Communication and Measurement of the University Social Responsibility: Social Networks and Indicator Proposal

La comunicación y medición de la Responsabilidad Social Universitaria: Redes sociales y propuesta de indicadores

A comunicação e mensuração da responsabilidade social universitária: redes sociais e proposta de indicadores

Ignacio Aldeanueva Fernández* http://orcid.org/0000-0002-6081-5581

Departamento de Economía y Administración de Empresas, Facultad de Ciencias Económicas y Empresariales, Universidad de Málaga (Málaga, España)

Gabriel Arrabal Sánchez http://orcid.org/0000-0003-0098-0558

Escuela Autónoma de Dirección de Empresas (Málaga, España)

▶ **Abstract.** This research analyzes the behavior of 50 variables related to corporate social responsibility in the area of communication of every Spanish university. To this aim, more than 25,0000 twits sent by the Twitter accounts of said universities—both private and public—were analyzed. Several different algorithms were applied to measure the frequency of concepts linked to the semantic universe of corporate social responsibility. The results reveal an unequal presence of these terms in the universities' outgoing messages and an alarmingly reduced median, which leads us to conclude that these concepts are not part of these institutions' outgoing communication. Based on this, future lines of research, as well as a unique system of university social responsibility indicators are proposed.

▶ **Resumen.** Esta investigación analiza el comportamiento de 50 variables relacionadas con la responsabilidad social corporativa en la comunicación de todas las universidades españolas. Para ello se analizan más de 250000 tuits emitidos por las cuentas de Twitter de dichas universidades, tanto públicas como privadas, y se aplican diversos algoritmos para medir la frecuencia de conceptos propios del universo semántico de la responsabilidad social corporativa. Los resultados revelan una desigual presencia de estos términos en la comunicación exterior de las universidades y una media llamativamente reducida, lo que hace concluir que dichos conceptos no forman parte de la comunicación exterior de las universidades. A partir de ello, se plantean futuras líneas de investigación y se propone un inédito sistema de indicadores de responsabilidad social universitaria.

Palabras clave:
responsabilidad
social universitaria,
redes sociales,
sistema de
indicadores.

▶ **Resumo.** Esta pesquisa analisa o comportamento de 50 variáveis relacionadas à responsabilidade social corporativa na comunicação de todas as universidades espanholas. Para isso, mais de 250.000 tweets emitidos pelas contas do Twitter dessas universidades, públicas e privadas, são analisados e vários algoritmos são aplicados para medir a frequência de conceitos próprios do universo semântico da responsabilidade social corporativa. Os resultados revelam uma presença desigual desses termos na comunicação externa das universidades e uma média notavelmente reduzida, o que leva à conclusão de que esses conceitos não fazem parte da comunicação externa das universidades. Com base nisso, futuras linhas de pesquisa e um sistema inédito de indicadores universitários de responsabilidade social são propostos.

Palavras-chave:
responsabilidade
social universitária,
redes sociais,
sistema de
indicadores.

The term corporate social responsibility (CSR) is fundamental in the organizational sphere nowadays, although it first appeared in prestigious international journals back in the sixties (Schlusberg, 1969) and seventies (Richman, 1973). Note that, throughout this work, limited to the Spanish context, this concept is referred to as CSR, as it is internationally widespread. This work specifically targets social responsibility from the perspective of a particular organization, the university, using CSR and USR (university social responsibility) interchangeably. Dozens of definitions for the concept of CSR can be found in literature (Dahlsrud, 2008). An outstanding proposal is the one given by Carroll (1999), establishing that CSR comprises the economic, legal, ethical and

discretionary expectations that society has from organizations at a given time. Anyhow, according to Marrewijk (2003), the definitions for the term discussed are very often biased towards particular interests.

Interest groups or Stakeholders are part of the CSR, and are defined by Freeman (1984) as any group or individual that can affect or be affected by the achievement of the company's goals. Subjects of subsequent studies carried out by several authors (Donaldson & Preston, 1995; Mitchell, Agle & Wood, 1997), they play, as Díez, Medrano y Díez (2008) show, a fundamental role in the CSR sphere, forcing organizations to acknowledge these groups' heterogeneity in order to deal with their expectations more efficiently. In the last years, CSR has become a subject of study linked to very diverse topics, such as financial performance (Barnett & Salomon, 2006), competitive advantage (Porter & Kramer, 2006), business ethics (Wines, 2008), triple bottom line (Dixon & Clifford, 2007), value creation (Gholami, 2011), small business (Fenwick, 2010), and others.

