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"REVELACIÓN ONLINE DE INFORMACIÓN SOBRE RESPONSABILIDAD SOCIAL UNIVERSITARIA: PROPUESTA DE UN MODELO E INCENTIVOS DE DIVULGACIÓN"

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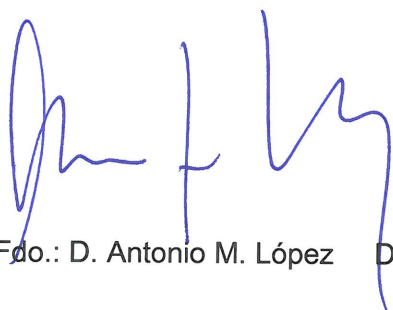
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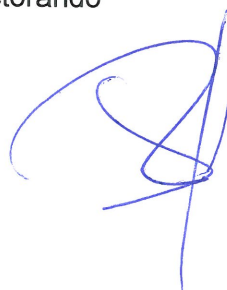
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CONTENTS

TABLES AND FIGURES

CHAPTER 1: INTRODUCTION

1. Introduction

1.1. Introduction

In recent decades, scientific and professional interest in Corporate Social Responsibility (CSR) in the business world has increased considerably. However, at many levels of government, the situation is significantly different, and concern about the concept of social responsibility in the public sector is only now beginning to appear (Al-Khatar and Naser, 2003). Nevertheless, in recent years, governmental social responsibility has acquired a higher profile, especially with respect to accountability, and the public sector has become a guarantor of compliance with socially responsible policies, not only in the private sphere but also within its own organizations. In fact, it may even function as a catalyst for the promotion of CSR, both in the adoption of formal policies to encourage the creation of this culture within companies and in the application of the CSR philosophy in public sector institutions.

The public sector, by reason of the service it provides and the social function fulfilled, should incorporate CSR principles into its management systems and relations with third parties. For various reasons governments seek to develop aspects of CSR, and in fact, many European governments have adopted an increasingly active role in shaping and promoting CSR, placing it among the main issues of political activity (Steurer, 2010).

With respect to the not-for-profit public sector, which includes a large number of universities, relatively little research has been published on the question of social responsibility. Nevertheless, in recent years, a certain degree of consensus seems to have been reached on the key role played by universities in incorporating aspects of CSR in the design of their educational and research programmes, and in determining their mission, their viewpoint and their corporate strategy (Muijen, 2004; Lukman and Glavić, 2007; Lozano and Peattie, 2011). In view of the functions they perform, universities should take social responsibility issues into consideration in all their areas of activity.

In fact, universities do appear to be incorporating criteria of social responsibility in their own management, in awareness of the organisational impact (on members of their own community, regarding occupational and environmental questions), the educational impact (the quality of training provided to students), the cognitive impact (concerning the university's mission as a producer of knowledge) and the social impact (as a focus of social reference) generated by their actions (Vallaeys, 2006). In consequence, universities are becoming managers of social responsibility, playing a leading role in actions to promote optimal social responsibility within organisations (Broadbent et al., 2010), and therefore it is necessary to carefully analyse and study this issue.

The application of social responsibility in the field of higher education involves, among other questions, identifying the expectations of various stakeholders, establishing mechanisms for dialogue with them and promoting accountability. In the latter respect, and in accordance with Jongbloed et al. (2008), universities, especially in recent years, regardless of the geographical context in which they operate, have had to interact with rising numbers of interest groups or stakeholders, all of which have their own vision and their own requirements of higher education institutions (Larrán et al., 2012a).

Stakeholders pressure universities to provide more complete information, in order to acquire a better understanding of the actions being taken, how the university operates and how it is organised. For this purpose, they require the disclosure of aspects of universities' social and environmental responsibility (Al-Khatar and Naser, 2003). Accordingly, studies have been made of the pressures exerted on universities in relation to accountability, for example, in New Zealand (in the period 1985-1989) and in the United Kingdom (1992-1994) (Banks et al., 1997). These studies have concluded that universities are not effectively addressing these demands, particularly with respect to the disclosure of questions concerning their social responsibility.

In this context, it has been proposed that universities should strive to meet the information needs of their stakeholders, reporting, among other information, on the social responsibility issues arising from their activities and establishing strategies to communicate the policies implemented in this respect. These actions, as well as presenting universities as being active agents in the field of CSR, would contribute to meeting stakeholders' information requirements, thus influencing public opinion and helping create the positive image of a socially responsible university (Branco and Rodrigues, 2006), and ultimately enhancing their reputation and improving relationships with stakeholders (Castelo and Lima, 2008). Taking into account these considerations, this paper analyses the main aspects of CSR reporting by a group of leading universities in this field.

The traditional medium of communication used by universities is the annual report (Gray et al., 1995; Neu et al., 1998; Castelo and Lima, 2008), which often includes information regarding aspects of social responsibility. However, studies have found that the duty of accountability is better fulfilled by addressing the question of socially responsible policies and practices in a report specifically focused on sustainability or social responsibility. This is considered to be an effective mechanism for monitoring and reporting information and, moreover, one that facilitates the benchmarking process among universities (Lukman and Glavić, 2007; GRI, 2000, 2002, 2005 and 2006).

New information and communication technologies (ICT), and the internet in particular, play a key role in transparency (Meijer, 2009), enhancing communication and providing stakeholders with greater access to information (Borins, 2002). Governments around the world view ICT as a powerful tool to improve the creation of public policies and as a means of increasing trust, by encouraging communication and accountability to stakeholders (Pina et al., 2007; Kudo, 2008). One reason for this is that the interactivity offered by the internet allows governments to be more responsive to the needs and demands of their citizens (Pina et al., 2007). Accordingly, website creation is one of the initiatives currently being

promoted by public organizations, among many others (Joseph and Jeffers, 2009) in order to address this call for accountability. In this respect, the analysis of information disclosure will reveal the interest of different organisations in informing and involving stakeholders in CSR activities, among other questions.

It is believed that universities could use ICT to digitise the offer of university services, to improve information transparency and to facilitate free, easy and sufficient access to information, concerning not only financial and budgetary questions but also aspects of social responsibility.

However, determining exactly how CSR information is disclosed and whether principles of social responsibility are adopted is no easy task; neither is there any extensive body of published research on the question, and this is the justification for our present interest. The main studies carried out into the question of social responsibility in universities have aimed to assess the perceptions of students and other stakeholders of this concept (Matten and Moon, 2004; Ibrahim et al., 2006; Christensen et al., 2007; Lämsä et al., 2007; Larrán et al., 2012a), to analyse the training provided in the field of social responsibility in universities (Holdsworth et al., 2008; Buchan et al., 2007; Ciurana and Filho, 2006; Larrán et al. 2012b) or to examine the cases of specific universities where clear strategies aimed at social responsibility are being implemented, mainly regarding the environmental dimension of the question (De Keizer, 2004; Serap and Eker, 2007; Ferrer-Balas et al., 2008; Hammond and Churchman, 2008).

For this reason, it is essential to create models that, on the one hand, assess the degree of information transparency regarding universities' social responsibility and, on the other, make it possible to create a benchmarking process to improve these aspects and achieve greater compliance with these organisations' duty of accountability, thus enhancing their legitimacy in view of the need to respond to stakeholders' expectations.

Therefore, the fundamental purpose of the present thesis is to characterise the higher education sector in relation to social responsibility

and to analyse universities' communication and dissemination of this issue. To do so, we analyse universities' disclosure of information in the field of social responsibility, determining the state of affairs in this respect and examining the different channels of such information disclosure.

In the field of the standardisation and evaluation of CSR or sustainability reports, as yet no standard model has been established for analysing the information disclosed, although numerous initiatives have been undertaken in this regard, such as the work of University Leaders for a Sustainable Future (ULSF) or that of Lozano, who proposed a model of CSR disclosure in 2006.

