



A new era of communication in Higher Education. Facebook as a marketing tool

Una nueva era de la comunicación en la Universidad: Facebook como herramienta de marketing

BLÁZQUEZ, Félix 1; RODRÍGUEZ, Clide 2 & TEIJEIRO, Mercedes 3

Received: 20/11/2019 • Approved: 08/02/2020 • Published: 27/02/2020

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ABSTRACT:

The aim of this study is two-fold: on the one hand, to identify the importance of social media in improving knowledge exchange, on the other hand, this paper explores the realities of Facebook usage in five Spanish universities and its relevance. The chosen research method was documentary analysis, consisting of the observation of the official websites of the top five universities in Spain and their corresponding fan pages. The findings reveal that there is a clear need for the development of more effective marketing strategies aimed at the creation of an online social space to generate greater opportunities for communication.

Keywords: communication; high education; content; visibility; interactivity

RESUMEN:

El objetivo de este estudio es doble: por un lado, identificar la importancia de las redes sociales para mejorar el intercambio de conocimiento, por otro lado, este documento explora las realidades del uso de Facebook en cinco universidades españolas y su relevancia. El método de investigación elegido fue el análisis documental, que consistió en la observación de los sitios web oficiales de las cinco universidades más importantes de España y sus correspondientes páginas de fans. Los resultados revelan que existe una clara necesidad de desarrollar estrategias de marketing más efectivas dirigidas a la creación de un espacio social en línea para generar mayores oportunidades de comunicación.

Palabras clave: comunicación; educación superior; contenido; visibilidad; interactividad

1. Introduction

Social media is a phenomenon that promotes new communication options for citizens and opens a new form to connect emotionally with their on-line audiences. They can communicate and interact with others by producing their own content and presenting it to a potentially broad audience (Crespo-Pereira; Martínez-Fernández; Campos-Freire, 2017).

The incursion of ICT in modern society is an obvious and irreversible trend (Baelo & Canton, 2010). The rapid growth of social networks, wikis, blogs or RSS (Rich Site Summary), amongst others, is transforming the way to communicate and interact by the academic community (professors, students, researchers, university libraries, prospective students, companies, etc) (Marcelo, Yot, & Mayor, 2015; Gewerc, Montero, & Lama, 2014; Guerra, Gonzalez, & Garcia-Ruiz,

2010; Prendes, Castaneda, & Gutierrez, 2010). This situation implies the need for a change in the consumption of information which affects the content and the way in which are consumed, thereby generating a new relevant informative ecosystem (Campos-Freire, & Rúas-Araújo, 2016).

Research into the role of Facebook in higher education has consolidated significantly over the last years and covers a range of topics (see review by Wilson, Gosling, & Graham, 2012), from the use of Facebook as an effective teaching and learning tool (Stirling, 2016; Sobaih, Moustafa, Ghandforoush, & Khan, 2016; Manca, & Ranieri, 2016) and as a way of boosting student engagement (Sobaih, Moustafa, Ghandforoush, & Khan, 2016; Sugimoto, Hank, Bowman, & Pomerantz, 2015), to the impact of Facebook in terms of academic achievement and its social impact (Kirschner, & Karpinski, 2010; Ellison, Steinfield, & Lampe, 2007).

There is incipient research activity into the use of social media by higher education institutions to market themselves to students and stakeholders (see review by Nyangau, & Niamboue, 2012). Communication with potential students and their families is crucial for universities' long term development (Manca, & Ranieri, 2016). In this context, Constantinides and Stagno (2011) carried out a study to determine the impact that social media have on the decision to attend a particular college. The findings confirmed that the majority of students do not seem to use social media for obtaining admissions-related information as they ranked social networking sites last on the list of resources that affect their college decisions. Stageman (2011) also investigated how prospective students use social media to communicate with higher education institutions after prospects have made the decision to attend. In turn, higher education admissions officers are using social media to connect with potential students and market their institutions (Barnes, & Lescault, 2011; Barnes, & Mattson, 2010; Merrill, 2010; Varsity Outreach, 2011).

The findings also revealed that Facebook is the most widely used because of its features. Its fan pages, for example, include wall posts, discussion boards, photos, videos, and many other applications. People who view the page can choose to become fans of your organization which is shown on their personal profile page, and it creates a marketing effect because it allows institutions to target not only prospective students who 'like' the institution's page, but also the friends of these prospective students are likely to become fans themselves.