CSR is not exclusive to companies, as managing universities using CSR criteria is fundamental so they can contribute to the development of the communities within which they operate. This is in consonance with the views expressed by different authors and organizations in the last decade (the European University Association, 2009; Dias, 2008; Ibarrol, 2016; Olarte & Ríos, 2015; the United Nations Educational, Scientific, and Cultural Organization, 2006), reinforcing the role of such institutions regarding the development of society.

USR, as Aldeanueva and Jiménez (2013) observed, must respond to the relationship between the activities carried out by the universities and what is expected from them, giving the function of social service a strategic role. On that subject, Hernández, Mora and Luna (2017) insist that USR is a widespread concept within the university sphere, acknowledged as part of its activities and academic discussions in a context of relationship with the environment. Specialized literature offers international research works on USR from different countries, such as the one by Atakan and Eker (2007), showing the socially responsible management of a Turkish university, or the one by Ahmad (2012), examining these type of initiatives in fourteen higher education institutions in Malaysia.

These concrete experiences with USR allow to consolidate the incorporation of this subject into university management. In South America, this subject keeps gaining ground and has become a priority for higher education institutions management. Proof of that, besides own initiatives developed by several universities, is the incorporation of CSR in the strategic plan of the Association of Universities Entrusted to the Society of Jesus in Latin America (AUSJAL), as the websites of the universities in this network stand out for usually offering information about USR (Canelón, 2013). As Martí-Noguera and Martí-Vilar (2015) indicate, Latin American universities must instill strongly society-oriented values, using USR as a foundation so that future professionals are committed to society. Also, in an international

context, the Global University Network for Innovation is remarkable: A network of higher education organizations from over seventy countries, aiming to innovate the policies in this sphere from a public service and CSR perspective on a global scale (Global University Network for Innovation, 2009).

At the same time, the organizations transmit that social sensitivity to their environment using all the means of communication available, especially social networks, proving that CSR is also an argument to sell and persuade that must be highlighted. In the last years, Twitter has become a very efficient tool to convey this type of messages to general public (Arrabal & de Aguilera, 2016). Higher education institutions also use Twitter to transmit information to their interest groups, which is common for universities from different regions such as Peru (Atarama & Cortez, 2015), Mexico (Cancelo & Almansa, 2013), or Ibero-America (Guzmán, del Moral & González, 2012).

In Spain, every university has a Twitter account (Rodríguez & Santamaría, 2012) and some studies do further analysis on their communication strategies through this social network (Alonso & Alonso, 2014; Gómez & Paniagua, 2014; Reina, Fernández & Noguer, 2012). For instance, Universidad de Sevilla issues a mean of 24.99 messages per day; Universidad de Burgos, 17.58 tweets per day; Universidad de Alcalá, 15.75 tweets per day; and Universidad de Salamanca, 9.38 tweets per day. Analyzing the content flowing through this network will be an excellent means to confirm if USR is present in the messages issued by Spanish universities to the public and if there is, in fact, activity related to these arguments in every university.

Also, the relationship between quality and CSR is a fact that has been reviewed for some years already. Different authors (Al-Marri, Baheeg & Zairi, 2007; McAdam & Leonard, 2003; Talwar, 2009) study the close connection between both terms, as quality management is fundamental to boost the development of CSR within the organization, and, at the same time, CSR, together with other factors (such as continuous improvement and strategy), is necessary to introduce quality into organizations. In the organizational sphere, such connection can also be observed. Proof of that is the ISO 26000 standard (International Organization for Standardization, 2010) related to CSR. As Tarí and Garcia (2011) indicate, an advanced quality culture can help organizations boost particular aspects of CSR.

Every company nowadays develops rigorous instruments to assure the quality of their services and their products. Universities are aware that they cannot remain indifferent to this self-assessment culture, which gives much importance to quality standards, and that they must commit to implement such standards (Organization for Economic Co-operation and Development, 2010) in order to assess the quality of their educational and managerial processes, among others.

In the last years, important advancements in the adaptation of quality standards in Spanish universities has taken place. These efforts aim to assess teaching and develop

detailed systems for quality assurance (Hernández & Pérez, 2015). However, works on USR indicators for universities are heterogeneous (Guijarro, Gomera & Antúnez, 2016; Martí, Moncayo & Martí-Vilar, 2014; Núñez, Alonso & Pontones, 2015), possibly because it is a subject that has become more important in the last years and, as Beltrán, Íñigo, and Mata (2014) have expressed, whose development entails permanent challenges. Anyhow, socially responsible management is a goal for existing organizations and so should it be for universities, the higher education institutions for excellence, as it allows to increase their contribution to the economic and social development of their environment.