With respect to the evaluation of CSR reports, among the most widely accepted and developed criteria are the Global Reporting Initiative (GRI) guidelines. As observed by Cole (2003), although these were not developed specifically for the university environment, they offer one of the best ways to assess sustainability reports and make them more widely known (Lozano, 2006; Lozano, 2011; Lozano and Huisingh, 2011), and enjoy considerable support in the private sector. Lozano (2006) argues that the GRI guidelines should be modified and supplemented to include the features and responsibilities that are specific to universities.

In view of the above, our thesis proposes a model of good practice and of socially responsible disclosure, taking into account various international initiatives taken to create assessment and information systems that are homogeneous among organisations, with specific regard to universities.

Furthermore, in order to analyse the universities that are currently reporting the greatest amount of CSR information, a worldwide data search was performed to identify the universities that are most prominent in this field. This search revealed that those located in English-speaking countries, and especially in the United States, are the most active in terms of disclosing this information. After a general analysis of a sample of these universities, and a more specific one of the US institutions, a comparative

study was carried out between the leading bodies in this respect and universities in Spain, in order to determine the degree of development of CSR disclosure in this country and possible areas for future development.

Finally, to highlight the factors that might influence the degree of online CSR information disclosure, and in the belief that these findings could be useful to encourage a greater number of universities to report on their social responsibility practices, we analysed the influence exerted on the disclosure of such information by variables such as the size, internationality, affiliation, public/private nature, age and Shanghai ranking of the university.

The thesis is structured as follows. In the second chapter (which as a paper was accepted for publication by the *Journal of Environmental Policy and Planning*, with an impact factor of 1.421 in 2012), we propose a model of CSR disclosure by universities, taking into account various studies that have analysed the information made available on the internet. This model, which constitutes the basis for our research, is applied to a sample of 123 universities in English-speaking countries which currently present the highest levels of information disclosure with respect to CSR. We examine whether, in the context of accountability, universities are providing social responsibility information on their websites and thus increasing their transparency. Furthermore, we consider whether the universities that offer the highest levels of information disclosure on the internet are also those that give highest priority to the disclosure of aspects of social responsibility.

After this analysis of the universities that most actively disclose information regarding their socially responsible policies, our third chapter (which as a paper was accepted for publication by *Environmental Education Research*, with an impact factor of 0.883 in 2012), focuses on a sample of American universities that are pioneers in the field of CSR disclosure. We characterise these universities and analyse the information they disclose, taking into account the competitive environment of higher education in the USA and analysing CSR disclosure as a potential differentiating factor. Thus, we examine the levels of information disclosure by public and private

universities, and possible differences between universities depending on the position they occupy in the rankings of quality and academic excellence, using statistical methods to study the possible differences, in terms of the hypotheses proposed.

Chapter Four (accepted for publication by the *Journal of Education*, with an impact factor of 0.309 in 2012), focuses on universities in Spain. Due to the recent reform of the university system in this country and the growing interest in CSR among these institutions, various projects and initiatives concerning social responsibility have been launched, in the fields of teaching, research and university management. We analyse whether information transparency on CSR issues is coming to play an essential role in the online communication policies utilised by Spanish universities to meet the information needs of stakeholders, and whether there are differences between universities depending on their public or private nature, and their academic prestige and quality, as well as between universities that communicate different levels of information via the internet. To carry out these analyses, various statistical methodologies are applied to test our hypotheses.

The next chapter (also published as a chapter in the book, *Sustainability Development: New Research*, which is listed in the Book Citation Index) analyses the possible differences between the US universities that are held to be pioneers in their reporting of CSR questions and their counterparts in Spain, examining whether ICT are used in communication policies as a means of disclosing CSR information and as a tool to facilitate communication and interaction with stakeholders.

Chapter Six of the thesis (currently under review for publication in the *Journal of Cleaner Production*) discusses how the main characteristics of these universities – their size, internationality, affiliation, public/private nature, practices of the online disclosure of questions of CSR. We propose various multiple regression models, depending on the different areas of CSR (environmental, social and economic issues) that are studied, using a sample of 154 US universities to test the hypotheses proposed.

Finally, we present the most significant findings obtained by different empirical studies, together with interesting lines for future research.

1.2. Introducción

En las últimas décadas el interés científico y profesional en la Responsabilidad Social Corporativa (RSC) aplicado al ámbito empresarial ha crecido de manera importante. Sin embargo, en las administraciones públicas la situación es significativamente diferente, ya que la preocupación por el concepto de Responsabilidad Social en el ámbito del sector público es sólo incipiente (Al-Khatar y Naser, 2003). No obstante, la responsabilidad social en las administraciones públicas ha ido adquiriendo, en los últimos años, una relevancia creciente centrándose en la rendición de cuentas y convirtiéndose el propio sector público en el garante del cumplimiento de políticas socialmente responsables, no sólo en el ámbito privado sino también en sus propias organizaciones. De hecho, puede desempeñar un papel catalizador y de apoyo en la promoción de la RSC, tanto en lo que concierne a la adopción de políticas formales que implulsen la creación de esta cultura corporativa en las empresas, como en la aplicación de la filosofía de la RSC en las propias entidades del sector público.

El sector publico, por su servicio y la función social que desempeña, debería integrar principios de responsabilidad social en sus sistemas de gestión y de relaciones con terceros. Así pues, son varias las razones que justifican que los gobiernos se preocupen por el desarrollo de los aspectos relacionados con la RSC, y de hecho, numerosos gobiernos europeos han asumido un papel cada vez más activo en la conformación y promoción de la RSC en los últimos años, convirtiéndose así la RSC en una temática de la actividad política (Steurer, 2010).

En el ámbito del sector público no lucrativo, en el que se sitúan un importante número de universidades, las aportaciones de la literatura sobre la Responsabilidad Social, también son escasas. En los últimos años, parece existir un cierto consenso sobre el papel clave de las universidades en la incorporación de aspectos de Responsabilidad Social Corporativa en el

diseño de sus programas educativos y de investigación, así como en su misión, visión y estrategia corporativa (Muijen, 2004; Lukman y Glavič, 2007; Lozano y Peattie, 2011). De hecho, las universidades constituyen un área del sector público que, debido a las funciones que desempeñan, deben considerar los aspectos de la responsabilidad social en todos sus ámbitos de actuación.

Así, en los últimos años se observa que las universidades están asumiendo los criterios de responsabilidad social dentro de su propia gestión, siendo conscientes de los impactos de carácter organizacional (hacia los miembros de su comunidad, tanto en aspectos laborales como ambientales), educativo (calidad en la formación de sus alumnos), cognitivo (relacionados con la propia misión de la universidad como productora de conocimiento) y social (como referente social) que presentan todas sus actuaciones (Vallaeys, 2006). Esto ha motivado que las universidades se estén convirtiendo en verdaderas gestoras de responsabilidad social, protagonizando y liderando las acciones que promueven una responsabilidad social óptima dentro de las organizaciones (Broadbent et al., 2010), y que, por tanto, es necesario analizar y estudiar esta cuestión en profundidad.

Además, la aplicación de la responsabilidad social al ámbito de la Educación Superior implica, entre otras cuestiones, la identificación de las expectativas de los diferentes grupos de interés, el establecimiento de mecanismos de diálogo con los mismos, así como fomentar la rendición de cuentas. Sobre este particular, y de acuerdo con Jongbloed et al. (2008), las universidades, y con mayor intensidad en los últimos años, con independencia del contexto geográfico donde operen, se ven forzadas a interactuar con un mayor número de grupos de interés o *stakeholders*, donde cada uno de ellos tiene su particular visión y sus propias demandas sobre las instituciones de Educación Superior (Larrán et al., 2012a).

