Comparing US and Spanish student teachers' perceptions on social media

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Abstract

This study investigated social media use for educational purposes in the contexts of two countries where social media is
pervasive, many people manage multiple social media accounts, and the use of diverse services is relatively common. Student
teachers (N=153) from two universities in the USA and Spain participated in course-based learning activities with social media,
and subsequently were asked about their experiences with and perceptions of such educational social media use. Quantitative
data were collected via an online survey featuring primarily Likert scale items, and complemented by qualitative data based on
written reflections. Results show positive perceptions in general regarding educational uses of social media among student
teachers from both contexts, although some differences and nuances are observed between the two countries: for example,
use of some services were only detected among US students, who at the same time showed more positive attitude towards
Twitter and Pinterest. Conclusions reflect on the importance of considering and seeking to influence student teachers' attitudes
and beliefs regarding educational uses of social media.

Keywords: Social media; teacher education; comparative study.

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1. Introduction

Social media use is widespread, and in particular in the case of the United States and Spain. According to the "We Are Social" report (2015), 88% of the population in the U.S.A. has access to the Internet, compared to 81% in Western Europe. The 2014 Sociedad de la Informacion en Espana report (Fundacion-Telefonica, 2015) states that 67% of Spanish Internet users utilized social media, whereas as least 79% in the U.S.A do so according to the Pew Research Center Social Media Update (2016). The Global Internet Report (Internet Society, 2015) forecasts that mobile Internet device penetration in the U.S.A. and Western Europe will reach virtually 100% of the population by 2017, thus making social media applications readily available to almost all citizens in these regions. The following table summarises recent data on the use of different social media among online adults in the U.S.A. and Spain:

Table 1. Use of various social media

Source	Facebook	Twitter	Instagram	Pinterest
U.S.A. 2016 (Pew Research Center report, 2016)	79	24	32	31
Spain 2014 (International Advertising Bureau, 2015)	96	56	25	7

This study explores both the usage of social media by student teachers from the USA and Spain, and their perceptions of these tools for educational aims. It is contextualised in an international study, from a comparative perspective, in which participants were asked to use Twitter (Carpenter, Tur & Marin, 2016). Thus, in order to better understand student performance, a wider picture of the topic was needed. This article also reports on the results of the work done specifically using Twitter.

2. Social media in Education

Nowadays using social media is one of the most common online activities of Internet users (Jackson & Wang, 2013). The rise of social media has created interest among many educators regarding learning activities based on the potential of these technologies to support communication and collaboration. There is a growing body of research that explores different aspects of social media in single contexts. For instance, there are studies relating the use of social media to factors such as personality (Orchard, Fullwood, Galbraith & Morris, 2014); uses and gratifications theory (Raacke & Bonds-Raacke, 2008); or social and cultural influences (Kim & Yun, 2007). Other studies focus on particular educational uses of social media, including the support of informal learning (Ebner et al., 2010), critical thinking skills (Herro, 2014), self-regulated learning (Matzat & Vrieling, 2015), and educators' professional development (Kimmons & Veletsianos, 2014).

2.1. Social media in the educational systems of the U.S.A. and Spain

Social media has been experimented with in the U.S. and Spain in different forms. In the United States, Nowell's (2014) findings suggested that social media use with students can improve student-teacher relationships and extend learning beyond the classroom. Social media use by U.S. educators appears to have been on the rise in recent years (Stevens, 2014; University of Phoenix, 2014). Research on the educational use of social media suggests these tools can facilitate participation in online communities of practice that enhance communication and collaboration (Vavasseur & MacGregor, 2008; Wesely, 2013), combat feelings of isolation (Carpenter & Krutka, 2014), and provide access to resources that may not otherwise be available (Dede, Ketelhut, Whitehouse, Breit & McCloskey, 2009). Course-based social media use in U.S. settings has been shown to contribute to improvement in outcomes such as grades (e.g., Junco, Heiberger & Loken, 2011), student engagement (e.g., Elavsky, Mislan & Elavsky, 2011), and collaboration (e.g., Carpenter, 2014).

