from face-to-face universities since the "original" students of UNIR opted for audiovisual materials due to our pedagogical model, as previously mentioned.

In conclusion, the data extracted from this piece of research show that the students of a virtual university in their initial teacher training are users of social networks and also do so, to some extent, for academic purposes. In spite of this, there is a predilection for certain networks that are not used for such purposes (*WhatsApp* and *Facebook*), and those that are (*YouTube* and *Pinterest*) have unidirectional possibilities and not for the exchange of information. Therefore, we believe that students should be trained and informed about the possibilities and benefits of collaborative work through social networks so that they can implement it.

## 7. REFERENCES

Aguareles Añoro, M. A. (1988). *Educación y Nuevas Tecnologías*. Tesis Doctoral. Barcelona: Universidad de Barcelona.

Ahmed, O. H.; Lee, H., y Struik, L. L. (2016). A picture tells a thousand words: A content analysis of concussion-related images online. *Physical Therapy in Sport*, 21, 82-86. Recuperado de https://doi.org/10.1016/j.ptsp.2016.03.001

Al-Samarraie, H., y Saeed, N. (2018). A systematic review of cloud computing tools for collaborative learning: Opportunities and challenges to the blended-learning environment. *Computers & Education*, 124, 77-91. Recuperado de https://doi.org/10.1016/j.compedu.2018.05.016

Alshaboul, M. (2012). *Los recursos tecnológicos y las tecnologías de la información y la comunicación aplicadas a la educación especial en Ammán (Jordania)*. Tesis Doctoral. Granada: Universidad de Granada. Recuperado de https://goo.gl/ZbLJ3U

Baker, L. R., y Hitchcock, L. I. (2017). Using Pinterest in Undergraduate Social Work Education: Assignment Development and Pilot Survey Results. *Journal of Social Work Education*, *53*(3), 535-545. Recuperado de https://doi.org/10.1080/10437797.2016.1272515

Barry, D. S.; Marzouk, F.; Chulak-Oglu, K.; Bennett, D.; Tierney, P., y O'Keeffe, G. W. (2016). Anatomy education for the YouTube generation. *Anatomical sciences education*, *9*(1), 90-96. Recuperado de https://doi.org/10.1002/ase.1550

Bensalem, E. (2018). The Impact of WhatsApp on EFL students' Vocabulary Learning. *Arab World English Journal*, *9*(1). Recuperado de https://dx.doi.org/10.24093/awej/vol9no1.2

Bernal, C., y Angulo, F. (2013). Interacciones de los jóvenes andaluces en las redes sociales. *Comunicar*, 40, 25-30

Cope, C. H., y Ward, P. (2002). Integrating lear- ning technology into classrooms: The impor- tance of teachers' perceptions. *Educational Technology & Society*, *5*(1), 67-74. Recuperado de https://goo.gl/Et3QUb

Calderón-Garrido, D.; Forés-Miravalles, A., y Gustems-Carnicer, J. (2015). Aproximación a las fortalezas de carácter en los estudiantes de Educación Social. Perfil de una muestra. *REIRE*, *9*(2), 48-64. doi: 10.1344/reire2016.9.2924

Callaghan, N., y Bower, M. (2012). Learning Through Social Networking Sites. The Critical Role of the Teacher. *Educational Media International*, 49, 1, 1-17

Haro Ollé, J. J. de (2011). *Redes Sociales para la educación*, Madrid: Anaya

Gil Fernández, R.; León Gómez, A., y Espigares Pinazo, M. (2016). Trabajo colaborativo y evaluación de competencias en el Máster de Formación del Profesorado de Secundaria con metodología *online*: el foro de discusión como recurso didáctico. En *Actas del VIII Congreso Internacional de Psicología y Educación (CIPE 2016)*, 1219-1220.

Fondevila Gascón, J.; Olmo Arriaga, J. del, y Sierra Sánchez, J. (2012). Búsqueda de información y redes sociales: el caso de la universidad. *Vivat Academia,* 117E, 497-511. doi: 10.15178/va.2011.117E.497-511

IAB (2017). *Estudio Anual Redes Sociales 2017.* Recuperado de https://www.slideshare.net/elogia/iab-estudio-anual-redes-sociales-2017

Kidd, D., y McIntosh, K. (2016). Social media and social movements. *Sociology Compass*, *10*(9), 785-794. Recuperado de https://doi.org/10.1111/soc4.12399

Köseoğlu, P.; Koseoglu, P.; y Köksal, M. S. (2017). An Analysis of Prospective Teachers' Perceptions Concerning the Concept of "Social Media" through Metaphors. *Eurasia Journal of Mathematics, Science and Technology Education*, *14*(1), 45-52. Recuperado de https://doi.org/10.12973/ejmste/79325

López Frías, C. (2014). La interrelación entre las redes sociales específicas de la comunicación científica y las redes sociales de uso general. *Vivat Academia*, 127, 103-116. Recuperado de http://dx.doi.org/10.15178/va.2014.127.103-116

Maraver, P.; Hernando. A., y Aguaded, J. I. (2012). Análisis de las interacciones en foros de discusión a través del Campus Andaluz Virtual, *@tic. Revista d'innovació educativa*, 9, 116-124.

Marchetti, E., y Valente, A. (2018). Interactivity and multimodality in language learning: the untapped potential of audiobooks. *Universal Access in the Information Society*, *17*(2), 257-274. Recuperado de https://doi.org/10.1007/s10209-017-0549-5

Martínez, O. (2014). Modelos de enseñanza y aprendizaje en la Universidad: Redes sociales y aplicaciones móviles para la generación de trabajos en grupo, en Durán y Durán, (Eds.), *La era de las TIC en la nueva docencia*, 267-290. Madrid: McGraw Hill Education.