Actualmente, los *stakeholders* están presionando a las universidades para que suministren una información más completa, de manera que puedan alcanzar una mejor comprensión de las acciones que están llevando

a cabo, el modo de funcionamiento y de organización. Además, demandan, como información necesaria, la divulgación de aspectos de responsabilidad social o medioambiental de la universidades (Al-Khatar y Naser, 2003). Así, en la literatura previa se ha estudiado las presiones ejercidas sobre las universidades en relación con la rendición de cuentas como, por ejemplo, en Nueva Zelanda (periodo 1985-1989) o en el Reino Unido (periodo 1992-1994) (Banks, et al. 1997), mostrándose como éstas no están atendiendo de manera eficiente a dichas demandas, sobre todo en lo que concierne a la divulgación de aspectos de responsabilidad social universitaria.

En este contexto, se plantea que las universidades deberían realizar un esfuerzo constante por satisfacer las necesidades de información de sus *stakeholders*, divulgando, entre otras informaciones, los aspectos de responsabilidad social que se derivan de sus actuaciones y estableciendo estrategias de comunicación de las políticas desarrolladas en este campo. Estas actuaciones, además de presentar a las universidades como agentes activos en el ámbito de la RSC, permitiría cumplir con las expectativas de información de los *stakeholders*, influyendo así en la opinión pública y derivando todo ello en una imagen positiva de universidad socialmente responsable (Branco y Rodrigues, 2006), lo que redundará, finalmente, en un aumento de su reputación y en una mejora de su relación con los *stakeholders* (Castelo y Lima, 2008). En este sentido en el trabajo se analizan los principales aspectos divulgados en materia de RSC en un grupo significativo de universidades pioneras en este campo.

De manera tradicional, el medio de comunicación utilizado por las universidades ha sido el informe anual (annual report) (Gray et al., 1995; Neu et al., 1998; Castelo y Lima, 2008), donde se ha incluido, en numerosas ocasiones, información de aspectos de responsabilidad social. Sin embargo, la literatura previa sostiene que, para un mayor cumplimiento del deber de rendición de cuentas, las prácticas y políticas socialmente responsables deberían incluirse en un Informe de Sostenibilidad o Memoria de Responsabilidad Social, al considerarse éste un mecanismo eficaz de control y comunicación de información que, además, podría permitir una

mejora del proceso de benchmarking entre las distintas universidades (Lukman y Glavič, 2007; GRI, 2000, 2002, 2005 y 2006).

Las nuevas tecnologías de la información, y especialmente Internet, desempeñan un papel clave en la transparencia (Meijer, 2009), permitiendo una mejora de la comunicación y un mayor acceso a la información a las partes interesadas (Borins, 2002). De hecho, han sido reconocidas en los gobiernos de todo el mundo como una herramienta poderosa para mejorar la formulación de políticas públicas y una forma de aumentar la confianza de los ciudadanos, ya que favorece la comunicación y la rendición de cuentas a los distintos grupos de interés (Pina et al., 2007; Kudo, 2008) puesto que la interactividad que ofrece internet permite que los gobiernos respondan mejor a las necesidades y demandas de los ciudadanos (Pina et al., 2007). De esta manera, la creación de páginas webs se ha convertido en una de las iniciativas impulsadas por, entre otras, las organizaciones públicas (Joseph y Jeffers, 2009) para cumplir este objetivo de la rendición de cuentas. En ese sentido, el análisis de la información divulgada nos permite poner de manifiesto el interés de las diversas organizaciones por comunicar y hacer partícipes a los diferentes stakeholders de las actividades desarrolladas en materia de RSC, entre otras cuestiones.

Así, se entiende que las universidades podrían utilizar las nuevas tecnologías de la información y comunicación tanto para ofrecer la digitalización de servicios universitarios, como para mejorar la transparencia informativa universitaria, permitiendo el acceso libre, fácil y adecuado a la información, no sólo de aspectos financieros y presupuestarios, sino también de aspectos de responsabilidad social.

Sin embargo, conocer con exactitud cómo se divulga la información socialmente responsable y si la información sigue unos principios de responsabilidad social no es una tarea fácil de resolver, ni cuenta con un amplio recorrido en la literatura, y es aquí donde encuentra la justificación nuestro trabajo de investigación. De hecho, las principales investigaciones sobre responsabilidad social en las universidades se han dirigido a evaluar las percepciones de estudiantes y otros stakeholders sobre este concepto

(Matten y Moon, 2004; Ibrahim et al., 2006; Christensen et al., 2007; Lämsä et al., 2007; Larrán et al., 2012a), a analizar la oferta formativa sobre Responsabilidad Social en las universidades (Holdsworth et al., 2008; Buchan et al., 2007; Ciurana y Filho, 2006; Larrán et al., 2012b) o a examinar casos basados en universidades concretas donde existen estrategias claras y dirigidas a las responsabilidad social, fundamentalmente en la dimensión ambiental (De Keizer, 2004; Serap y Eker, 2007; Ferrer-Balas et al., 2008; Hammond y Churchman, 2008).

Es por ello que resulta imprescindible crear modelos de evaluación que, por un lado, evalúen el grado de transparencia informativa en materia de responsabilidad social de las universidades y, por otro, permitan crear un proceso de benchmarking que facilite la mejora de estos aspectos y un mejor cumplimiento del deber de rendición de cuentas de estas organizaciones, mejorando su legitimidad ante la necesidad de atender las expectativas de sus stakeholders.

Así pues, el propósito general de la tesis es caracterizar el sector de la Educación Superior en relación con la responsabilidad social y analizar la comunicación y divulgación de estos aspectos realizada por las universidades. Por tanto, se analizará la divulgación de información socialmente responsable por parte de las universidades comprobando el estado de la cuestión y examinando los diferentes canales de divulgación de información socialmente responsable.

En el campo de la normalización y la evaluación de los informes de RSC o de sostenibilidad todavía no existe un modelo estándar para el análisis de la información divulgada, aunque se están llevando a cabo numerosos esfuerzos al respecto, como los avances desarrollados por los Líderes Universitarios para el futuro sostenible (ULSF) o el trabajo de Lozano que propone un modelo de divulgación de RSC (2006).

En el ámbito de la evaluación de informes de RSC, uno de los criterios más aceptados y desarrollados son las directrices de la "Global Reporting Initiative" (GRI), aunque, como argumenta Cole (2003), éstas no han sido

desarrollados para el ámbito de las universidades, a pesar de ofrecer una de las mejores formas de evaluar y dar a conocer los informes de sostenibilidad (Lozano, 2006; Lozano, 2011; Lozano y Huisingh, 2011) y con un amplio respaldo social en el ámbito privado. En este sentido, el trabajo desarrollado por Lozano (2006) argumenta que las directrices propuestas en el GRI deberían ser modificadas y completadas para incluir las características y competencias específicas de las universidades.

Por lo tanto, en base a estos argumentos, en la tesis se propone un modelo de buenas prácticas y de divulgación de información socialmente responsable atendiendo a las diversas iniciativas que, a nivel internacional, han pretendido crear sistemas de evaluación e información homogéneos entre las organizaciones y, concretamente, en las universidades.

Además, con el fin de analizar las universidades que, actualmente, están divulgando un mayor volumen de información de RSC, se realiza una búsqueda, a nivel mundial, que permite destacar aquellas universidades pioneras en materia de RSC. En este sentido, se observa que son las universidades pertenecientes al ámbito anglosajón las más activas en cuanto a la divulgación de información socialmente responsable, especialmente las situadas en Estados Unidos. Tras un análisis general de una muestra de dichas universidades anglosajonas, y más específico de las universidades pioneras -universidades de EEUU-, se realiza un estudio comparativo entre las líderes en estos aspectos y las universidades españolas para conocer el grado de desarrollo de la RSC en el ámbito español y las posibles líneas de desarrollo.

Por último, a fin de poner de manifiesto los factores que pueden influir en el grado de divulgación de información online en materia de RSC, y que pueden resultar de utilidad para impulsar que un mayor número de universidades informen sobre sus prácticas de responsabilidad social, se analiza la influencia que ejercen en la divulgación de dicha información variables como el tamaño, la internacionalidad, la afiliación, el carácter público/privado de la universidad, la edad y la posición de una universidad en el ranking de Shanghai.