In Spain, in the first years of the 2000 decade, a national programme, called first *Internet en el aula* and later *Escuela 2.0*, was developed in order to provide schools with hardware and Internet connection. At the same time, an important programme for in-service teachers was carried out in order to develop teachers' digital skills (de Pablos, 2012). Since then, many teachers have engaged in the design of diverse

learning activities with social media as reported by Basilotta and Herrada (2013). However, only partial innovation has been achieved (Area, 2010) and more work on social media for learning aims seems still to be required.

3. Research

3.1. Context and Participants

The study was carried out in the campuses of Majorca and Ibiza of the University of the Balearics Islands in Spain and in Elon University in the United States. All students were preparing to be teachers in a variety of areas and levels. In Spain, most of them were first and third year undergraduates (*n*=85) fand, in addition, in the case of Ibiza (*n*=15). The participants (*n*=53) from Elon University were all undergraduates in years two, three and four of their programme.

3.2. Learning activity

The learning activity was carried out through the microblogging platform Twitter. Students were asked to make some tweets weekly as well as to follow classmates and in-service teachers. At the end of the semester, the students were requested to answer a questionnaire and submit written reflections on their perceptions of social media and Twitter for educational uses.

3.3. Research questions

This work aimed to explore the differences in uses of and beliefs regarding social media among student teachers in the U.S.A and Spain. Thus, this study aims to answer the following research questions:
1. Are there differences in the way U.S. and Spanish students use Social Media?
2. Are there differences in the way U.S. and Spanish students perceive the educational use of Social Media?

3.4. Methodology and Instrument

The research is based on a comparative approach in which both quantitative and qualitative data were gathered. A Likert scale was built based on an earlier one by Carpenter and Krutka (2014; 2015). The new version of the instrument was enriched by new existing literature as well as lessons learned in previous experiences. The survey was first written in English and then translated into Spanish and subsequently revised by colleagues from both Universities. Also, written reflections were mandatory for students to reflect in greater depth on the possibilities of the diverse social media services for education.

4. Results

The survey was answered by 153 participants: 100 education students from Spain (65.4%) and 53 from the U.S. (34.6%).

4.1. Research Question 1: Are there differences in the way U.S. and Spanish pre-service teachers use Social Media?

Table 2. What social media services do you use?

	Total number Spain	% Spain	Total number U.S.	% U.S.	$\chi^2(1)$	*p* value
Facebook	92	92	53	100%	4.474	.034
Pinterest	10	10	36	67.9%	55.278	<.001
Linkedin	5	5	16	30.2%	18.56	<.001
Whatsapp	96	96	8	15.1%	104.159	<.001
GroupMe	0	0	43	81.1%	112.847	<.001
Instagram	62	63	39	73.6%	2.072	.150
Twitter	51	51	32	60.4%	1.503	.472

In both countries, Facebook and Twitter were the most popular social media. There were a number of significant differences in the use of social media, apart from these two services. The U.S. participants

were also active in Pinterest, Linkedin and GroupMe, while Spanish participants were more likely to use Whatsapp and Facebook. Consequently, there appeared to be variation in the two groups of students' general use of social media.

4.2. Research Question 2: Are there differences in the way U.S. and Spanish pre-service teachers perceive the educational use of Twitter and other social media?

Table 3. Which of the following social media services do you think have educational uses? (Check all that apply)

	Total number Spain	% Spain	Total number U.S.	% U.S.	$\chi^2(1)$	*p* value
Facebook	33	33%	22	41.5%	4.436	.035
Pinterest	15	15%	35	66%	41.015	<.001
Linkedin	8	8%	25	47.2%	31.418	<.001
Whatsapp	14	14%	3	5.7%	2.439	.118
GroupMe	5	5%	16	30.2%	18.56	<.001
Instagram	24	24%	13	24.5%	0.005	.942