That is why in this paper we look in more detail at the role of social media in universities and more specifically we adopt a network approach based on the relevance of universities websites in Facebook, as a communication tool and a form of social status and reputation. We believe that Facebook is appropriate for the current study as it is the most popular online social networking site among university students.

We conducted our empirical study in five universities in Spain. Four of them are considered as the most important Spanish universities in rankings (QS World University Rankings 2015/2016) and the fifth is the 'Universitat Oberta de Catalunya (UOC)', the UOC is an innovative university open to the world. Its educational model is based on personalization and accompanying students using e-learning.

This paper contributes to the body of knowledge in relation to the use of Facebook platform as a marketing tool for higher education institutions. Specifically, it explores the most important web contents shared by the institutions analyzed and the number of links they use. Secondly, it identifies and measures the interactivity of the Facebook pages associated with the engagement and the web user response. Finally, the visibility of the Facebook pages analyzed is addressed.

2. Methodology

For the purpose of our study we used the online LikeAlyzer (<http://www.likealyzer.com/>) which analyzes the social network Facebook, measures parameters of interest for this study such as page efficiency, detects problems and proposes possible solutions; FanPage Karma (<http://fanpagekarma.com/>) which analyzes Facebook, Twitter, YouTube, Google+ and Instagram (Rodríguez, Sánchez, Kleiner, & Martínez, 2016) and Likeinspector (<https://likeinspector.com/es/>) allows for the creation of performance indicators of use for our research objectives. This is an innovative area, implying certain difficulties in obtaining the data (Babbie, 2007). The chosen research method was documentary analysis, consisting of the observation of the official websites of the top five universities in Spain and their corresponding fan pages. In accordance with the main objective of our research, the decision was taken to carry out an exploratory quantitative and qualitative study.

The research, which was conducted between 22th July and 22th August 2017, consisted of the analysis of the official fan pages of the following Spanish Universities:

Table 1
Domain registration and fan pages of universities analyzed.

University	URL and Fan Page
Barcelona	http://www.ub.edu https://www.facebook.com/UniversitatdeBarcelona
Autónoma de Madrid (UAM)	http://www.uam.es/ https://www.facebook.com/universidadautonomademadrid
Navarra	http://www.unav.edu/ http://www.facebook.com/unav/
Politécnica de Valencia (UPV)	https://www.upv.es/ https://www.facebook.com/UPV
Oberta de Catalunya (UOC)	http://www.uoc.edu/ https://www.facebook.com/UOC.universitat

Source: Own elaboration

Regarding the selection criteria, we selected five of the top Spanish universities on the QS World University Rankings and the Ranking Web of Universities for Spain (Webometrics): our choice was based on the fact that each university was located in a different city and has an official main Facebook page (Fan page). Universities with multiple local pages rather than an official one were ruled out. The following criteria were also taken into consideration: the pages had to be more than one-year-old (in order to guarantee a relatively consolidated fan base); furthermore, they had to be active during the observation period, thereby enabling us to determine the utility of the social network Facebook as a communication tool (Valerio, Herrera, Herrera, & Rodríguez, 2014).

3. Results

Adapting their strategies to the new online communication models is essential for any company, making an official page on Facebook an absolute necessity (Rodríguez, & Sánchez, 2014). However, a mere presence is insufficient, as efficiency depends, amongst other factors, on the correct handling of profiles.

In view of the objective of our research, we opted to follow the analysis criteria previously used by Huertas, Setó and Míguez (2014) and Rodríguez, Rodríguez and Martínez (2015) regarding content, visibility and interactivity, taking into consideration the following indicators:

Table 2
Aspects relating to each item.

Content	Visibility	Interactivity
Post format	Number of fans	Engagement or loyalty
Post day	Post day	Web user
Information type	Average number of Likes, Comments and Shares	Response or Reactions
	Timing	
	Post length	
	Hashtags	
	Pages liked	

The study of the various indicators was conducted independently; however, some are included in more than one item, as in the case of Shares, which are measured both in the loyalty and visibility parameters, or post day, that offers an insight into content efficiency as well as visibility.

3.1. Facebook Contents

A key element for the Web positioning by the higher education institutions is content creation and consumption patterns (Gómez-Hernández, 2013). Content marketing has emerged as a key priority in corporate marketing strategies: original, unique and creative quality content tailored for each client that will be positively received and rewarded with some form of interaction, thereby enhancing online reputation and relevance, which in turn will lead to larger audiences, and retain high value users through loyalty and potential virality, boosting engagement, brand awareness and a stable and long-term relationship with the target market.