Para cumplir con tales objetivos, el trabajo de tesis ha sido estructurado como sigue. En el segundo capítulo (artículo aceptado en la revista "*Journal of Environmental Policy and Planning*" con factor de impacto en 2012 de 1.421), se propone un modelo de divulgación de información sobre RSC en las universidades considerando diversos estudios que analizan la información divulgada en internet y que servirá de base en nuestro trabajo de investigación. Dicho modelo se aplica a una muestra de 123 universidades pertenecientes a países anglosajones y que, actualmente, muestran unos niveles más altos de divulgación de aspectos de RSC. Se analiza si, en el marco de la rendición de cuentas, las universidades están divulgando información sobre la responsabilidad social en sus páginas webs, mejorando su transparencia informativa. Además, se estudia si aquellas universidades que ofrecen unos niveles más altos de divulgación de información en Internet son aquellas que están dando una mayor prioridad a la divulgación de aspectos de responsabilidad social.

Una vez analizadas las universidades más activas en la divulgación de políticas socialmente responsables, en nuestro capítulo tercero (artículo aceptado en la revista "*Environmental Education Research*" con factor de impacto en 2012 de 0.883), nos centramos en una muestra formada por las universidades pioneras en RSC, que son universidades americanas. Para ello, se caracteriza el ámbito universitario de EEUU y se analiza la información divulgada por tales universidades teniendo presente el contexto competitivo de la educación superior de EEUU y analizando la RSC como un posible factor diferenciador. Por tanto, se examinan los diferentes niveles de divulgación de información entre universidades públicas y privadas y las posibles diferencias entre las universidades según el puesto que ocupan en los rankings de calidad y excelencia académica, utilizando metodologías estadísticas para estudiar las posibles diferencias entre las universidades según las hipótesis planteadas.

Nuestro cuarto capítulo (aceptado en la "*Revista de Educación*" con factor de impacto en 2012 de 0.309), se centra en el conjunto de universidades españolas. Debido a la reciente reforma del sistema

universitario español y al creciente interés de la RSC en dichas instituciones, se han puesto en marcha numerosos proyectos e iniciativas sobre responsabilidad social tanto en el ámbito de la docencia como de la investigación y de la gestión universitaria. Así, se analiza si la transparencia informativa en temas de RSC está adquiriendo un papel esencial en las políticas de comunicación online de las universidades españolas para satisfacer las necesidades de información de los grupos de interés, y si existen diferencias entre las universidades según su diferente carácter público/privado, prestigio y calidad académica, así como entre aquellas universidades que ofrecen niveles altos de comunicación de información en Internet. Para la consecución de tales objetivos, se aplican diversas metodologías estadísticas que nos permiten contrastar las hipótesis planteadas.

Posteriormente, y de manera conjunta, en nuestro quinto capítulo (publicado como capítulo en el libro "*Sustainability Development: New Research*" incuido en Book Citation Index) se analizan las posibles diferencias que existen entre las universidades pioneras, consideradas como modelos en la divulgación de aspectos de RSC (EEUU), y las universidades españolas, comprobando si utilizan las TICs en sus políticas de comunicación como medio de difusión de aspectos de RSC y como herramienta para facilitar la comunicación e interacción con los stakeholders.

El capítulo sexto de la tesis (artículo en revisión en la revista "*Journal of Cleaner Production*") analiza cómo las características principales de las universidades -el tamaño, la internacionalidad, la afiliación, el carácter público/privado, la edad y la posición de una universidad en el ranking de Shanghai, entre otros aspectos- pueden influir en las prácticas de divulgación de información online de RSC. Para cumplir con tal objetivo, se proponen varios modelos de regresión múltiple, en función de las distintas áreas que forman parte de la RSC (aspecto medioambiental, social y económico) y que fueron objeto de estudio. Se utilizó una muestra de 154

universidades estadounidenses para testar las diferentes hipótesis planteadas en nuestro trabajo de investigación.

Finalmente, se exponen las conclusiones más relevantes obtenidas en las diferentes investigaciones empíricas realizadas, así como las futuras líneas de investigación.

2. Bibliografía

Al-Khatar, K. y Naser, K. (2003). User's Perceptions of Corporate Social Responsibility and Accountability: Evidence from an Emerging Economy. Managerial Auditing Journal, 18 (6/7), 538.

Banks W., Fisher J. y Nelson M. (1997). University Accountability in England, Wales, and Northern Ireland: 1992-1994. Journal of International Accounting Auditing and Taxation, 6 (2), 211.

Borins, S. (2002). On the frontiers of electronic governance: a report on the United States and Canada. International Review of Administrative Science, 68 (2), 199-211.

Broadbent, J.; Laughlin, R. y Alwani-Starr, G. (2010). Steering for Sustainability' Higher Education in England. Public Management Review, 12 (4), 461–473.

Buchan, G.D., I.F. Spellerberg, and Blum, W.E.H. (2007). Education for Sustainability. Developing a Postgraduate-level Subject with an International Perspective. International Journal of Sustainability in Higher Education, 8 (1), 4-15.

Castelo B.M. y Lima R.L. (2008). Factors Influencing Social Responsibility Disclosure by Portuguese Companies. Journal of Business Ethics, 83 (4), 685–701.

Christensen, L.J., Peirce, E., Hartman, L.P. Hoffman, W.M. y Carrier, J. (2007). Ethics, CSR, and Sustainability in the Financial Times Top 50 Global Business Schools: Baseline Data and Future Research Directions. Journal of Business Ethics, 73 (4), 347-368.

Ciurana, G.A.M. y Filho, W.L. (2006). Education for Sustainability in University Studies. Experiences from a Project Involving European and Latin American Universities. International Journal of Sustainability in Higher Education, 7 (1), 81-93.

Cole, L. (2003). Assessing sustainability on Canadian university campuses: development of a campus sustainability assessment framework. Unpublished Master thesis, Royal Roads University, Victoria.

De Keizer, B. (2004). Corporate Social Responsibility at the University of Amsterdam (paper presented at the University Industry Forum, Bonn).

Ferrer-Balas, D.; Adachi, J; Banas, S.; Davidson, CI; Hoshikoshi, A.; Mishra, A.; Motodoa, Y; Onga, M; Ostwald, M. (2008). An international comparative analysis of sustainability transformation across seven universities. International Journal of Sustainability in Higher Education, 9 (3), 295-316.

Global Reporting Initiative (GRI) (2000). Sustainability Reporting Guidelines. Retrieved from http://www.sustainableproducts.com/download/gri.pdf

Global Reporting Initiative (GRI) (2002). Sustainability Reporting Guidelines. Retrieved from http://www.uneptie.org/scp/gri/pdf/gri_2002_guidelines.pdf

Global Reporting Initiative (GRI) (2005). Sector Supplement for Public Agencies. Global Reporting Initiative, Amsterdam. Retrieved from http://www.globalreporting.org/ReportingFramework/SectorSupplem ents/

Global Reporting Initiative (GRI) (2006). G3 Sustainability Reporting Guidelines. Global Reporting Initiative, Retrieved from http://www.globalreporting.org/ReportingFramework/G3Guidelines/

Gray, R., Kouhy, R. y Lavers, S. (1995). Methodological Themes: Constructing a Research Database of Social and Environmental Reporting by UK Companies. Accounting, Auditing and Accountability Journal, 8 (2), 78–101.

Hammond, C. y Churchman, D. (2008). Sustaining academic life: A case for apllying principles of social sustainability to the academic profession. International Journal of Sustainability in Higher Education, 9 (3), 235-245.

Holdsworth, S.; Wyborn, C.; Bekessy, S. y Thomas, I. (2008). Professional Development for Education for Sustainability. How advanced are Australian Universities?. International Journal of Sustainability in Higher Education, 9 (2), 131-146.

Ibrahim, N.A.; Angelidis, J.P. y Howard, D.P. (2006). Corporate Social Responsibility: A Comparative Analysys of Perceptions of Practicing Accountants and Accounting Students. Journal of Business Ethics, 66, 157-167.