Mnkandla, E., y Minnaar, A. (2017). The Use of Social Media in E-Learning: A Metasynthesis. *The International Review of Research in Open and Distributed Learning*, *18*(5), 227-248. http://dx.doi.org/10.19173/irrodl.v18i5.3014.

Nwosu, A. C.; Monnery, D.; Reid, V. L., y Chapman, L. (2017). Use of podcast technology to facilitate education, communication and dissemination in palliative care: the development of the AmiPal podcast. *BMJ supportive & palliative care*, *7*(2), 212-217. Recuperado de http://dx.doi.org/10.1136/bmjspcare-2016-001140

Rodríguez Villalobos M. C., y Fernández Garza, J. Uso del recurso de contenido en el aprendizaje en línea: YouTube. *Apertura*, 9.1, 22-31. http://dx.doi.org/10.18381/Ap.v9n1.1018

Salas Rueda, R. I.; Lugo García, J. L., y Ruiz Silva, H. F. Perspectivas de los estudiantes sobre el uso de redes sociales en el proceso educativo superior, *Vivat Academia*, 139, 53-66. Recuperado de https://doi.org/10.15178/va.2017.139.53-66

Serrano Puche, J. (2013). Vidas conectadas: tecnología digital, interacción social e identidad. *Historia y Comunicación Social*, 18, 353-364.

Siemens, George (2004). Conectivismo: Una teoría de aprendizaje para la era digital. Recuperado de https://docs.google.com/document/d/1ZkuAzd-x1l9lDgcC1E_XSmPTOk6Gu1K2SEvXtduG3gc/edit [Traducción D. Leal (2007).

Sloep, P., y Berlanga, A. (2011). *Redes de aprendizaje, aprendizaje en red*. Comunicar, 37-XIX, 55-64.

Tang, Y.; Wen, L. L., y Wei, G. W. (2017). Approaches to multiple attribute group decision making based on the generalized Dice similarity measures with intuitionistic fuzzy information. *International Journal of Knowledge-based and Intelligent Engineering Systems*, *21*(2), 85-95. Recuperado de https://doi.org/10.3233/KES-170354

Tirado Morueta, R., y Martínez Garrido, J. M. (2010). Creando comunidades virtuales de aprendizaje: análisis del progreso de las interacciones. En Coll, C. y Falsafi, L. (Eds.) *Identidad y Educación* [Monográfico], *Revista de educación*, 353, 297-328.

Tourón , J.; Martín Rodríguez, D.; Navarro Asencio, E., e Iñigo Mendoza, V. (2018). Validación de constructo de un instrumento para medir la competencia digital docente de los profesores (CDD). *Revista Española de Pedagogía*, *76*(269), 25–54. doi: 10.22550/REP76-1-2018-02

Wamuyu, P. K. (2018). Leveraging Web 2.0 technologies to foster collective civic environmental initiatives among low-income urban communities. *Computers in Human Behavior*, *85*, 1-14. Recuperado de https://doi.org/10.1016/j.chb.2018.03.029

## AUTHORS

**Diego Calderón Garrido**
Doctor in History of Art from the University of Barcelona, graduated in Modern Music and Jazz, professor at the Faculty of Education of the International University of La

Rioja. Author or co-author of more than 50 articles and more than 20 books or book chapters focused on the different educational fields. Participation in numerous International and National Congresses. Teaching regulated at the University of Barcelona, the Rovira i Virgili University. Visiting professor at the Universidade de Coimbra and the Kecskeméti Főiskola.
diego.calderon@unir.net
**Orcid ID:** 0000-0002-2860-674.
**Google Scholar:** https://scholar.google.es/citations?user=0kZGZ48AAAAJ&hl=es

**Alicia León Gómez**
PhD in History from the University of Seville with Extraordinary Doctorate Award. FPI Predoctoral Contract of the Ministry of Science and Technology. Postdoctoral contract at the Carlos III University of Madrid. Participation in International Congresses as well as conferences and seminars. Publications in numerous indexed journals and three monographs. Principal Investigator of three Projects: "The classic past in the definition of European Identities" (Ministry of Science and Technology, Carlos III University of Madrid), "The didactics of History in the Digital Society" and "Evaluation of Digital Competence Teacher in the initial training of teachers in the area of Social Sciences and their Specific Didactics". Member of Scientific Committees together with Technical Secretary of the Revista de Historiografía (SCOPUS). Teaching regulated at the University of Seville, Carlos III University of Madrid. Currently Professor Contracted Doctor in the International University of La Rioja, Department of Social Sciences Didactics.
alicia.leongomez@unir.net
**Orcid ID:** 0000-0002-4519-8175
**Google Scholar:** http://cort.as/-8TJr

**Raquel Gil Fernández**
European PhD in Geography and History from the University of Córdoba in 2001, in the specialty of Ancient History. FPI Predoctoral Contract of the previous Ministry of Education and Culture (1996-2001). General Director, partner-founder, of the Cultural Management Company TEMPORA XXI, SL (2001-2010). Participation in International Congresses as well as conferences and seminars. Director of numerous research and transfer projects, obtained in public competitions, from the Ministry of Development and the Ministry of Culture of the Junta de Andalucía. Research member of internationally recognized projects and research groups. Regulated teaching at the University of Córdoba and currently, Contracted Professor Doctor at the International University of La Rioja, Department of Social Sciences Teaching of the Faculty of Education. Synthesis of the 150-word author's curriculum.
raquel.gilfernandez@unir.net
**Orcid ID:** 0000-0001-9881-8641
**Google Scholar:** https://scholar.google.es/citations?hl=es&user=-EeTN6UAAAAJ