In this sense, post format, post day and information type included on the fan pages are all closely linked to the success of the contents included and therefore with achieving the objectives set. In relation to post format and its influence (see Table 3) our analysis revealed that all the universities channel major efforts into this area, as post variety enables them to increase interaction with their target markets.

Table 3
Facebook. Post format, day and rate.

	Barcelona	Madrid	Navarra	Valencia	Oberta
Posts Format Rate*					
Photos	70.8%	100%	25%	54.2%	29.2%
Video	4.2%	---	8.3%	20.8%	16.7%
Link	25%	---	66.7%	25%	50%
Status	---	---	---	---	4.2%
Others	---	---	---	---	---
Posts day					
	0.52	0.94	0.39	0.40	0.44

* At the time of analysis (22.08.2017). LikeAlyzer 2017
Source: Own elaboration

They all publish photographs, links and videos, with the exception of the Universidad de Madrid which uses only photos. Particularly worthy of note is the Universitat Oberta de Catalunya, which uses four different formats, although priority is given to links (50%). Of particular importance are those posts that feature images because, as posited by Cárcamo and Marcos (2014), the time it takes for them to be noticed is generally short and they also require little foveal attention, as the memory can easily complete comprehension of the image, thereby enhancing both visibility and interaction. The Universitat de Barcelona (70.8%), Madrid (100% and the Politècnica de Valencia (54.2%) seem to be aware of this, unlike the Universidad de Navarra (25%) and Oberta de Catalunya (29.2%) which uses few images and photographs. This impacts negatively on their degree of representativeness, reducing their visibility and by extension, the opportunities for interaction.

Post day or frequency is another of the variables assessed. As the LikeAlyzer tool states, daily posts or five publications a week (Internet República, 2012) provide the correct degree of stimulus for fans, allowing for effective communication with them and boosting potential audience growth through greater visibility. Key data reveal significant differences between the universities in this

sense, as only Madrid (6 weekly posts) and Barcelona (almost 4 weekly post) meet this ratio. Oberta de Catalunya, Valencia and especially Navarra are a considerable way behind, preventing them from obtaining efficient feedback.

Finally, in terms of information type, monitoring these fan pages enabled us to detect that although comments, thanks and even suggestions were published, the number of actual questions posed was very low: asking fans questions is a way of encouraging them to interact and boosting page visibility. In addition, receiving responses provides crucial information for the universities' sales and marketing strategies.

3.2. Facebook Visibility

This indicator allows us to determine the key factors for boosting network presence. The items used to assess this and which are analyzed below are included in the following table:

Table 4
Visibility analysis.

	Barcelona	Madrid	Navarra	Valencia	Oberta
Fans*	153,287	73,942	13,137	52,536	52,150
Post per day*	0.52	0.94	0.39	0.40	0.44
Likes, Comments & Shares**	128	74	53	193	37
Timing	Perfect	Way off	Way Off	Off	Way off
Length of posts***	Between 100/500	Between 100/500	Between 100/500	Between 100/500	Between 100/500
Hashtags	Using	Using	Using	Using	Using
Pages liked	>10	>10	>10	>10	>10

* At the time of analysis (22.08.2017)

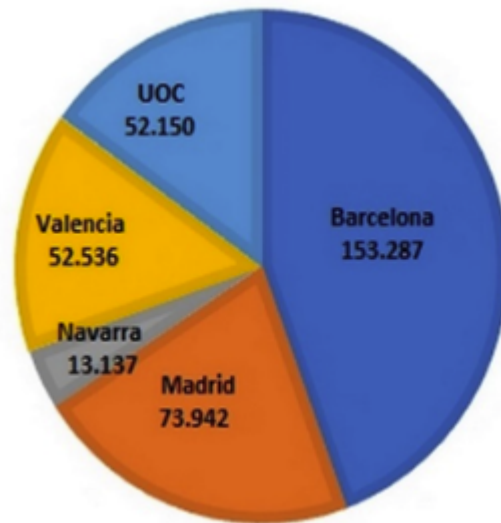
** rate per post

***characters. LikeAlyzer 2017

Source: Own elaboration

Authors such as Sobejano and Cavalganti (2011) draw a connection between visibility and the influence of social media fan numbers on brands, stressing their importance, whilst at the same time acknowledging that a greater number of fans do not necessarily imply that the objectives set will be reached. In general terms, our monitoring process (see Figure 1) revealed that the Universitat de Barcelona and the Universidad Autónoma de Madrid had the highest number of fans, with more than one hundred thousand and just over seventy thousand and there has been a 0.74 and 0.81 per cent growth in the total new fans during the reporting period, respectively. In contrast, the number of fans following the Universidad de Navarra was far lower, indicating the scant success of its fan page.