Jongbloed, B.; Enders, J. y Salerno, C. (2008). Higher Education and its Communities: Interconnections, Interdependencias and a research agenda. Higher Education, 56, 303-324.

Joseph, R.C. y Jeffers, P.I. (2009). E-Government in the Caribbean Nations. Journal of Global Information Technology Management, 12 (1), 52-70.

Kudo, H. (2008). Does e-government guarantee accountability in public sector? Experiences in Italy and Japan. Public Administration Quarterly, 32 (1), 93.

Lämsä, A.; Vehkaperä, M.; Puttonen, T. y Personen, H. (2007). Effects of Business Education on Women and Men Students' Attitudes on Corporate Responsibility in Society. Journal of Business Ethics, 82, 45-58.

Larrán Jorge, M; López Hernández, A. y Calzado Cejas, Y. (2012a). Stakeholders expectations in Spanish Public Universities: An empirical study. International Journal of Humanitites and Social Science, 2 (10), 143-158.

Larrán Jorge, M.; López Hernández, A. y Andrades Peña, F.J. (2012b). El proceso de Bolonia: ¿Ha propiciado una mayor incorporación de la responsabilidad en los grados relacionados con la Economía y la Empresa?. Revista de Docencia Universitaria, 10 (2), 345-363.

Lozano, R. (2006). A tool for a Graphical Assessment of Sustainability in Universities (GASU). Journal of Cleaner Production, 14, 963–972.

Lozano, R. (2011). State of Sustainability Reporting in Universities. International Journal of Sustainability in Higher Education, 12, 67–78.

Lozano, R. and Peattie, K. (2011). Assessing Cardiff University's Curricula Contribution to Sustainable Development Using the STAUNCH(RTM) System. Journal of Education for Sustainable Development, 5 (1), 115–128.

Lozano, R. y Huisingh, D. (2011). Inter-linking issues and dimensions in sustainability reporting, Journal of Cleaner Production, 19, (2/3), 99-107.

Lukman, R. y Glavič, P. (2007). What are the key elements of a sustainable university?. Clean Technologies and Environmental Policy, 9 (2), 103-114.

Matten, D. y Moon, J. (2004). Corporate Social Responsibility Education in Europe. Journal of Business Ethics, 54, 323-337.

Meijer, A. (2009). Understanding Modern Transparency. International Review of Administrative, 75, 255.

Muijen, H. (2004). Corporate Social Responsibility Starts at University. Journal of Business Ethics, 53 (1/2), 235–246.

Neu, D.; Warsame, H. y Pedwell, K. (1998). Managing Public Impressions: Environmental Disclosures in Annual Reports. Accounting, Organizations and Society, 23 (3), 265–282.

Pina, V.; Torres, L. y Royo, S. (2007). Are ICTs improving transparency and accountability in the EU regional and local government? An empirical study. Public Administration, 85 (2), 449–472.

Serap A.M.G. y 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.

Steurer, R. (2010). The role of governments in corporate social responsibility: characterising public policies on CSR in Europe. Policy Sci, 43, 49–72.

Vallaeys F. (2006). Brief Theoretical Framework of University Social Responsibility. Pontificia Universidad Católica de Perú. Retrieved from http://blog.pucp.edu.pe/item/4880/breve-marco-teorico-de-rsu

CHAPTER 2: ONLINE DISCLOSURE OF CORPORATE SOCIAL RESPONSIBILITY INFORMATION IN LEADING ANGLO-AMERICAN UNIVERSITIES

1. Introduction

Whilst over the last decades academic and professional interest in the application of Corporate Social Responsibility in the sphere of business has grown significantly, only over the last few years has social responsibility acquired any great relevance as the main feature of accountability in the field of public administrations (Al-Khatar and Naser, 2003).

Prior research has called for governments to adopt positions in terms of global corporate responsibility multi-stakeholder initiatives to fill the gap between the corporate rhetorical discourse of corporations and the real corporate changes in the field of sustainable development, with the ultimate aim of encouraging robust structural change in corporate accountability and sustainability (Albareda, 2010).

Universities are one area of the public sector which have become a driving force not only for sustainable development (Lozano, 2006a, 2010; Lukman and Glavič, 2007), but also for the promotion of socially responsible policies which are incorporated into their mission statements, vision and strategies for education and research (Muijen, 2004; Lukman and Glavič, 2007; Lozano and Peattie, 2011).

Higher Education institutions should define their role in relation to sustainable development as stated by the United Nations Decade of Education for Sustainable Development (2005-2014). Corporate social responsibility (CSR) can be considered to be one of the first initiatives in terms of contributing to sustainability (Lozano, 2011b). Universities should train future business leaders in order to provide them with the skills that are needed in the turbulent context of changing requirements concerning social responsibility issues (Pesonen, 2003), and a one-year social entrepreneurial experience within academic courses and personal coaching should be included as a formal part of the management curriculum called 'World-changing leadership' (Glunk and Smits, 2010).

Therefore, in the context of education for sustainable development, the teaching of corporate social responsibility in business schools has been

a relevant factor (Setó-Pamies et al., 2011). Indeed, education for sustainable development is perhaps even more important in the current economic downturn and financial crisis scenario as it is thought that those companies that incorporate environmental sustainability as an integral component of their corporate business strategies are destined to be the leading companies and can thus mitigate the challenges facing our society (Kashmanian et al., 2011).

Nowadays, universities are more aware of the negative and/or positive repercussions of their actions in society at large and the need to play a leading role in this question as an ethical model for society (Vallaeys, 2006), and they are now integrating the concepts of social responsibility within the university educational system whilst also training professionals in educational ethics, social values and concern about the repercussion of business activity on the environment (Lozano, 2006a; Glunk and Smits, 2010; Schneider et al., 2010; Lozano et al., 2011).

In addition, the pressures that universities have undergone in terms of the demand for greater accountability have had a special impact on the need for the disclosure of university social responsibility issues. In terms of the expectations of various university stakeholders (Gallego et al., 2011), they mainly represent an instrument of legitimacy which may favour the process of acceptance and approval of their activities in their social environment (Deegan, 2002; Lozano, 2011b) as they currently play a minor role in institutions (Pavičić et al., 2009; Benneworth and Jongbloed, 2010) despite the major influence they have on any organization (Johnson et al., 2006).

The application of social responsibility to the context of Higher Education implies, among other questions, the introduction of processes with which to identify the expectations of different groups of stakeholders (Epstein and Widener, 2010; Lozano, 2011b), the establishment of mechanisms of dialogue with these stakeholders (Downey, 2002) and the promotion of accountability at universities.

Nevertheless, the question of transparency of information, which is an essential question linked to accountability, seems to have been neglected since this disclosure has traditionally been exclusively focused on financial and budgetary information, and this information has not considered questions related to social responsibility (Mellé, 2007).

New information and communication technologies (ICT), above all the Internet, have played a key role in transparency, allowing an improvement in communication and greater access to information for all stakeholders (Borins, 2002). In this regard, public administrations have introduced these ICTs in the delivery of public services (Wimmer, 2002) as a means of improving communication between public managers and citizens, encouraging participation in the decision-making process (Robbins et al., 2008), improving the formulation of public policy and increasing public confidence by fostering communication and accountability to all stakeholders (Kudo, 2008).

In the higher education scenario, the Internet has become the main educational platform for education for sustainable development (Strandberg and Brandt, 2001). Furthermore, communication and participation are key principles for the implementation of the concept of sustainability in the university context (Adomssent et al., 2007) and the Internet has played a key role in communicating the sustainability message in higher education institutions as it allows dialogue and a democratic approach (Djordjevic and Cotton, 2011). Indeed, the use of the Internet has proved to be a very important tool in this process (Schimmel et al., 2010).

