The use of social networks in a Virtual University

El uso de las redes sociales en una Universidad virtual

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ABSTRACT. The aim of this paper is to discover the educational use of social networks in initial training by students of the Bachelor's Degree in Teaching and Master's Degree in Secondary Education in a non-classroom-based and exclusively online University. In this study, we have selected the most popular social networks on which the University itself is present: YouTube, Instagram, Facebook, Pinterest and Twitter. The methodology focuses on the design, validation and distribution of an online questionnaire, with a valid sample of 130 participants studying Bachelor's Degrees and 132 studying the Master's Degree. The results obtained show that the Bachelor's Degree students are more active on social networks and use them more for educational purposes than the Master's Degree students. It can be noted that Pinterest and YouTube are used the most for educational purposes, while the educational use of Facebook is declining despite being the most promoted social network in this area given its benefits in cooperative learning. Instagram and Twitter are those that are least used for educational purposes. With regards to Instagram, it may be related to the age range of our students, as it is higher than that of the regular users of this network.

RESUMEN. Este trabajo tiene como finalidad conocer el uso educativo de las redes sociales en la formación inicial por parte de los alumnos del Grado de Maestro y Máster de Educación Secundaria en una Universidad no presencial y exclusivamente on line. En este estudio se han seleccionado las redes sociales más usadas y que la propia Universidad suscita a través de su presencia: YouTube, Instagram, Facebook, Pinterest y Twitter. La metodología se ha centrado en el diseño, validación y distribución de un cuestionario on line, con una muestra válida de 130 participantes de Grados y 132 de Máster. Los resultados obtenidos muestran que los alumnos de Grado hacen un uso social más activo junto con un mayor uso educativo que los de Máster. Se puede destacar que el mayor uso educativo se centra en Pinterest y en YouTube, mientras que el de Facebook desciende, a pesar de ser la red social que más se promueve en este ámbito dado sus beneficios en el aprendizaje cooperativo. Instagram y Twitter son las que menor uso educativo presentan. En el caso de Instagram podría estar relacionado con la horquilla de edad de nuestros alumnos ya que es más elevado que los usuarios habituales de dicha red.

KEYWORDS: Bachelor's Degree, Master's, Initial training, Social networks, Educational technology.

PALABRAS CLAVE: Grado, Máster, Formación inicial, Redes sociales, Tecnología Educativa.

1. Introduction

Current studies advocate the need to find out whether university students receive sufficient training on the use of digital technology and, thus, social networks in the field of education in order to put it into practice in their future teaching work (Salas, Lugo & Ruiz, 2017). This training is directly linked to digital competence, as set out in the Libro Blanco de la Profesión Docente y su Entorno Escolar [White Paper on the Teaching Profession and its School Environment] (Marina, Pellicer & Manos, 2015) and also forms a major part of the global training of citizens integrated in a digitised and continuously metamorphosing society (Tourón, Martín, Navarro & Iñigo, 2018).

2. Theoretical background or theoretical assumptions

The European Higher Education Area demands a new profile of teachers, with highly developed reflective thinking, the capacity to carry out reviews of professional practice incorporating active methodologies (Serrat, 2015), and the acquisition of knowledge that means challenges can be taken on in the field of education, which entails the need to emphasise the acquisition of certain competences, such as digital competence. It is no coincidence that these future teachers will be responsible for their students' conscious use of technologies and for putting effective educational experiences into practice (López, Flores, Espinoza de los Monteros & Rojo, 2017).

Currently, digital competence is present in both Spanish education legislation (Order ECD/65/2015) and in Recommendation 2006/962/EC of the European Parliament. Both texts advocate the need to be promoted in the educational sphere as a driving force for the overall training of students for their future employability.

This digital competence entails a very broad concept, as mentioned above, which not only includes ICT resources but also social networks too. Haro (2011) argues that, in both Web 2.0 and Education 2.0, social networks play a major role as a "paradigm of communication and human interaction unparalleled to this day" (p. 35). Therefore, it is considered important to find out the use that these students in the study make of social networks, as a means of detecting the acquisition of this digital competence in their initial training.