Figure 1
Fans



Source: Own elaboration

A component is closely related to the visibility is the origin of the fans since it determines the internationalization of the Spanish universities and how its contents are displayed in countries in several geographical areas such as Latin America. This is particularly apparent in the case of the Barcelona, Madrid and Navarra universities which fans origin is mainly Spain, about 40%; larger percentage in the case of Valencia, something like 55% and having more than 80% in the UOC (Likeinspector.com, 2017). Additionally, the countries of fans origin interviewed were very varied: Mexico, Ecuador, Peru, Honduras or Guatemala, which dictates how important it was for Spanish-speaking countries for the communication with these Spanish universities.

Another representative indicator of these universities' network presence is the average number of likes, comments and shares per post. This is closely related to the total number of fans each university has, the post days and users' interaction with or reaction to them. Two results are particularly worthy of note in this sense: firstly, the highest averages correspond to the universities of Valencia (193) and Barcelona (128), attributable to their large numbers of fans, in the case of Barcelona, despite the fact that the post rate of each is extremely low.

However, this is significant in that it indicates that although the actual number of posts is low, their content is of major interest to their fans, generating a considerable number of reactions and therefore boosting their network visibility. Secondly, the situation of the only online university analyzed, the Oberta de Catalunya, is a cause for concern due to the low number of fans, and the fact that although it registers an average of 3.08 posts per week, the reaction rate is also extremely low (37). This implies that the post content is of little interest to fans, indicating a failure to take advantage of opportunities to boost visibility, an aspect that this university should therefore reconsider.

Timing attempts to identify the periods of greatest audience receptiveness; in other words, to determine the most appropriate time for sharing information of value to the community that will guarantee maximum impact.

Our analysis revealed that only the Universitat de Barcelona follows the criteria described above: most of its posts, especially those containing photographs, are published between 09 a.m. and 12 a.m. (GMT), coinciding with the period when its followers are most active, thereby ensuring greater opportunities for visibility and interaction. Madrid, Navarra and Oberta de Catalunya coordinate their publications almost to perfection, as the majority coincides with the periods of maximum activity among their fans. However, the timing strategy adopted by the Universitat de Valencia would appear to be erroneous: it publishes its posts between 6 a.m. and 9 a.m. (GMT), although its followers are most active, particular in terms of following links, between 18 p.m. and 21 p.m. (GMT).

Post length is a further indicator in determining the degree of fan page visibility. In this sense, the study conducted by Track Social (2012) concluded that posts that included longer texts (more than 1,000 characters) are not as successful in terms of the number of Likes, Comments and Shares they receive. In contrast, the LikeAlyzer monitoring tool revealed that messages of between 100 and 500 characters are most popular among fans. In the case of our analysis, all the universities are well positioned, although none of them stand out in particular. Fans would appear

to prefer shorter posts, as they generate more responses, thereby boosting visibility and interactivity levels.

Hashtags and Pages liked are the final variables used in order to assess the visibility of the pages we analyzed. An effective use of hashtags can be extremely beneficial in enhancing visibility. They are mainly used to order the vast amount of content shared via social media, enabling users to click on the word and access other publications addressing the same topic. In the case of our analysis, all the universities use this resource in a range of situations including the following: releasing statistics, summaries, acknowledgements or asking for opinions and organizing conversations surrounding a specific event. This generates feedback with fans and extends the scope of their publications, thereby boosting visibility.

Finally, all the universities include pages liked and interact with them, thereby increasing their network presence and encouraging interest in their own fan pages.

3.3. Facebook Interactivity

The question of interactivity is closely related to content and visibility. One of the principal variables we used in analyzing this item is user Engagement or brand loyalty, which measures reactions to posts and how it is measured is referred to as Engagement Rate. In order to calculate the engagement percentage, the PTAT (People Talking About This) or number of interactions (Likes, Comments & Shares) generated over a certain period of time must be divided between the total number of fans (fans+No fans) and multiplied by 100 (Valerio, Herrera, Herrera, & Rodríguez, 2014; Huertas, Setó, & Míguez, 2014; Cvijikj, & Michahelles, 2013).

$$\text{Engagement Rate} = \frac{\text{Thumbs Up} + \text{Comments} + \text{Shares}}{\text{Fans}} (\%)$$

According to the LikeAlyzer analysis tool, Facebook activity is only significant if the degree of commitment stands at more than 7% (see Table 5).