Therefore, this work aims to analyze CSR-related content in the messages issued by Spanish universities from their official Twitter accounts, which would represent an advancement in the research on this social network within the university sphere, as specific USR-related information issued to the general public is analyzed. And, if the analysis demanded it, this work would offer a system of indicators to help universities assess their commitment to this matter, although the nature of this tool also allows for its application in universities from different countries.

METHOD

Participants

In order to determine CSR content in the messages issued through Twitter, the official accounts of the 83 Spanish universities—both public and private, recognized by the Spanish Ministry of Education—have been identified. The last 3200 tweets from each university were gathered—the maximum number of tweets Twitter allows to extract from a user—, although some universities, such as San Dámaso, Atlántico, Oviedo, Zaragoza, San Jorge or CEU San Pablo have not reached that number of tweets yet since they opened their accounts in this platform. The total amount of tweets issued by the official accounts of the universities was over 250,000.

Instruments

The following specialized tools were used during the data collection and statistical processing: Crowdriff, Foller.me, Tweet Binder, Twitter Counter, Twitonomy, and Excel spreadsheets.

Crowdriff, Foller.me, and Tweet Binder were used to gather general information from the accounts analyzed, double check their authenticity and gather basic information, such as number of followers, tweets issued, retweets and mentions. Foller.me's algorithms allowed us to make, in a second stage, a basic classification of the topics addressed in the tweets issued, and helped as a verification and security check tool.

Twitter Counter allows for analysis of possible trends in the messages issued thanks to its predictive algorithms. In this research, it has been exclusively used as a tool for trend verification and confirmation a posteriori, as we never sought to do a forward projection.

Twitonomy, a paid tool, allowed to create precise reports in Excel and gather the complete content of the tweets that make up the sample: over 250,000 messages. The size of the sample makes it statistically representative, as it is comprised by the totality of the Spanish universities and the totality of the recoverable tweets. However, it is also limited, as the term "recoverable" narrows down the analyzable data to the last 3200 tweets issued by each university. This figure may seem small, but it has actually been reached by few Twitter users since this microblogging platform started in 2006.

Several predefined functions, such as Lookup, Vlookup, countif, countblank, Concatenate, and Dcounta, have been used in Excel and have helped create search algorithms to find the absolute frequency and the cumulative absolute frequency of the terms related to corporate social responsibility that were previously determined.

Procedure

Studying the tweets required the use of content analysis methodology, which comprises a number of techniques that help interpreting communication through systemic and objective proceedings that describe the content of the messages (Tinto, 2013) or, as Piñuel (2002) indicates, the communicative products (messages, texts or speeches).

Based on specialized literature, the most frequent CSR-related terms in the Twitter accounts of the Spanish universities were selected, and after several screening stages, 50 recurrent terms were chosen (See Table 1). For their translation into the languages of Spain, besides English, which is used in the tweets of the IE University, academic bibliography in these languages was also reviewed.

These 50 terms, translated into the mentioned languages, were tracked in the more than 250,000 messages issued by the official accounts of the Spanish universities. Once detected, they were reviewed one by one in order to confirm that the context in which they were used was related to CSR.

It should be noted that, even though the study does not aim to measure the sensitivity of the universities regarding CSR, but only to show the frequency of appearance of these terms in their messages to the public, it is true that the number of tweets analyzed is very high (250,000), as well as the number of variables studied (50), which makes the sample statistically significant.

Table 1
Terms related to corporate social responsibility

Code of conduct
Code of ethics
Social cohesion
Commitment
Social commitment
Responsible communication
Socially responsible communication
Social awareness
Cooperation
Development cooperation
International cooperation
Ecology
Responsible education
Socially-responsible education
Equality
Ethics
Social function of universities
Environmental management
Impact management
Environmental management
Socially-responsible management
Interest groups
Economic impact
Environmental impact
Social impact
Environment
Environmental
Environment
Social responsibility memory
Sustainability memory
Morality
Social reality
Recycling
Accountability
Social responsibility
Corporate social responsibility
University's social responsibility
University social responsibility
CSR
Solidarity
Sustainability
Committed university
Responsible university
Healthy university
Socially-responsible university
Solidarity university
Sustainable university
Transparent university
Ethical values
Volunteering

Source: Own elaboration

RESULTS

The quantitative analysis of the more than 250,000 tweets issued by the Spanish universities revealed the 20 most recurrent terms in their tweets, listed by frequency of appearance for each of them, from most to least frequent (see Table 2).