This paper also includes the specific case of how these experiences are developed in virtual educational spaces, consolidated and endorsed by the European Higher Education Area, which recommended the promotion of cooperative and autonomous learning and the facilitation of learning through virtual campuses and other resources in this regard (Merma, 2008), aimed at achieving the necessary change in educational paradigm to place emphasis on student learning. Virtual educational environments have their own resources and platforms. However, the best approach is to combine the use of such with other resources (Aguaded, Guzmán & Duarte, 2016).

2.1. The use of social networks at university

Calderón-Garrido, Forés Miravalles and Gustems-Carnicer (2015) establish that the analysis of competition along with the study on the use students make of social networks allows us to verify their adaptation to the world of work in an increasingly digitised society. Therefore, education and social networks must go hand in hand since the teaching-learning process carried out in classrooms is not currently being considered without their presence.

One of the issues that determine their usefulness for education, as argued by Gómez, Ferrer and de la Herrán (2015) is the possibility of establishing a link between the school and the students' out-of-school environment, creating the feedback effect that must be present throughout the education process. For these authors, this leads to "alternative learning that is informal and, above all, motivating, which allows each student to carry out and expand their knowledge of what most interests and inspires them" (p. 222).

To this position, with regards to the relationship between social networks and the world of education, we must link the premise defended by Sloep and Berlanga (2011) based on the fact that social networks form

learning networks, as they are:

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

This line of work was joined by the incorporation of other constructs from sociology, such as social and intellectual capital (Colás, Conde & Martín, 2015), which introduce the idea that networks include elements that cover social needs due to their contribution of human and emotional resources with an inclusive result.

It is logical in the world of science and academia for users to contact each other through networks guided by common interests and themes of their studies, using them to share all kinds of content, events, news, etc. The use of academic and professional networks is by no means contradictory with regards to the use of more generic networks. In fact, López's studies (2014) concluded that researchers who disseminate their work through social networks with a clearly scientific profile (ResearchGate or Mendeley) also have profiles on generic networks (Facebook or Twitter) and use them to disseminate their work. It is thus established that this has a positive influence on scientific dissemination and popularisation as, in this way, they achieve greater reach. In addition, some authors include the idea that the non-specificity of generic networks gives them a flexible spirit that makes them especially suitable for education, as it means they can be given very diverse uses and, in this way, different objectives can be set in each education process (Haro, 2011; González & Muñoz, 2016).

The inclusion of the use of social networks in the university classroom (and at other levels) has been a reality for some time. This is supported by different studies which advocate the need to include social networks in the world of education (Callaghan & Bower, 2012; Bernal & Angulo, 2013; Valerio, Herrera, Villanueva, Herrera & Rodríguez, 2015, cited by Salas et al., 2017), since information exchange practices and the configuration of networks, essential issues in the university environment, are facilitated by them. In spite of this, educational innovation must continue to implement the pedagogical aims of the use of social networks (López, 2016), considering not only the pedagogical benefits, but also the increase in psychological well-being (Giles & Alonso, 2016).

However, González, Lleixà and Espuny (2016) have detected that the use of social networks in the university environment, despite their benefits, is not being applied as often as would be desirable, since students lack "real models" to see how to realise the potential of their use, and teachers do not see it as an easy task to use them for teamwork or motivating students, and conclude that social networks continue to be an uncommon educational tool, even though there is no significant resistance. The same scenario is shown by Altuzarra, Gálvez and González (2018), who also detect that the use of social networks for academic purposes is not very widespread among the students in their sample, nor do they perceive that their inclusion could lead to better results and they also invite us to work in this regard to achieve good practices (renovation of infrastructures, attitude of teachers, improvement in the acquisition of digital competence, etc.). Years ago, Siemens and Weller (2011) pointed out a reason for this problem, which seems to continue to exist:

In short, the educational potential of social networks is "practically unlimited", but current pedagogical practices often fail to capture this potential, as the legacy of the one-way information flow model used in many classrooms slows down innovation. (p. 158)

Therefore, scientific literature agrees with regards to inviting reflection, given that there is currently an imbalance between the benefits of using social networks and the actual implementation in the classroom, which justifies an incipient but prolific line of research in this regard.