Chi-square tests for association indicated there existed statistically significant association between nationality and perceptions of the educational usefulness of several different social media sites. U.S. participants were more likely to see educational uses for Facebook ($\chi^2(1)$=4.436, p=.035), Pinterest ($\chi^2(1)$=41.015, p<.001), Linkedin ($\chi^2(1)$=31.418, p<.001), GroupMe ($\chi^2(1)$=18.56, p<.001). In a different survey item, participants were also queried regarding the educational usefulness of Twitter, and a Mann Whitney *U* test determined that again U.S. participants displayed significantly more positive attitudes (*U*= 1351.5, *z*= -5.214, p < 0.001). Therefore, it appears that the U.S. participants' beliefs were more positive regarding the educational use of various social media than the Spanish participants' beliefs. In their written reflections, several participants commented on the use of social media for learning aims by comparing diverse platforms. A Spanish participant contrasted Twitter with Facebook:

First of all I would like to talk about Twitter, a totally unknown tool ... I thought it was similar to Facebook so I thought I had enough with one network. I also thought that Twitter was for gossiping about what celebrities publish and it didn't interest me. My opinion has changed totally because Twitter is a tool that you can use to find information about concrete topics. Facebook is to connect with your friends and you can also have information but not about lots of topics like education.

A handful of participants from both contexts did note that they found Twitter to be overwhelming at times. For example, a U.S. participant commented, "I like some of the Twitter aspects, but overall I was not a fan of how overwhelming it can be."

5. Discussion and Conclusion

Our results suggest that students from two different countries perceived that social media can have a meaningful impact in the educational sphere. The progressive development of the Internet and social uptake of networks supporting collaborative and self-determined learning have created a context in which experimenting with and enhancing educational experiences with social media is worthwhile.

We gathered data from education majors who had engaged in required learning activities with Twitter, and who were asked to reflect on their attitudes and beliefs towards the possibilities of social media in education. This is a relevant study since an initial evaluation of students' perceptions on social media can be informative for future learning activities in which these tools are used with educational aims. According to Hermans, Tondeur, Braak and Valcke (2008) student attitudes and beliefs about educational uses of technology are created at an early stage, and they can become significant barriers for future uptake (Ertmer & Ottenbreit-Lefwich, 2013). This research is in line with research about

attitudes and beliefs for successful ICT integration in education (Teo, 2009; Tirado-Moreta & Aguaded-Gomez, 2014).

This study's findings on social media usage partially align with averages offered by different reports from both countries. First of all, Facebook is considered to be the social network with the greatest uptake (Pew Research Center, 2015; IAB, 2015), which is confirmed by both U.S. and Spanish students from our sample. According to the reports by Pew Research Center (2016) and IAB (2015) it can be observed that picture-based networks such as Pinterest and Instagram have greater penetration in the U.S., than in Spain, and this was in line with the results showing a greater usage by the U.S. students of these picture-based networks. Also, the fact that the general average Twitter usage among Spaniards represents approximately 50 per cent of Internet users (IAB, 2015) is in line with the half of the participants in Spain who indicated that they had a previous Twitter account for non-academic purposes.

Future implementations of educational activities with social media should explore the possibilities of collaboration among students from different countries. Social media have an inherent potential for facilitating global interaction, although in this case students from these two countries have independently participated in similar activities without interacting. It would be a challenging new iteration of the activity to take advantage of this research cooperation to facilitate collaboration and interaction among students across national borders. Thus, further research could explore the possibilities for the creation of international communities of students, or specifically education majors, collaborating and sharing for learning aims. Such multicultural social media experiences could help participants develop a sense of identity as a world citizen or educator. New studies could also explore whether patterns in technology-supported communication and collaboration have evolved with the development of social media services over time or whether there might exist cultural differences in these patterns (Ryymin, Palonen & Hakkarainen, 2008).

Limitations of the study are derived from the learning activity per se. The mandatory task was based on Twitter whereas the questionnaire made them reflect on social media in general. Since it is almost impossible to ask students to use all the platforms in existence, it is necessary for students to be able to reflect on general terms based on a particular experience. Thus, from now on, further comparative studies will explore the nuances of the impact of diverse social media tools observed in this step of research.

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