Table 5
Fans, Post day,
PTAT and Engagement

	Barcelona	Madrid	Navarra	Valencia	Oberta
PTAT**	3,245	1,096	98	129	2,225
Engagement	2.12%	1.48%	0.39%	0.25%	4.27%

* At the time of analysis (22.08.2017)

**People Talking about this for the last month

Source: Own elaboration

In our analysis, the Universitat Oberta de Catalunya obtained the result closest to the rate considered necessary for successful fan engagement (4.27%). It must be noted that this is also the second university with the lowest number of fans, implying that success depends not only on the number of fans, but also on effective interaction with them, quality content and appropriate post variety. The remaining universities obtained a very low success rate, generating limited engagement and loyalty and therefore low levels of visibility and interactivity. A paradigmatic example of this is the situation of the Universitat de Barcelona with an engagement level of just 2.12% despite having more than one hundred and fifty-three thousand fans and publishing almost four posts a week.





Higher education institutions are aware of and acknowledge the crucial role social media play in the creation of their digital identity and interaction with current and potential students (Korones, 2012). Moreover, and as posited by Cvijikj and Michahelles (2013), a series of factors such as content format, post time and length would appear to have a positive or negative influence on the engagement levels generated by publications and whose impact varies in accordance with the way universities manage them.

It is therefore clear that users' response to post types is closely related to interactivity: a comparison of the data regarding post type and the interaction generated (Likes, Comments & Shares) provides the response rate.

One of the most successful of the top five posts of all the universities analyzed (figure 2) is a photograph published by the Universidad Autónoma de Madrid related to its position on the International Ranking QS top 50 under 50. It was published on 3rd August 2017 at 6.20 a.m. (GMT) and received 275 likes, 84 shares and 15 comments, obtaining a high response rate of 0.51%. The four next most successful posts are three photographs published two of them by the Universidad Autónoma de Madrid and once of the Universitat de Barcelona apart from one link of the UOC. The highest response rate was obtained by a post referring to the August 17 terrorist attacks in Barcelona, published on 18th August 2017 at 5.49 a.m. (GMT), generating 1,067 likes, 184 shares and 9 comments, obtaining a response rate of 0.82%. In this respect, it is fully in line with the current theories about how important social networks are for to express sentiments. Authors such as Estévez-Ortiz, García-Jiménez and Glösekötter (2016) show that sentiment analysis can be done by the study of opinions (positive, negative, or neutral) and emotional tone in relation to a comment, person, event, object or institution, published through social networking.

Photographs emerge as the post type that generates the highest reaction rate among users. This result is in line with the fact that this is the post format most commonly employed by the two universities that generate the highest rate of interactivity, Barcelona and Madrid, accounting for more than half their total number of posts in both cases (70.8 and 100 per cent, respectively).

Figure 2
Facebook: Best publications. All Likes, Comments and Shares (FanpageKarma)

Photos	Publication	Indicators (to 28/08/17)
	Universidad de Barcelona: 18-ago-2017; 5:49 h	1067 Likes 184 Shares 9 Comments 0,82% Response rate
	Declaración de condena del Rector de la #UAM, Rafael Garesse, de los atentados del 17 de agosto en Barcelona. http://bit.ly/1vuSDmF UAM: 18-ago-2017; 7:56 h	549 Likes 95 Shares 4 Comments 0,88% Response rate
	La comunidad UOC condena el atentado en las Ramblas de Barcelona UOC: 17-ago-2017; 15:59h	412 Likes 25 Shares 2 Comments 0,85% Response rate
	ELLAS-Científicas: Blanca Portillo junto con el actor Antonio Resines, visitaron en la #UAM / CBMSO a Margarita Salas, bioquímica y discípula de Severo Ochoa, pionera en la investigación científica en biología molecular y bioquímica. UAM: 09-ago-2017; 3:16h	264 Likes 132 Shares 7 Comments 0,55% Response rate
	La UAM es la universidad española mejor valorada en el ranking internacional QS Top 50 under 50 2018, que evalúa a centros universitarios fundados en los últimos 50 años. UAM: 03-ago-2017; 6:20h	275 Likes 84 Shares 15 Comments 0,51% Response rate

Source: Own elaboration

4. Conclusions

This article clearly reflects the far reaching changes in the world of higher education and the learning context brought about by advances in Information Technologies. These changes have been triggered by social media, with Facebook at forefront, contributing to higher education institutions' transfer of knowledge whilst at the same exerting a major impact on communication thanks to the bilocation of universities, affording them greater visibility.