Table 2
20 most recurrent terms in the Twitter messages

1	1006	Volunteering
2	931	Ethics
3	727	Cooperation
4	552	Solidarity
5	487	Environment
6	465	Commitment
7	330	Sustainability
8	248	CSR
9	236	Morality
10	149	Ecology
11	144	Social responsibility
12	96	Recycling
13	92	Environmental
14	81	Development cooperation
15	69	International cooperation
16	60	Equality
17	50	Corporate social responsibility
18	39	Social impact
19	26	Social commitment
20	24	Environmental management

Source: Own elaboration

As the previous chart shows, the most frequent terms are "volunteering," repeated 1,006 times; "ethics," 931; "cooperation," 727; "solidarity," 552; and "environment," 487. Other terms such as "responsible education," "socially responsible communication" or "socially-responsible management" do not appear at all.

The same analysis made the elaboration of a university ranking possible, based on the frequency of these terms in their tweets (see Table 3). Universidad Católica de Valencia leads the ranking, as it includes the selected terms 249 times. Universidad de Barcelona comes next with 174, then Universidad Pontificia Comillas with 172, then Universidad de Málaga with 142, and Universidad de Cádiz with 138.

Table 3
Frequency of use of the terms sorted by university

1	U. Católica de Valencia	249
2	U. Barcelona	174
3	U. Pontificia Comillas	172
4	U. Málaga	142
5	U. Cádiz	138
6	U. Cantabria	132
7	U. Alcalá	131
8	U. Loyola Andalucía	130
9	U. Autónoma de Madrid	129
10	U. Jaén	129

Source: Own elaboration

Universidad Católica de Valencia, leading the ranking by a good margin, used the word "commitment" 143 times, the word "ethics" 36 times, and the word "volunteering" 28 times, always in the context of CSR, using, in fact, the hashtag #compromisoUCV in the messages published regarding these subjects. The terms most frequently used by Universidad de Barcelona are "solidarity" and "volunteering". In the case of Universidad Pontificia Comillas, the most recurrent concepts denote heterogeneity: "commitment," "cooperation," "ethics," "solidarity," "sustainability," and "volunteering." In the case of Universidad de Málaga, the word "volunteering" stand out, as it appears up to 91 times in the messages analyzed. Besides those seen previously, Universidad de Cádiz uses the terms "recycling" and "social responsibility."

The little presence of these words in some of the timelines of the Spanish universities at the other end of the ranking shows that these topics are not a big part of their messages to the general audience. It is very remarkable that half the universities analyzed do not include any of these 50 words in more than 60 occasions, or that the last ten universities do not use those terms more than 30 times in the last 3,200 tweets issued.

The analysis of the last 250,000 tweets from the official accounts of the Spanish universities indicates, except for a few cases, very little presence of CSR in the messages from these institutions to the public. In more than half of the 83 Spanish universities, the USR-related terms were rarely used.

DISCUSSION

The little presence of the CSR in the outgoing messages sent by Spanish universities is evidence of a lack of sensitivity about these matters or, at least, of the fact that the activities, actions, and projects related to CSR are not so present in the messages issued by the Spanish universities

through this social network. However, a socially-responsible management is a *conditio sine qua non* for the development of the organizations today, and so should it be for universities, as these institutions were conceived with CSR at their very heart.

This realization has led us to put forward in these pages a new system of indicators capable of measuring important areas of USR, aiming to give universities a basic instrument to quantify and assess the results achieved in the field studied in this work. This will make possible to know and reinforce more precisely and reliably how committed these institutions are to CSR.

The system of indicators proposed in Table 4 is related to the scope of action of the Principles of Responsible Management Education (PRME) developed under the coordination of the United Nations Global Compact in 2007 by representatives of different academic institutions at international level (United Nations Organization, 2007).

Table 4
System of indicators to measure areas of USR

SCOPE OF ACTION	INDICATORS	
1. Student body	1.1.	Students with a recognized level of disability (equal or greater than 33%).
2. Staff	2.1.	Participation of the staff in formative activities.
	2.2.	Compliance with equality policies.
3. Society	3.1.	Access to labor market.
	3.2.	Development cooperation.
4. Environment	4.1.	Responsible use of electric energy.
	4.2.	Responsible water consumption.
	4.3.	Commitment to recycling.
5. Business sector and institutions	5.1.	Transfer of knowledge.
	5.2.	Connection to business fabric.