When reviewing the papers on experiences with social networks in the field of higher education, it can be seen that Facebook, one of the main examples, is the most chosen for innovation practices, among other reasons because of its high number of users, the fact that groups can be created and files can be uploaded and shared, its tools, etc. It comes as no surprise that, despite being a generic network, it was created at Harvard to meet the needs of its students (Perez, 2015).

At present, there are many experiences with Facebook at university given the advantages it has: it is familiar to students, as many of them already have a profile and, at the same time, it has an optimal level of privacy when dealing with closed groups. Furthermore, it has the advantage that there is no obligation to be on the same list of contacts in order to work on a specific experience (Iglesias, González & González, 2016).

The use of Facebook in higher education is supported by the fact that it is a tool for expanding upon and gaining further insight into participatory methodologies and an excellent tool for reflection and exchange (Serrat, 2015). However, despite the multiple positive effects of its use in the university classroom, some authors such as López et al., (2017) observe, in reference to Facebook, that "some of the qualities of social networks can come into conflict with current teaching paradigms, as these networks are informal communication channels and poorly structured spaces for academic activities" (p. 134), and therefore it is appropriate to expand upon such experiences in order to establish good practices.

In the case of Instagram and Pinterest, there is still little literature on their academic use, as although their great potential is recognised, there are not a lot of experiences that have been compared, possibly as they have reached a high number of users in more recent times although their use has grown exponentially. Pinterest is a collection of images that are grouped together on boards, which can be followed or recommended, with great visual orientation (Ciamodo, 2016). This same author is aware that their great educational potential has not yet been exploited. Instagram also allows you to upload images and videos and then share them on other networks. Below we will see the use made of them at the University in our study.

Twitter is a social network that operates as a microblogging service. It has a high number of users and is easily accessible on mobile phones. From the point of view of its educational use, for López, Maneu, Formigós and García (2013), this network allows for easy individual monitoring of students, which encourages their participation, motivation and reflection. Tur, Marín and Carpenter (2017) researched the different teaching innovation practices carried out with Twitter, compiling the existing literature that detects strengths such as the improvement of formal and cooperative learning, the creation of learning communities and a tool that improves the development of teachers, as well as weaknesses such as the possibility that the information flow may be too overwhelming for some users. López and Tascón (2013) emphasise the versatility of this network by compiling different experiences with different objectives and scopes, highlighting that this microblogging network helps to increase students' level of commitment, as well as their active participation.

As we shall see later, the case of YouTube is particularly interesting for our study, given the intense use at the university in the case at hand. Rodríguez and Fernández (2017) believe that it is an excellent free resource that develops digital competences, since the use of videos is an important part of personal learning environments in virtual environments, in addition to being one of the most "officially" accepted platforms for sharing educational videos at university level. Emphasising the cooperative nature of this network, Sádaba and Rendueles (2016) highlight its nature as an open medium that universalises the possibility of to produce, play and download, which leads to infinite possibilities for education.

2.2. The pedagogical model of the International University of La Rioja and the importance of using social networks in e-learning

This study was carried out among students at the International University of La Rioja (UNIR) where the teaching system is 100% online. This institution identifies itself with a flexible pedagogical model supported by the student's autonomous use of a virtual campus based on interactivity. This model focused on constructivism

(Maraver, Hernando & Aguaded, 2012), both individual and social, is made up of learning communities whose characteristics are defined by Tirado and Martínez (2010) and in which social networks are vital, since along with other tools, they allow for the three key aspects for setting up such communities: making progress in a common project, sharing resources and tools related to knowledge, and working as a team to achieve common goals. For Candela, Aldeguer and Merma (2015), the use of ICT in online educational methods helps to develop competences inherent to teaching, related to educational planning and didactic interaction, and gives the student autonomy. Alonso and Blázquez (2009) invite us to gain further insight into these virtual university scenarios, since they represent "a new concept of space, communication and human relations" (p. 2)

The UNIR students (residing in both Spain and other countries) in the sample form part of, as has already been stated, a strictly virtual environment. Domínguez (2011), analysed the deterritorialisation/physical disembodiment dimension, two aspects in which physical presence is not necessary in order to establish connections and which remove any physical barriers that are indeed imposed in classroom-based environments. In this type of new environment, the creation of virtual networks is essential for the development of personal contact.