A number of authors have claimed that technological development could lead to a situation of dystopia or a fictitious representation of society that would contribute to human alienation. However, the possibilities Facebook offers higher education institutions would appear to lead in quite the opposite direction: it is a network that facilitates the creation of new relations with target markets, thereby enabling them to meet their objectives of globalization and greater internationalization.

Our analysis of the fan pages using the LikeAlyzer, FanPage Karma and Likeinspector online tools of the five Spanish universities, namely Barcelona (UB), Autónoma de Madrid (UAM), Universidad de Navarra, Politecnica de Valencia (UPV) and Universitat Oberta de Catalunya (UOC) has produced the following results:

The content analysis of the various post types produced differing data as although the post variety was appropriate, the frequency rate could significantly improve. Worthy of mention are all universities due to the wide variety of its post types with the exception of Madrid. In addition, Madrid publishes a large number of photographs, generating a greater reaction among its fans. Wider variety and more dialogue create a more interesting and attractive space which in turn leads to greater visibility and potential engagement and loyalty. However, although these universities use this social network as a means of providing information, they should increase their use of questions as a means of boosting interactivity.

In terms of visibility, the universities of Barcelona and Madrid acknowledge the importance of fan numbers in securing appropriate levels of presence and visibility, although they must not overlook the need to improve the participation and conversion rate of each user. Similarly, certain institutions such as the Universitat Oberta de Catalunya should focus more on content and the level of interest their posts generate, as although it publishes an average of 0.44 posts per day, the response rate is extremely low, indicating that its posts are of little or no interest to its fans. The result is a loss of opportunities to boost visibility, a key aspect for a pure player university. The visibility analysis also included a study of the timing and length of the posts published by all the institutions. With the exception of the Universitat de Barcelona, the results showed that they must all make an effort to post their publications at the most appropriate moment.

Regarding interactivity, the posts that generated the highest number of reactions are a photograph published by the Universitat de Barcelona, three by The Universidad Autónoma de Madrid and one link published by the Universitat Oberta de Catalunya, all of which obtained significant response rates. However, the posts published by the other universities failed to generate any considerable degree of interest among their fans. We can also state that a higher degree of engagement would be recommendable in all cases, as none of the universities reach 7% in this area. Greater interaction can be obtained by offering better quality and more varied content, as well as adapting the post frequency rates. Users' loyalty should be rewarded and appeals should be made for their collaboration in creating content. The universities should also engage in direct conversations with their target markets and hold competitions and anticipate users' preferences.

In view of the information obtained and the data analyzed from the fan pages of the five universities included in our study, we can conclude that there is a clear need for the development of more effective marketing strategies aimed at the creation of an online social space where university students can build and maintain social capital with other students and the institutions themselves, thereby generating greater opportunities for communication.

Bibliographic references

Babbie, E. (2007). *The practice of social research*. USA: Thomson Wadsworth. ISBN-13: 978-1133049791

Baelo, R., & Canton, I. (2010). Use of Information and Communication Technologies in Castilla & Leon Universities. *Comunicar*, 35, 159-166. <http://doi.org/10.3916/C35-2010-03-09>