Source: Own elaboration

The indicators showed below are generically represented by RSij, where i refers to the area the indicator belongs to and j to the position that such indicator holds in the mentioned area:

Commitment to students with a recognized level of disability (equal or greater than 33%) ($RS_{1.1.}$): supporting students with a recognized level of disability (equal or greater than 33%) with the purpose of helping them have positive results is a goal related to integration. The proposed indicator measures achievement of this goal through the percentage relationship between the

students with a recognized level of disability in cohort C that obtain, in the expected time plus one year, the credits leading to degree t, and the totality of freshmen students with a recognized level of disability also in cohort C and degree t. It is represented with this expression:

$RS_{1.1.=}$ (Number of students with a recognized level of disability in cohort C that obtain, in the expected time plus one year, the credits leading to degree t/ Number of freshmen students with a recognized level of disability also in cohort C and degree t) x 100

Participation of the staff in formative activities ($RS_{2.1.}$): Boost specific training for the totality of staff: teaching and research staff as well as administrative and service staff. The proposed indicator measures the participation of the staff in formative activities determined by the university, based on the percentage relationship between the number of people attending the formative courses and the total number of people working in the university. When calculating this indicator, it shall distinguish between teaching-research staff, and administrative-service staff. It is represented with this expression:

$$RS_{2.1.=} \frac{N^o \text{ of people attending formative courses}}{\text{Total staff at the institution}} \text{ x 100}$$

Compliance with equality policies.($RS_{2.2.}$): the aim is to eliminate all inequality based on sex among the institution staff, and the proposed indicator measures the degree of equality among them based on the percentage relationship between the number of women in government and representative posts, and the total number of people in government and representative posts in the university. It is represented with this expression:

$$RS_{2.2.=} \frac{\text{\# of women who belong to government and/or the institution's representative agencies}}{\text{Total \# of people who belong to government and/or the institution's representative agencies}} \text{ x 100}$$

Access to labor market (RS3.1.): The aim is to increase the number of incorporations of the graduates from each university to the labor market. To be measured, the percentage relationship between the number of graduates from the last three academic courses currently working and the total number of graduates from the last three academic courses was proposed as indicator. It is represented with this expression:

$$RS_{3.1.=} \frac{\text{\# of graduates from the last three academic years currently employed}}{\text{Total \# of graduates from the last three academic years}} \text{ x 100}$$

Development cooperation ($RS_{3.2.}$): In this case, the aim is to boost commitment to development cooperation. To be measured, the percentage relationship between the number of professors participating in development cooperation programs and the total number of professors working in the university was proposed as indicator. It is represented with this expression:

$$RS_{3.2.} = \frac{\text{\# of professors participating in development cooperation programs}}{\text{Total \# of professors at the institution}} \times 100$$

Responsible use of electric energy (RS4.1.): The aim is to optimize energy use by monitoring and controlling its consumption. For that purpose, the percentage relationship between electric energy consumption in the academic course t and the total electric energy consumption for the course t-1, both calculated in Kilowatt-hour (kWh) is proposed as indicator. It is represented with this expression:

$$RS_{4.1.} = \frac{\text{Total kWh used during the academic year}}{\text{Total kWh used during the prvious academic year}} \times 100$$

Responsible water consumption ($RS_{4.2.}$): In this case, the aim is to control and reduce water consumption. The percentage relationship between water consumption for the academic course t and the total water consumption for the academic course t-1, both calculated in cubic meters (m3), was proposed as indicator. It is represented with this expression:

$$RS_{4.2.} = \frac{\text{Total cubic meters of water used during the academic year t}}{\text{Total cubic meters of water used during the academic year t-1}} \times 100$$

Commitment to recycling ($RS_{4.3.}$): The aim is to promote proper recycling of the main materials used in each institution through responsible waste management (paper, glass, packages, and organic waste). For that purpose, the total Kilograms (Kg) of waste sorted by type in the academic course t was proposed as indicator. It is represented with this expression:

$$RS_{4.3.} = \text{Total kg of waste managed accoring to type of wates during the academic year t}$$