For Alonso and Blázquez (2010), e-learning systems have created a new ecology of learning that enables alignment with the EHEA and the application of new practices that are very different to the classic lecture. Lucero, Alonso and Blázquez (2010) detect a clear agent of change in virtual teaching models and emphasise the importance of teachers becoming aware in their initial training of the importance of dealing with this type of innovation which, along with the use of networks, entails the use of new open spaces for interaction and communication. Suárez (2011) considers that textuality, cooperation and asynchrony can also occur in classroom-based training, but that it is in a virtual environment where they can occur in optimal conditions. In the same vein, Candela et al. (2015) highlight the importance of creating social environments and common spaces in these online contexts to counteract the potential isolation of students, and Suárez (2011) states that the socio-cultural nature of virtual learning should not be neglected.

In the case at hand, students can attend live classes through the Adobe Connect platform, which are recorded and uploaded to a virtual repository so that they can be viewed as many times as required. Both bachelor's and master's degree students undertake collaborative activities that strengthen their autonomy and intensify the practical training essential to carry out their future professional work.

Therefore, this virtual environment strengthens and promotes the use of social networks as a means of social communication among students, as it is very coherent with the collaborative and student-centred pedagogical model used by this University. Social networks complement the learning communities offered by the institution itself through its virtual campus—wikis, collaborative projects using onedrive, forums, etc.—(Gil-Fernández, León-Gómez & Espigares, 2016).

UNIR students are typically a mean age of 33 years old, with 61% women and 39% men. This difference in gender is more significant in the bachelor's degrees of the Faculty of Education than in the master's degree. The majority have previous studies and actively form part of the labour market and, thus, their objectives when starting to study at this institution are to expand upon their training or improve their current employment situation.

Taking into account analyses such as that of Rojas (2014), it should be considered that the use of social networks becomes especially "necessary" in non-classroom-based education, since it facilitates personal relationships and produces a motivating effect, which also creates emotional ties of belonging to a group (Area & Pessoa, 2012). In the teaching-learning process, establishing such connections is fundamental.

UNIR has its own official profile on a Facebook page, both for the University and its magazine, where questions related to its studies, articles of interest, events, etc. are published. It also has an additional page managed by a community manager from the institution itself, helped by some students on a voluntary basis. It

is offered as a space to switch off. Students use it socially to keep in touch and discuss topics of common interest—cinema, meet-ups, events, etc.—but linked to their studies and future professions, and it is also used specifically for academic issues, such as opinions on personal experiences of the degrees, study techniques and learning strategies, etc. It has almost 4,700 members and a high rate of activity. This page provides a list of all the other groups linked to UNIR, practically one for each subject in each of the bachelor's degrees taught, which are intensely used for academic purposes: exchange of notes, queries, comments on selective tests, teaching resources, etc.

Marchetti and Valente (2018) assert that in virtual teaching, the visual elements that facilitate understanding take centre stage, thus making YouTube a fundamental resource. The use of YouTube is intense in this virtual university, in line with a proposed pedagogical model that seeks student autonomy and encourages them to take an active and flexible role in the teaching-learning process. Teachers usually choose videos from this social network to support their classes and, in the same way, students use tutorials on issues such as citation regulations, conceptual contents, fragments of films and short films related to their studies, etc. Rodríguez et al. (2017) analysed the use of this network in a non-classroom-based postgraduate study and concluded that the students who used this network for educational purposes obtained better results, as it is an interesting resource for obtaining content. Apart from this use, the university has a YouTube channel with over 31,000 subscribers offering videos related to the subjects taught, lectures, summaries of academic training events, explanations on the methodology of the university, interviews and events of the Aula de Cultura [Culture Room], etc.

The UNIR Instagram profile has 5,322 followers and the Pinterest profile 131, both networks are used by students and members of the Institution alike, but only issues related to the personal achievements of students or events promoted in the UNIR, such as conferences, plays, graduations, etc., are uploaded.