- Barnes, N.G., & Lescault, A-M. (2011). Social media adoption soars as higher-ed experiments and reevaluates its use of new communications tools. *Center for Marketing Research. University of Massachusetts Dartmouth, North Dartmouth, MA.* <https://goo.gl/s9zRWR>
- Barnes, N.G., & Mattson, E. (2010). Social media and college admissions: Higher-ed beats business adoption of new tools for third year. *University of Massachusetts–Dartmouth Center for Marketing Research.* <https://goo.gl/n5jhJy>
- Campos-Freire, F., & Rúas-Araújo, J. (2016). Uso de las redes sociales digitales profesionales y científicas: el caso de las 3 universidades gallegas. *El profesional de la información, 25, (3), 431-440.* <http://dx.doi.org/10.3145/epi.2016.may.13>
- Cárcamo, L., & Marcos, M.C. (2014). Prensa en Facebook: la importancia de la imagen en la web social. En: *1º Congreso Internacional Infoxicación: mercado de la información y psique, 562-577.* <https://goo.gl/q8T9Mg>
- Constantinides, E., & Zinck-Stagno, M. (2011). Potential of the social media as instruments of higher education marketing: A segmentation study. *Journal of Marketing for Higher Education, 21, (1), 7-24.* <http://dx.doi.org/10.1080/08841241.2011.573593>
- Crespo-Pereira, V., Martínez-Fernández, V.A., & Campos-Freire, F. (2017). La Neurociencia para la innovación de contenidos en la television pública europea. *Comunicar, 25, (52), 9-18.* <https://doi.org/103916/C52-2017-01>
- Cvijikj, I.P., & Michahelles, F. (2013). Online engagement factors on Facebook brand pages. *Social Network Analysis and Mining, 3, (4), 843-861.* <http://doi:10.1007/s13278-013-0098-8>
- Ellison, N., Steinfield, C., & Lampe, C. (2007). The benefits of Facebook "friends": Social capital and college students' use of online social network sites. *Journal of Computer–Mediated Communication, 12, (4), 1143-1168.* <http://doi:10.1111/j.1083-6101.2007.00367.x>
- Estévez-Ortiz, F.J., García-Jiménez, A., & Glösekötter, P. (2016). An application of people's sentiment from social media to smart cities. *El profesional de la información, 25, (6), 851-858.* <https://doi.org/10.3145/epi.2016.nov.02>
- Gewerc, A., Montero, L., & Lama, M. (2014). Collaboration and Social Networking in Higher Education. *Comunicar, 42(XXI),55-63.* <http://dx.doi.org/10.3916/C42-2014-05>
- Gómez-Hernández, J.A. (2013). Unir educación y bibliotecas: la evolución de un reto permanente. *El profesional de la información, 22 (2), 101-105.* <http://dx.doi.org/10.3145/epi.2013.mar.01>
- Guerra, S., Gonzalez, N., & Garcia-Ruiz, R. (2010). Study on the Use of ICT as Teaching Tools by University Instructors. *Comunicar, 35(XVIII), 141-148.* <http://dx.doi.org/10.3916/C35-2010-03-07>
- Huertas, A., Setó, D., & Miguez, M.I. (2014). Comunicación de Destinos Turísticos a través de las Redes Sociales. *El Profesional de la Información, 24 (1), 15-21.* <http://doi.org/10.3145/epi.2015.ene.02>
- Internet República. (2012). *La Banca a Examen en las Redes Sociales.* Retrieved from: <https://goo.gl/bPbh9y>
- Kirschner, P., & Karpinski, A. (2010). Facebook and academic performance. *Computers in Human Behavior, 26, (6), 1237–1245.* <http://doi:10.1016/j.chb.2010.03.024>
- Korones, S. (2012). *10 universities that have mastered social media Smart–planet. Which schools across the U.S. are using Twitter and Facebook the best? Smartplanet.* Retrieved from: <https://goo.gl/6Cd23R>
- Manca, S., & Ranieri, M. (2016). Facebook and the others. Potentials and obstacles of Social Media for teaching in higher education. *Computers & Education, 95, 216-230.* <https://doi.org/10.1016/j.compedu.2016.01.012>
- Marcelo, C., Yot, C., & Mayor, C. (2015). University teaching with digital technologies. *Comunicar, 45 (XXIII), 117-124.* <http://dx.doi.org/10.3916/C45-2015-12>
- Merrill, N. (2010). *Social media in international student recruiting and outreach survey.* Retrieved from: *Global Campus website.* <https://goo.gl/kVn1Vn>
- Nyangau, J.Z., & Niamboue, B. (2012). Social Media and Marketing of Higher Education: A Review of the Literature. *Journal of the Research Center for Educational Technology (RCET), 8(1), 38–51.* <https://goo.gl/zYG4RP>
- Prendes, M.P., Castaneda, L., & Gutierrez, I. (2010). ICT Competences of Future Teachers. *Comunicar, 35(XVIII), 175-182.* <https://doi.org/10.3916/C35-2010-03-11>