Transfer of knowledge (RS5.1.): Traces cooperation between universities and the productive tissue. The indicator proposed for measuring the degree of achievement of this

goal is the percentage relationship between the number of professors involved in cooperation agreements with companies and institutions, and the total number of professors working in the university. It is represented with this expression:

$$RS_{5.1.} = \frac{\text{\# of professors involved in collaboration agrements with companies and institutions}}{\text{Total \# of professors at the institution}} \times 100$$

Connection to business fabric ($RS_{5.2.}$): The aim is to increase the number of agreements between each university and companies or institutions. The indicator proposed to measure the existing relationship between the university and its environment is the absolute value of such agreements. It is represented with this expression:

$$RS_{5.2.} = \text{\# of agrements signed with companies and institutions}$$

The proposed indicators comply with the established requirements to be labeled as reliable: impartiality, objectivity, verifiability and accurate representation (Universidad de Castilla-La Mancha, 2010), allowing for its application in university systems in different countries.

USR must be part of the strategies designed by the higher education institutions, followed by funds allocation, but it is crucial to understand that these measures must be projected to the public, to the community that is affected in different ways by the actions carried out by the universities and their impact. Among the possible means to communicate the advancements made regarding USR, social media is an option, and Twitter is an excellent one. The contribution of the system of indicators pushes universities to better understand their commitment to USR, define their role in this sphere, and establish, in a timely manner, correcting measures when experiencing any type of deviation. In that way, it will be easier to convey via Twitter and other social networks the work carried out by the socially responsible universities.

In subsequent studies and as a future line of research, it would be interesting to evaluate if introducing the system of indicators proposed denotes an increase of university activity related to USR, as well as a bigger presence of these aspects in the messages that the universities themselves issue through social networks.

REFERENCIAS

Ahmad, J. (2012). Can a university act as a corporate social responsibility driver? An analysis. *Social Responsibility Journal, 8*(1), 77-86. doi: https://doi.org/10.1108/17471111211196584

Aldeanueva, I. & Jiménez, J. A. (2013). Responsabilidad social universitaria en España: un estudio de casos. *Revista Venezolana de Gerencia, 18*(64), 649-662. Recuperado de http://goo.gl/oo9bbz

Al-Marri, K., Baheeg, A. & Zairi, M. (2007). Excellence in service: an empirical study of the UAE banking sector. *International Journal of Quality & Reliability Management, 23*(2), 164-176. doi: https://dx.doi.org/10.1108/02656710710722275

Alonso, S. & Alonso, M. M. (2014). Las redes sociales en las universidades españolas. *Vivat Academia. Revista de Comunicación, 126*, 54-62. doi: http://dx.doi.org/10.15178/va.2014.126.54-62

Arrabal, G. & de Aguilera, M. (2016). Comunicar en 140 caracteres. Cómo usan Twitter los comunicadores en España. *Comunicar, 24*(46), 9-17. doi: https://doi.org/10.3916/C46-2016-01

Asociación de Universidades Europeas (2009). *Declaración de Praga. Las universidades europeas: mirando al futuro con confianza.* Bruselas: Autor.

Atakan, M. & Eker, T. (2007). Corporate identity of a socially responsible university: a case from the Turkish higher education sector. *Journal of Business Ethics, 76*(1), 55-68. doi: http://dx.doi.org/10.1007/s10551-006-9274-3

Atarama, T. & Cortez, C. (2015). La gestión de la reputación digital en las universidades: Twitter como herramienta de la comunicación reputacional en las universidades peruanas. *Revista de Comunicación, 14*, 26-47. Recuperado de http://goo.gl/ndZEsX

Barnett, M. & Salomon, R. (2006). Beyond dichotomy: the curvilinear relationship between social responsibility and financial performance. *Strategic Management Journal, 27*(11), 1101-1122. doi: http://dx.doi.org/10.1002/smj.557

Beltrán, J., Íñigo, E. & Mata, A. (2014). La responsabilidad social universitaria, el reto de su construcción permanente. *Revista Iberoamericana de Educación Superior, 5*(14), 3-18. doi: http://dx.doi.org//10.1016/S2007-2872(14)70297-5

Cancelo, M. & Almansa, A. (2013). Estrategias comunicativas en redes sociales. Estudio comparativo entre las universidades de España y México. *Historia y Comunicación Social, 18*(número especial), 423-435. doi: http://dx.doi.org/10.5209/rev_HICS.2013.v18.44339