The Twitter profile has 20 thousand followers and it is the network that deals with the most educational information and on which relevant topics are constantly being uploaded and exchanged.

3. Methodological design

The aims of this research paper are to analyse and compare the educational use by students of the Bachelor's Degrees in Teaching and the Master's in Secondary Education of the social networks promoted by a university in a completely virtualised environment. The networks analysed (Facebook, Instagram, Pinterest, Twitter and YouTube) were chosen because the University itself has official and institutional accounts on such.

In order to achieve the proposed aims, two ad hoc questionnaires were designed and validated (available at https://reunir.unir.net/123456789/6695) in such a way that it would be possible to attend to the specific characteristics of the Bachelor's and Master's Degree students. They were provided online through the platform formsite, setting a period of three weeks for response. The participating students signed to provide their free, prior and informed consent implicit in the questionnaire itself, knowing that they could leave the study at any time they wished. The collection and subsequent analysis of the results were carried out using the quantitative analysis software Statistic Package for Social Science (SPSS) version 21.0.

3.1. Sample

The sample analysed consisted of 130 students studying the UNIR's Bachelor's degrees in Early Childhood and Primary Education (19 men and 111 women) and 132 students from the different specialisations of the UNIR's Master's in Teacher Training (52 men and 81 women). The mean age was very similar in both cases (M = 33.35; SD = 7.323 for the Bachelor's Degrees and M = 33.32; SD = 7.455 for the Master's Degrees).

The questionnaire showed excellent reliability according to Cronbach's Alpha scale in both total responses (.901) and for Bachelor's Degrees (.889) and Master's Degrees (.923).

4. Results

In general, as can be seen in Graphic 1, the data showed that there was a greater tendency to use social networks among Bachelor's Degree students than Master's students (z = -6.544; p < .001).
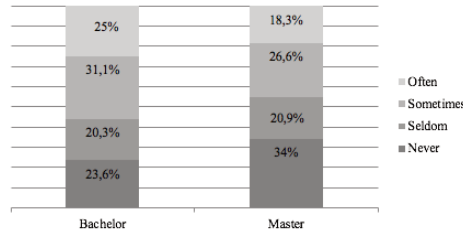
Graphic 1. Distribution of the use of social networks. Source: Own elaboration.

The comparison of the data according to gender showed that in both cases there were statistical differences (z = -2.456; p = .014 for Bachelor's Degrees; z = -3.216; p = .001 for the Master's Degree). In both cases it was women who used social networks the most.

As shown in Graphic 1, the data showed how there was a distinct profile of students using Facebook and Instagram and another group using Pinterest and YouTube (Graphic 2).
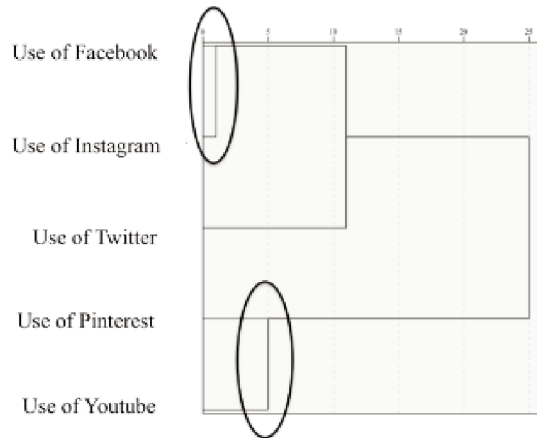
Graphic 2. Dendrogram on the use of social networks in education. Source: Own elaboration.

The analysis of the data according to each social network showed many more differences. Table 1 shows the frequency and response rate in each of the social networks, both in the Bachelor's and Master's degrees.