- Rodríguez, C., & Sánchez, M. (2016). La influencia de la presencia en Redes Sociales sobre el grado de ocupación de los establecimientos turísticos. *Revista de Análisis Turístico*, 21, 1-10. <http://www.aecit.org/journal/index.php/AECIT/article/view/220/170>
- Rodríguez-Fernández, M.M., Rodríguez-Vázquez, C., & Martínez-Fernández, V.A. (2015). Social Media Communication and the way of Santiago. In: *10th Iberian Conference on Information Systems and Technologies, CISTI 2015*, 1182-1187. <http://doi:10.1109/CISTI.2015.7170580>
- Rodríguez-Fernández, M.M., Sánchez-Amboage, E., Kleiner, R., & Martínez-Fernández, V.A. (2016). Leading Ecuadorian companies in the wine tourism sector and their positioning on the social medium Facebook. *New Advances in Information Systems and Technologies. Springer International Publishing*, 445, 479-488. http://doi:10.1007/978-3-319-31307-8_50
- Sobaih, A.E., Moustafa, M.A., Ghandforoush, P.G., & Khan, M.K. (2016). To use or not to use? Social media in higher education in developing countries. *Computers in Human Behavior*, 58, 296-305. <https://doi.org/10.1016/j.chb.2016.01.002>
- Sobejano, J., & Cavalcanti, J. (2011). Social Media IOR: Las Relaciones como moneda de rentabilidad. Madrid: Bubok Publishing S.L. ISBN: 978-84-9981-567-1
- Stageman, A. (2011). Consulting social media in the college transition process: Experiential accounts of the class of 2014. Marquette University, ProQuest Dissertations Publishing. <https://goo.gl/hUYAaX>
- Stirling, E. (2016). Technology, time and transition in higher education – two different realities of everyday Facebook use in the first year of university in the UK. *Learning, Media and Technology*, 41(1), 100–118. <http://doi.org/10.1080/17439884.2015.1102744>
- Sugimoto, C., Hank, C., Bowman, T., & Pomerantz, J. (2015). Friend or faculty: social networking sites, dual relationships, and context collapse in higher education. *First Monday*, 20(3). <http://dx.doi.org/10.5210/fm.v20i3.5387>
- Track Social (2012). *Optimizing Facebook Engagement – Part 3: The Effect of Post Length*. Retrieved from: <https://goo.gl/Mn98Tj>
- Valerio, G., Herrera, N., Herrera-Murillo, D.J., & Rodríguez, M.C (2014). En Facebook el tamaño sí importa. Engagement y el impacto de la longitud del mensaje en las fanpages de las universidades mexicanas. *Revista Digital Universitaria*, 15(2). <https://goo.gl/Jt8w6Q>
- Valerio, G., Herrera-Murillo, D.J., & Rodríguez-Martínez, M.C (2014). Association between the moment of publication in social networks and engagement: Study of Mexican universities. *Palabra Clave*, 17(3), 749-772. <http://dx.doi.org/10.5294/pacla.2014.17.3.8>
- Varsity Outreach (2011). *Facebook and admissions: a closer look at how college admissions offices use Facebook*. Retrieved from: <https://goo.gl/TCKZkP>
- Wilson, Robert E; Gosling, Samuel D; Graham, Lindsay T (2012). "A Review of Facebook Research in the Social Sciences". *Perspectives on Psychological Science*, v. 7, n. 3, pp. 203-220. <https://doi.org/10.1177/1745691612442904>

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1. PhD Professor in Marketing and head of Department of Business in the Faculty of Economics and Business and is a member of the research group on Marketing Applied (iMARKA). <http://orcid.org/0000-0003-1371-1453>. University of A Coruña, Department of Business. Campus de Elviña, Faculty of Economics and Business. felix.blazquez@udc.es
 2. PhD Assistant Professor in Marketing and researcher at the Department of Business in the Faculty of Economics and Business at University of A Coruña (Spain) and is a member of the research group on Marketing Applied (iMARKA) <http://orcid.org/0000-0001-6224-0534>. University of A Coruña, Department of Business. Campus de Elviña, Faculty of Economics and Business. crodriguezv@udc.es
 3. PhD Professor in Business Organization and is lecturer of several postgraduate courses at the department of Business. <http://orcid.org/0000-0002-6836-7453>. University of A Coruña, Department of Business Campus de Elviña, Faculty of Economics and Business. mercedes.teijeiro@udc.es
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Revista ESPACIOS. ISSN 0798 1015
Vol. 41 (Nº 06) Year 2020

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