Canelón, A. R. (2013). Responsabilidad social universitaria 2.0. Análisis de páginas web de universidades de AUSJAL. *Revista Internacional de Relaciones Públicas, 3*(5), 27-48. doi: http://dx.doi.org/10.5783/RIRP-5-2013-03-27-48

Carroll, A. (1999). Corporate social responsibility: evolution of a definitional construct. *Business & Society, 38*(3), 268-295. doi: https://doi.org/10.1177/000765039903800303

Dahlsrud, A. (2008). How corporate social responsibility is defined: an analysis of 37 definitions. *Corporate Social Responsibility and Environmental Management, 15*(1), 1-13. doi: https://doi.org/10.1002/csr.132

Dias, M. (2008). La universidad en el siglo XXI: del conflicto al diálogo de civilizaciones. *Educación Superior y Sociedad, 2*, 91-138. Recuperado de https://goo.gl/oy6V8Z

Díez, F., Medrano, M. L. & Díez, E. (2008). Los grupos de interés y la presión medioambiental. *Cuadernos de Gestión, 8*(2), 81-96. Recuperado de http://goo.gl/yH4BV1

Dixon, S. & Clifford, A. (2007). Ecopreneurship: a new approach to managing the triple bottom line. *Journal of Organizational Change Management, 20*(3), 326-345. doi: http://dx.doi.org/10.1108/09534810710740164

Donaldson, T. & Preston, L. (1995). The stakeholder theory of the corporation: concepts, evidence and implications. *Academy of Management Review, 20*(1), 65-91. Recuperado de http://goo.gl/w3vaEh

Fenwick, T. (2010). Learning to practice social responsibility in small business: challenges and conflicts. *Journal of Global Responsibility, 1*(1), 149-169. doi: http://dx.doi.org/10.1108/20412561011039753

Freeman, R. E. (1984). *Strategic management: a stakeholder approach.* Boston: Pitman.

Gholami, S. (2011). Value creation model through corporate social responsibility (CSR). *International Journal of Business and Management, 6*(9), 148-154. doi: https://dx.doi.org/10.5539/ijbm.v6n9p148

Global University Network for Innovation (2009). *Global University Network for Innovation.* Barcelona: Autor.

Gómez, B. J. & Paniagua, F. J. (2014). Las universidades españolas en Twitter: mensajes, contenidos y públicos. *Historia y Comunicación Social, 19*(número especial), 681-694. doi: http://dx.doi.org/10.5209/rev_HICS.2014.v19.44994

Guijarro, C., Gomera, A. & Antúnez, M. (2016). Propuesta de indicadores de la responsabilidad social universitaria conforme a la guía G4 del GRI: el caso de la Universidad de Córdoba. *CIRIEC-España, Revista de Economía Pública, Social y Cooperativa, 87*, 103-137. Recuperado de http://goo.gl/UbXPQH

Guzmán, A. P., del Moral, M. E. & González, F. (2012). Usos de Twitter en las universidades iberoamericanas. *Revista Latinoamericana de Tecnología Educativa, 11*(1), 27-39. Recuperado de http://goo.gl/HtxkSv

Hernández, I., Mora, J. P. & Luna, J. A. (2017). Universidad y empresa: un binomio de responsabilidad social en el siglo XXI. *Tendencias. Revista de la Facultad de Ciencias Económicas y Administrativas, 18*(1), 145-158. doi: http://dx.doi.org/10.22267/rtend.171801.70

Hernández, J. & Pérez, J. A. (2015). *La Universidad Española en cifras 2013/2014.* Madrid: Conferencia de Rectores de las Universidades Españolas.

Ibarrola, S. & Artuch, R. (2016). La docencia en la universidad y el compromiso social y educativo. *Contextos educativos, 19*, 105-120. doi: http://dx.doi.org/10.18172/con.2763

Marrewijk, M. V. (2003). Concepts and definitions of CSR and corporate sustainability: between agency and communion. *Journal of Business Ethics, 44*(2-3), 95-105. doi: https://doi.org/10.1023/A:1023331212247

Martí, J. J., Moncayo, J. E. & Martí-Vilar, M. (2014). Revisión de propuestas metodológicas para evaluar la responsabilidad social universitaria. *Revista Digital de Investigación en Docencia Universitaria, 8*(1), 77-94. doi: : http://dx.doi.org/10.19083/ridu.8.364

Martí-Noguera, J. J. & Martí-Vilar, M. (2015). Responsabilidad social en la educación básica y superior: una perspectiva desde el espacio iberoamericano. *Revista de Educação da PUC-Campinas, 20*(1), 27-39. doi: https://doi.org/10.24220/2318-0870v20n1a2941