Therefore, it would be interesting to ascertain whether or not universities, as models of ethical behaviour for society and centres of knowledge and research in questions of social responsibility, are taking advantage of the opportunities provided by ICT, and particularly the Internet, as a means both for the disclosure of information about social responsibility and for interaction with stakeholders. Nevertheless, there are currently no studies which have focused on the analysis of online communication policies at universities in questions of social responsibility.

Therefore, this paper seeks to make a triple contribution. On the one hand, based on prior research, we have designed and programmed a model to analyse and evaluate the online disclosure of information about social responsibility at universities. Furthermore, this model is applied to a sample which includes the main universities in the world that are applying socially responsible criteria on campus, in order to observe whether or not they disclose information about this question. Finally, we also seek to analyse whether or not the information that is disclosed online about questions of social responsibility is considered to be an essential part of their communication policy.

Taking all of these factors into account, this article has a twofold objective. On the one hand, to analyse whether or not in the framework of accountability, universities are disclosing information about social responsibility on their websites, thus improving the transparency of their information. On the other hand, we also study if those universities which offer the highest level of communication of information through the Internet, are also the ones who give high priority to the disclosure of information related to social responsibility in their policies regarding Internet based communication. Therefore, this paper seeks to enhance our understanding of CSR issues today and their Internet based communication by universities, especially regarding environmental information since, as noted previously, most CSR-related initiatives are focused on environmental measures (Serap and Eker, 2007; Hammond and Churchman, 2008).

The article is divided as follows: Section 2 describes the role played by universities in the development of social responsibility. In Section 3, we show the main aspects of the empirical research (sample and research methodology), and section 4 analyses the results of the empirical study. We finish the study with our main conclusions and a discussion section.

2. Universities and social responsibility

Many definitions have been made of CSR and of corporate social responsibility (CSR). In applying the concept of CSR to universities, the *University Build the Country* Project (2006) defines CSR as the capacity of

the university to disseminate and implement a body of principles and general and specific values, by means of four key processes – management, teaching, research and university extension – thus responding to the needs of the university community and of the country as a whole.

International institutions have argued that higher education organizations should play a leading role in developing solutions related to sustainable development (UNESCO, 1998). In fact, several universities have begun the debate about the content of the Sustainable Development concept and the ways in which to integrate it into their university policy, organization and activities (Van Ween, 2000).

More recently, the UNESCO declared the Decade of Education for Sustainable Development (2005-2014) to promote sustainable education, incorporating sustainable development at all levels, based on the view that universities have a vital role to play in economic growth and in creating a sustainable future. Nonetheless, education for sustainable development is a complex concept which draws upon many disciplines (Perdan et al., 2000) and its goal is to explore the reconciliation of critical ecological, social and economic imperatives (Dale and Newman, 2005). This multi-approach to the concept of sustainable development has made universities deal with the challenge of sustainable development in many different ways, which may vary from aiming to function as an environmentally friendly company to formulating principles and signing declarations, establishing totally new institutions, or focusing the mission and management of an existing university on the quest for sustainability (Van Ween, 2000). The UNESCO focused on the process of orienting and re-orienting education in order to foster values and attitudes regarding respect for the environment, and envisaged ways and means of doing so (UNESCO, 2006).

In summary, education is the key to promoting a sustainable society. Indeed, the more a nation is educated about sustainability, the more likely it is to succeed in sustainability (Nicolaides, 2006). In this regard, in higher education the term "sustainability" is used to describe a positive movement towards environmental accountability and social and environmental

responsibility (Nicolaides, 2006). Nevertheless, there is very little literature about Social Responsibility in the university context. The main research into social responsibility has been focused on assessing the perceptions of students about this concept and the reasons for these perceptions (Lämsä et al., 2007), analyzing the education offered about Social Responsibility at universities (Boks and Diehl, 2006; Lozano, 2010; Lozano and Peattie, 2011) or examining specific cases based on certain universities where there are clear strategies aimed at social responsibility, mainly in environmental terms (Serap and Eker, 2007; Ferrer-Balas et al., 2008; Hammond and Churchman, 2008).

In any case, there seems to be a certain consensus that universities must integrate social responsibility in their strategic planning, through the setting of objectives and the development of long term strategies in questions related to social responsibility (Muijen, 2004) which must then be translated into specific actions (Valleys, 2006; Nicolaides, 2006; Mulder, 2010) such as the following inter-linked elements: Education, Research; Campus operations and Community Outreach. These dimensions must also be assessed and reported on in an on-going manner which leads to a fifth dimension: Assessment and Reporting (Lozano, 2006a; Lozano et al., 2011). All of the aforementioned questions will allow them to occupy a predominant role as models of ethical behaviour for society as a whole (Valleys, 2006; Lozano, 2006a; Lozano et al., 2011). Furthermore, CSR is an important component in order to consider social responsibility as a strategic and differentiating factor (Serap and Eker, 2007).

These lines of action must be aimed at the incorporation of social responsibility as a key, cross-curricular element both in teaching and research (Muijen, 2004; Lozano 2006a; Lozano, 2010; Lozano et al., 2011). In terms of teaching, this incorporation must take place both in degree programmes and in post-graduate studies and must encourage the training of future professionals with a high level of sensitivity to the issue of social responsibility (Nicolaides, 2006; Lozano, 2006a, Lozano et al., 2011), which will inevitably lead to greater quality in education, the creation of a fairer

society and higher levels of sustainable development (Lozano, 2006a, Lozano et al., 2011).

In relation to research, universities must encourage research into social responsibility as a useful tool for more sustainable social change supported by university management and its social projection (Stephens et al., 2008). This has meant that universities are becoming true managers of social responsibility, leading actions that promote an optimal level of social responsibility within organizations (Lozano et al., 2011).

Thus, many universities are struggling to improve the sustainability of their activities. However, it is difficult to know exactly how to undertake this change (Brinkhurst et al., 2011). Some universities have focused on a top-down change, that is, through institutional changes and action of university leaders. This is based on the idea that what is crucial to success is that whoever is involved is committed and cooperative (Holt and Anthony, 2000). In this regard, some authors state that the support of vice-chancellors and all senior managers is imperative to the success of sustainable universities because a commitment from senior management is essential in a "top-down approach" where positive ideas permeate the entire university (Emerson and Welford, 1997; Djordjevic and Cotton, 2011).

Other authors feel that a "bottom-up approach" is equally effective. This last mechanism implies, for example, the introduction of initiatives and the demands of the students themselves (Brinkhurst et al., 2011), or an increase in the interest of university leaders through the incorporation of environmental behaviour in the ranking methodology of universities (Lukman et al., 2010). Indeed, in this approach students are encouraged to criticize campus activities and as they are "customers" they are allowed to demand reforms concerning sustainability issues (Dahle and Neumeyer, 2001).

Finally, other authors think that both approaches (top-down and bottom-up approaches) are not mutually inconsistent. These approaches

could coexist at a university and share the success of the implementation of sustainability at that university (Mochizuki and Fadeeva, 2010). In this regard, the University of Bradford has introduced strategies both in the academic implementation strategy providing continuity and coherence of planning, and in the creation of incentives and the identification of good educational practices for sustainability development in some university subjects (Mochizuki and Fadeeva, 2010).

In any case, an area that does not appear to have been efficiently developed at universities is the disclosure of information. At present, stakeholders are pressuring universities to provide more complete information and they demand the disclosure of information about social responsibility and environmental questions at universities (Al-Khatar and Naser, 2003). Disclosure of information is voluntary and seeks to communicate the sustainable objectives and achievements in this sense of an organization to society (Dalal-Clayton and Bass, 2002; Lozano, 2006b; Lozano and Huisingh, 2011). Nevertheless, the information traditionally provided by universities has mainly been found in their annual reports (Castelo and Lima, 2008) and has been exclusively based on financial and budgetary questions (Mellé, 2007), which has made it difficult to provide proper accountability.