| | Have | | | | Use in education | | | | | | | |
| | No | | Yes | | Never | | Seldom | | Sometimes | | Often | |
	Bachelor	Master	Bachelor	Master	Bachelor	Master	Bachelor	Master	Bachelor	Master	Bachelor	Master
Facebook	18	16	112	116	31	56	35	37	34	16	12	7
	13.8%	12.1%	86.2%	87.9%	27.7%	48.3%	31.3%	31.9%	30.3%	13.8%	10.7%	6%
Instagram	50	59	80	73	39	47	20	12	11	6	10	8
	38.5%	44.7%	61.5%	55.3%	48.8%	64.4%	25%	16.4%	13.8%	8.2%	12.5%	11%
Pinterest	40	64	90	68	8	25	29	15	31	21	22	7
	30.8%	48.5%	69.2%	51.5%	8.9%	36.7%	32.2%	22.1%	34.4%	30.9%	24.4%	10.3%
Twitter	62	52	68	80	25	22	24	34	13	15	6	9
	47.7%	39.4%	52.3%	60.6%	36.8%	27.5%	35.3%	42.5%	19.1%	18.8%	8.8%	11.3%
Youtube	33	28	97	104	6	12	24	27	50	54	17	11
	25.4%	21.2%	74.6%	78.8%	6.2%	9.1%	24.7%	26%	51.5%	51.9%	17.5%	10.6%

Table 1. Distribution of frequency and response rate in each of the social networks. Source: Own elaboration.

The data showed statistical differences in the use of social networks for educational purposes between Bachelor's Degree and Master's students (z = -4.281; p < .001), with the former being the ones who use them the most.

Thus, in the event of having an open account on a certain social network, it was observed that Master's students were more active on Facebook, Twitter and YouTube, while Bachelor's Degree students were more active on Instagram and Pinterest. In the case of Pinterest, statistical differences were also observed (z = -2.925; p = .003).

Regarding use for educational purposes, in the case of Facebook statistical differences were detected (z = -3.729; p < .001), with Bachelor's Degree students being the most accustomed to this practice. Despite this, none of the groups seemed to be regular users. With regard to gender differences, it was observed that women on the Master's Degree used Facebook more regularly for educational purposes than men (z = -2.154; p = .031).

In the case of Instagram, despite not showing statistical differences, greater use was observed by Bachelor's Degree students. In both cases, there are a multitude of students who never use this network (48.8% for Bachelor's Degree students and 64.4% for Master's students).

Pinterest, both in Bachelor's Degrees and Master's, although not as popular as other networks, was indeed shown to be widely used among students who had an account. This data shows students have a strategic presence on this network, the majority of whom, presumably, have an account on Pinterest in order to be able to use it for such educational purposes. In any case, it is more common among Bachelor's Degree students than Master's students, reflecting statistical differences (z = -3.526; p < .001). The data also showed statistical differences according to gender among Master's students (z = -3.134; p = .002), with women being the most regular users.

As far as Twitter is concerned, most students stated that they never used it or only used it occasionally. The data showed that it is a little more common among Master's students.

YouTube seemed to be the network most used for educational purposes both for Bachelor's Degree and Master's students, although Bachelor's Degree students are the more regular users. The data showed statistical differences according to gender among Master's students (z = -2.064; p = 0.039), with women being shown to use it more.

5. Discussion and Conclusions

Regarding the use of social networks, there is a greater tendency among the Bachelor's Degree students than Master's students (z = -6.544; p < 0.001) and, moreover, it is also the Bachelor's Degree students who use them more often for educational purposes (z = -4.281; p <0.001). The students in both studies who use social networks are mainly women (z = -2.456; p = 0.014 for the Bachelor's Degrees; z = -3.216; p = 0.001 for the Master's Degree). In addition, bachelor's degree students were more active on Instagram and Pinterest, while master's students were more active on Facebook, Twitter and YouTube, with statistical differences on Pinterest (z = -2.925; p =0.003).

Furthermore, in both studies students use Pinterest and YouTube the most for educational purposes (Graphic 2). However, these results are contradictory, since Facebook is the network whose use is promoted the most in education given the benefit it has for collaborative learning, as it enables the implementation of participatory methodologies in which exchange and reflection are some of the most representative benefits (Pérez, 2015; Serrat, 2015; Al-Samarrie & Saaed, 2018); even more so in this type of virtual environment with a great variety of students residing in different geographical areas of Spain (Wamuyu, 2018) and, thus, its use counteracts their isolation (Candela et al., 2015).