McAdam, R. & Leonard, D. (2003). Corporate social responsibility in a total quality management context: opportunities for a sustainable growth. *Corporate Governance, 3*(4), 36-45. doi: http://dx.doi.org/10.1108/14720700310497104

Mitchell, R., Agle, B. & Wood, D. (1997). Toward a theory of stakeholder identification and salience: defining the principle of who and what really counts. *Academy of Management Review, 22*(4), 853-886. doi: http://dx.doi.org/10.2307/259247

Núñez, M., Alonso, I. & Pontones, C. (2015). Responsabilidad social universitaria: estudio empírico sobre la fiabilidad de un conjunto de indicadores de gobierno corporativo. *Innovar. Revista de Ciencias Administrativas y Sociales, 25*(58), 91-103. doi: http://dx.doi.org/10.15446/innovar.v25n58.52428

Olarte, D. & Ríos, L. (2015). Enfoques y estrategias de responsabilidad social implementadas en instituciones de educación superior. Una revisión sistemática de la literatura científica de los últimos 10 años. *Revista de la Educación Superior, 44*(175), 19-40. doi: https://doi.org/10.1016/j.resu.2015.10.001

Organización de las Naciones Unidas (2007). *Principios para la educación responsable en gestión (PRME).* Nueva York: Autor.

Organización de las Naciones Unidas para la Educación, la Ciencia y la Cultura (2006). *Decenio de las Naciones Unidas de la Educación para el Desarrollo Sostenible (2005-2014). Plan de aplicación internacional.* París: Autor.

Organización Internacional de Normalización (2010). *Norma internacional ISO 26000:2010. Guía de responsabilidad social.* Ginebra: Autor.

Organización para la Cooperación y el Desarrollo Económico (2010). *Education at a glance 2010. OECD Indicators.* París: Autor.

Piñuel, J. L. (2002). Epistemología, metodología y técnicas de análisis de contenido. *Estudios de Sociolingüística, 3*(1), 1-42. Recuperado de http://goo.gl/RpLX3F

Porter, M. & Kramer, M. (2006). Strategy & society. The link between competitive advantage and corporate social responsibility. *Harvard Business Review, 84*(2), 78-92. Recuperado de https://goo.gl/uhFQ2j

Reina, J., Fernández, I. & Noguer, A. (2012). El uso de las redes sociales en las universidades andaluzas: el caso de Facebook y Twitter. *Revista Internacional de Relaciones Públicas, 2*(4), 123-144. Recuperado de http://goo.gl/KDj86B

Richman, B. (1973). New paths to corporate social responsibility. *California Management Review, 15*(3), 20-36. doi: http://dx.doi.org/10.2307/41164436

Rodríguez, A. & Santamaría, P. (2012). Análisis del uso de las redes sociales en internet: Facebook y Twitter en las universidades españolas. *Icono 14. Revista de Comunicación y Tecnologías Emergentes, 10*(2), 228-246. doi: https://doi.org/10.7195/ri14.v10i2.198

Schlusberg, M. (1969). Corporate legitimacy and social responsibility: the role of law. *California Management Review, 12*(1), 65-76. doi: http://dx.doi.org/10.2307/41164207

Talwar, B. (2009). Comparative study of core values of excellence models vis-à-vis human values. *Measuring Business Excellence, 13*(4), 34-46. doi: http://dx.doi.org/10.1108/13683040911006774

Tarí, J. J. & García, M. (2011). La gestión de la calidad y la responsabilidad social en empresas de servicios. *Revista de Dirección y Administración de Empresas,* 18, 77-93. Recuperado de https://goo.gl/S5wyJv

Tinto, J. A. (2013). El análisis de contenido como herramienta de utilidad para la realización de una investigación descriptiva. Un ejemplo de aplicación práctica utilizado para conocer las investigaciones realizadas sobre la imagen de marca de España y el efecto país de origen. *Provincia. Revista Venezolana de Estudios Territoriales,* 29, 135-173. Recuperado de http://goo.gl/vdnth6

Universidad de Castilla-La Mancha (2010). *Encuesta sobre la fiabilidad en las universidades públicas.* Ciudad Real: Autor.

Wines, W. (2008). Seven pillars of business ethics: toward a comprehensive framework. *Journal of Business Ethics, 79*(4), 483-499. doi: https://doi.org/10.1007/s10551-007-9411-7