In this regard, the increased use of sustainability reporting at universities has become a symbol of the demand by stakeholders for more transparency and accountability (Borkowski et. al., 2010). The Sustainability Report or a Social Responsibility Report is considered to be an effective mechanism of control and communication of information which could also allow improvement in the benchmarking process between different universities (Lukman and Glavič, 2007; Lozano, 2011a). Some initiatives in the university context have developed tools that allow this process from the information provided in Sustainability Reports (Graphical Assessment of Sustainability in Universities –Lozano, 2006b-).

Furthermore, adapting to the expectations of different university stakeholders (Epstein and Widener, 2010; Gallego et al., 2011; Lozano,

2011b) would represent, above all, an instrument of legitimacy for universities that would favour the process of acceptance and approval by stakeholders of the activities carried out in the community by universities (Deegan, 2002). Nonetheless, in order to obtain or maintain this legitimacy, they must not only take action but also inform society at large about this action (Cormier et al., 2004). It has been shown that one of the main strategies applied by organizations to gain legitimacy for their actions has been to align the perception of their actions with what is expected by their stakeholders, by means of information disclosure (Daub, 2007). Consequently, universities must establish communication strategies for social responsibility which, in addition to presenting universities as active participants in this field, allow them to fulfil the informational expectations of stakeholders and offer an image of universities as socially responsible institutions, which will ultimately lead to an improvement in their reputation (Castelo and Lima, 2008; Heuer, 2010; Kashmanian et al., 2011).

The development of ICT could facilitate access to CSR information allowing for more effective fulfilment of the obligation to provide accountability at universities and improving their legitimacy. Therefore, universities could use ICT both to digitalize university services and to improve the transparency of university information. In this regard, it would be useful to create models of assessment which, on the one hand, could analyze the degree of informational transparency in terms of social responsibility at universities and could create a benchmarking process that would facilitate improvement in these questions and a greater fulfilment of accountability, thus improving legitimacy and the need to meet the needs of the stakeholders. In fact, prior research has indicated that a lack of a consistent format in sustainability reporting could make benchmarking difficult (Schneider et al., 2011).

3. Empirical Research

3.1. Sample

Sample selection for the empirical study was developed in two stages. Firstly, we identified those universities that were making the greatest effort

to disclose CSR information on the Internet. In order to do so, we conducted an online search for universities that most frequently address CSR questions on their websites and/or publish annual CSR reports. As previous studies have shown that the annual report is the main instrument of information disclosure and communication and also constitutes an essential element of accountability (Vuontisjärvi, 2006), we also analyzed these documents to observe whether they included information about CSR questions.

This initial search showed that the most highly developed policies are those related to environmental protection, as was to be expected from the definition of CSR and from previous studies; moreover, these policies have a longer history in the field of education (Serap and Eker, 2007; Ferrer-Balas et al., 2008; Hammond and Churchman, 2008). The same conclusion was reached concerning the first sustainability and CSR reports that were found; once again, environmental issues were most visible in the information disclosed.

Using general search engines such as Yahoo, Google and Terra, we fed in key concepts such as *sustainability report, environmental report, environment, ecology, water, recycling, green building, biodiversity* and *non-profit*, along with the term *university*. In order to obtain a broad range of articles, the search was conducted in five main languages: Spanish, Portuguese, French, English and German. The results showed that universities in the UK, the USA, New Zealand, Canada, Australia and Ireland are the most active in disclosing CSR related questions on the Internet. In order to analyse the best practice, our sample has focused on Anglo-American universities as these are the most active on the Internet in terms of disclosing CSR related information.

We stress that the selection of universities in our paper has limitations because it only considers those universities that implement socially responsible actions and disclose such policies via the Internet. Therefore, the present study does not address universities that, while committed to CSR, do not disclose their commitment or, even if they do, if

other means are used, such as printed materials (posters, brochures, magazines, etc.). Nevertheless, despite these limitations, we believe the sample is appropriate for the goals of this study, i.e., to analyze the transparency of information regarding CSR issues disclosed via the Internet. Moreover, and as noted above, universities would be interested in using the Internet to disseminate information in order to underscore the legitimacy of their actions.

Secondly, the selection of the number of Anglo-American universities in the sample has been determined taking into account a webometric ranking (Wormell, 2001; Aguillo, 2009). Bearing in mind the fact that the objective of our article is to analyze the policies of communication and dissemination of information by universities, we note that in practice it is very difficult to classify and evaluate these policies. This is due to the heterogeneity of online publication and the complex technique of extracting relevant information (Wilkinson et al., 2003). However, despite the difficulty of selecting a ranking that measures communication policies, in this paper we opt to choose the webometrics ranking as that which is relevant for analyzing those universities on a world-wide level that show the best communication policies on the Internet.

Indeed, although the original aim of the webometrics ranking is to promote academic web presence, its continuous improvement has made it change and evolve in the measurement of other missions such as teaching or the so-called third mission, considering not only the scientific impact of the university activities, but also the economic relevance of the technology transfer to industry, community engagement (social, cultural, environmental roles) and even political influence (see http://www.webometrics.info/en/Methodology), which is closely linked to our research.

In other words, a webometrics ranking intends to motivate both institutions and scholars to have a web presence that accurately reflects their activities because, as the creators of the webometrics ranking indicate (Aguillo et al., 2008), it is of paramount importance to take into

consideration web publication not only as a primary tool for scholarly communication but as a true reflection of the overall organisation and performance of universities.

Therefore, the use of webometrics as a method of selecting the universities in the sample allowed us to observe whether or not the disclosure of CSR related information at Anglo-American universities is playing an important role in their Internet communication policies. In order to have a significant sample, we selected the first 25 universities in the webometrics ranking, regardless of whether they were public or private, from each of the Anglo-American countries selected. Therefore, the sample is made up of a set of 123 universities, 25 of which belong to each Anglo-American country in the sample except in the cases of Ireland and New Zealand in which case there were 13 and 10 universities respectively, according to the ranking selected.

3.2. Research methodology

In order to analyse to what extent the universities in the sample are disclosing CSR information online, this paper initially considered several studies that analyzed the disclosure of information on the Internet (Caba et al., 2005; Paul, 2008; Rodríguez, 2009; Gallego et al., 2011) along with others that analysed visibility (Middleton et al., 1999), accessibility (Lawrence and Giles, 1999), usability (Dustin et al., 2002), privacy and informational content (Holzer and Manoharan, 2007; Holzer and Kim, 2007). The specific analysis of this previous literature has meant that we have structured this research in two sections which will ultimately lead to the study of six indexes (See Table 1 and 2).