In the case of Facebook, there are no statistical differences (z = -3.729; p < 0.001), but we can point out that despite the fact that bachelor's degree students are the most regular users of this network, its educational use is greater among female master's degree students (z = -2.154; p = 0.031). These results are in line with the real use made of UNIR's Facebook profile, which has only 4,700 followers. If we expand upon the position of Martínez (2014), regarding the potential of the use of this resource for learning strategies and, therefore, the socialisation of students (Colás, Conde & Martín, 2015), we can link it to the direct use of the profile of the University itself. However, it is clear that its educational use is not as widespread among these students and, therefore, its benefits are not reaped, such as the collaborative learning advocated by Al-Samarrie and Saed (2018) or by Wamuyu (2018), the latter focusing on a virtual environment such as that of the University in the study at hand.

The use of Instagram is not very widespread among the students of both studies (48.8% for Bachelor's Degree and 64.4% for Master's students). Nevertheless, despite the little use they make of this network, we can observe that Bachelor's Degree students make the greatest educational use of it, although the statistical difference is not significant. This low level of educational use is confirmed by the profile of this UNIR network: it only has 5,322 followers and its use is restricted to uploading photos of the students and the institution itself, as well as events in which they have taken part. We must bear in mind that, despite considering Instagram to be one of the most widely used social networks by young people (Kidd & McIntosh, 2016), the mean age of the students in our sample would not fit in with that of the regular users of this network (the mean age was very similar in both cases M = 33.35; SD = 7.323 for the Bachelor's Degrees and M = 33.32; SD = 7.455 for the Master's Degrees).

Pinterest does not appear as a very common network among these students and this is in line with what is defended by Ciamodo (2016), which highlights its little use in spite of its educational possibilities. However, it can be noted that despite this, students who have an account on this network make greater educational use of it. This may be associated with the fact that they have it mainly to use it for educational rather than social purposes. This use shows a statistical difference since the students who use it the most are bachelor's degree students (z = -3.526; p < 0.001) and, in relation to gender, women studying master's degrees (z = -3.134; p = 0.002) contrast with the majority of men studying bachelor's degrees (Z = 2.762; p = 0.006). This low level of use is also reflected in the number of followers of the UNIR profile (131) and in the type of content, since they mainly focus on events organised by the institution and, to a lesser extent, educational topics.

Twitter is the least used among students (31.8% said they never used it for academic purposes) and the greater absence among Master's students is of note (70% never or almost never used it), despite the fact that Tur, Marín and Carpenter (2017) along with Koseoglu and Köksal (2018) highlight its positive effects on motivation, reflection and active participation. This low level of use is in contrast to UNIR's active profile, as not only does it have 20 thousand followers but it is also mainly educational content that is exchanged. With regards to gender, statistical differences were detected (z = -4.540; p < 0.001) with women being the ones who used it most for educational purposes.

In the case of YouTube, the results obtained on its educational use reveal that it is the most used (Figure 2), with 65.6% of students using it often or always. This use provides students with infinite possibilities for learning as pointed out by Sábada and Rendueles (2016) and is also directly linked to the use of this University's profile. This is in contrast to the results of the study by Altuzarra, Gálvez and González (2018), which detected the little use of the aforementioned by the students in their sample. In this case, bachelor's degree students use this network the most and, according to gender, the women on the master's degree can be highlighted (z = -2.064; p = 0.039). However, current studies focusing on this social network, such as that by Rodríguez and Fernández (2017), focus on the positive aspect of learning outcomes obtained by students who have used it with an educational approach. However, in our study we have focused on its educational use and not on the learning outcomes obtained through its use. This majority use is linked to the benefits it brings to learning, not only because of the prevalence of visual elements that aid the assimilation of content (Marchetti & Valente, 2018), but also because it is advantageous in a virtual environment such as that of this University.

Therefore, we can conclude that the data analysed are consistent with what was expressed by Rojas (2014), who believes that the social networks used in non-classroom-based educational environments allow for a much more personal human connection than other platforms, which is much more motivating. In addition, as considered by Siemens (2004), such use fosters the maintenance of connections, which is fundamental for learning and knowledge. In the case of our sample, all students have at least one active social network and all of them use it on occasions for educational purposes.

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