TABLE 1. Content of CSR Reporting

GENERAL CSR INFORMATION			$GSRI= \sum\limits_{i=1}^{m} g_i$
Concept	**Items**		**Score**
G1. Statement of vision and strategy of the university on issues about social responsibility	a) If main SR commitments are disclosed. b) If the webpage or Sustainability Report includes a declaration on SR from the governing body.		0/0.5 based on the absence-presence of each item
G2. Information about profile of stakeholders	a) If the university webpage or the SR/SustainabilityReport identify the stakeholders. b) If there is specific information about the informational needs of each group of stakeholders.		0/0.5 based on the absence-presence of each item
G3. Centralized or decantralized disclosure of SR information by universities	a) If the disclosure of SR information is developed in a centralized way on the university webpage. b) If this disclosure is developed through dependent centres at said university.		0/0.5 based on the absence-presence of each item
G4. Data on performance indicators	a) economic indicators. b) social indicators. c) environmental indicators.		0/0.33 based on the absence- presence of each item
G5. Index of contents or a table to locate different elements of information about SR	Provides the reader with an index or a table to locate different SR elements.		0/1 based on the absence-presence of that item
SPECIFIC CSR INFORMATION			$SSRI= \sum\limits_{i=1}^{m} g_i$
Concept	**Items**		**Score**
S1. Energy	Information is disclosed about the installation of systems that save electricity such as movement sensors, incandescent lightbulbs or other alternative sources of energy.		0/1 based on the absence/presence of this item
S2. Buildings and grounds	Information is disclosed about criteria for construction, renovation and rehabilitation of existing buildings in line with "green criteria".		0/1 based on the absence/presence of this item
S3. Purchasing management	Information is disclosed about the need to prioritize the purchase of reusable, ecological materials that require a minimum of packaging.		0/1 based on the absence/presence of this item
S4. Waste management and recycling	Information is disclosed about questions related to the promotion of the recycling of office material and solid waste providing recipients for articles such as paper, printer cartridges and batteries.		0/1 based on the absence/presence of this item
S5. Transportation	Information is disclosed about the creation of incentives for the university community to use public transport or alternative means of transport such as bicycles and bus.		0/1 based on the absence/presence of this item
S6. Food	Information is disclosed about fair trade and sustainable food through the provision of ecological products in campus cafés and shops.		0/1 based on the absence/presence of this item
S7. Academic	Information is disclosed about courses, seminars and conferences related to SR.		0/1 based on the absence/presence of this item
S8. Research	Information is disclosed about University research centres linked to SR.		0/1 based on the absence/presence of this item
QUALITATIVE CHARACTERISTICS OF CSR INFORMATION			$QSRI= \sum\limits_{i=1}^{m} g_i$
Concept	**Items**		**Score**
Q1. Completeness	It is possible to check and/or download the Report online.		0/1 based on the absence-presence of that item
Q2. Timeliness	It offers SR information more frequently than on a yearly basis (monthly, termly, etc).		0/1 based on the absence-presence of that item
Q3. Comparability	a) It is possible to compare information from two or more years. b) It offers comparative summaries on sustainable information provided by the university.		0/0.5 based on the absence-presence of each item
Q4. Understandability	a) It offers ratios and graphics to help to clarify the SR information included in the Reports. b) It incIncludes comments on the SR information provided.		0/0.5 based on the absence-presence of each item
Q5. Relevance	a) It provides technical SR reports made by the University b) It presents SR information in and ordered and classified manner.		0/0.5 based on the absence-presence of each item
Q6. Reliability	The information has been accredited.		0/1 based on the absence-presence of that item

Source: Own elaboration based on the GRI guidelines, adaptations about SR Reports published by universities and on the pronouncements published by FASB (1980) and IASB (1989).

TABLE 2. Context in which CSR Reporting takes place

USABILITY		$USRI = \sum\limits_{i=1}^{m} g_i$
Concept	**Items**	**Score**
U1. Reading and scanning	a) A specific section on the universities' websites for disclosing sustainability information exists. b) Electronic formats used to process the sustainability reporting: - htlm - pdf doc - xml or xbrl - xls c) Sustainability reporting is disclosed in different languages	0/0.33 based on the absence- presence of each item. REgarding the type of format (item b), the score of 0.33 is split in the following way: - htlm: 0.066 - pdf or doc: 0.066 - xml or xbrl: 0.099 - xls: 0.099
U2. Search	a) A basic search tool is included in the university website. b) An advanced search tool is included in the university website.	0/0.5 based on the absence-presence of each item
U3. Link characteristics	A system of hyperlinks for the information offered is provided.	0/1 based on the absence-presence of that item
U4.Structure of the web page	A web map showing the contents is available	0/1 based on the absence-presence of that item
U5. Characteristics of accesibility	All information provided on the website is freeware and it can be downloaded	0/1 based on the absence-presence of that item
STAKEHOLDER PARTICIPATION		$SKSRI = \sum\limits_{i=1}^{m} g_i$
Concept	**Items**	**Score**
SK1. Characteristics of interactivity	a) A different e-mail address to the webmaster's is provided to request information or explanations. b) Personal contacts with responsible persons of the university for the information provided are supplied on the website c) The website has a mailing list to update information to those information users that apply this service	0/0.33 based on the absence-presence of each item
SK2. Forums/chats	a) Forums with general contents b) Forums related to SR or sustainability	0.5 if the online forum/chat used allows discussion of general subjects and 1 if there is a specific forum/chat used for SR subjects
SK3. Web 2.0 technology	a) Web 2.0 technology about the University in general b) Web 2.0 technology about aspects of SR or sustainability	0.5 if the use of Web 2.0 technology is aimed at general university subjects and 1 is the Web 2.0 technology is used for
SK4. Online surveys	a) Surveys not specific to SR b) Surveys specific to SR	0.5 of the university uses online surveys of a general nature and 1 if the university uses surveys about SR
SK5. Newsletter	a) General news b) Specific news about SR or sustainability	0.5 if the news disclosed by the university is of a general nature and 1 if it is SR news
PRIVACY AND SECURITY		$PSRI = \sum\limits_{i=1}^{m} g_i$
Concept	**Items**	**Score**
P1. Data collection	The university collects specific data from the user	0/1 based on the absence-presence of that item
P2. Digital signature	A digital signature can be used	0/1 based on the absence-presence of that item
P3. Notification of privacy policy	If there is notification of a privacy policy	0/1 based on the absence-presence of that item
P4. Access to private info	If there is restricted information	0/1 based on the absence-presence of that item
P5. Use of cookies	Use of techniques such as cookies that collect information on user access or behaviour on the webpage	0/1 based on the absence-presence of that item

Source: Own elaboration based on CYPRG lines 2010 and previous literature (Holzer and Manoharan, 2007; Holzer and Kim, 2007)

The first section includes, in a general manner, the structure of a corporate social responsibility report and deals with the informational content on CSR disclosed by the universities in the sample –see table 1-. There are many sustainability reporting guidelines (Dalal-Clayton and Bass, 2002), but the most widely used include: the ISO 14000 series (especially ISO 14031) and the Eco-Management and Audit Scheme; the Social Accountability 8000 Standard (SAI, 2007); and the GRI Sustainability Guidelines (GRI, 2002a, 2006) (Lozano, 2011a). Furthermore, there have been efforts to develop a standardization of sustainability / CSR reporting for universities, such as the work of University Leaders for Sustainable Future (ULSF) or the research work by Lozano (2006b).

Although the GRI guidelines were not developed for universities (Cole, 2003), they offer one of the best options for assessing and reporting sustainability reports (Lozano, 2006b; Lozano, 2011a; Lozano and Huisingh, 2011). Therefore, in our study, the GRI guideline has been selected as a first approach for analyzing CSR informational content at universities.

Nonetheless, although we are aware of their limitations in representing CSR reporting at universities, we have also analyzed the CSR Reports from sample universities as they are considered to be an effective mechanism for the control and communication of information (Lukman and Glavič, 2007; Lozano, 2011a) and because it has allowed us to highlight items that are being published by the universities at the moment. Therefore, we have designed and programmed a model to analyze and evaluate the online disclosure of information about social responsibility at universities with the aim of contributing to the existing literature on sustainability reporting in universities.

We have distinguished three different aspects of the question: General CSR Information (GSRI), specific CSR information (SSRI), and the Qualitative Characteristics of the CSR Information (QCSRI) as the main questions to be addressed in order to guarantee the quality of information related to CSR (see Table 1).

The second section of our study refers to the context of the CSR information and has been structured in three sections taking into account the previous research –see Table 2-. On the one hand, we seek to analyse the usability of the webpage (USRI). On the other hand, in order to obtain information about stakeholders, learn about their expectations and establish mechanisms for interaction (Downey, 2002), we analyse which mechanisms favour the participation of stakeholders (SKSRI), and then conclude with the characteristics related to privacy and safety on webpages (PSRI) which mainly seek to observe the capacity for personalization that can be included in the disclosure of CSR information.

In relation to the value assigned to each of the questions included in our proposal for assessment of the disclosure of CSR information at universities, and based on the previous literature (Cooke, 1989; Caba et al., 2005; Lozano, 2011a), we have opted for a binary dichotomic value system (0/1) depending on the absence or presence of each aspect on the webpage or the Sustainability/Social Responsibility Report, with the objective of reducing subjectivity in the evaluation when there are no specific rules to assign the value of each one of the aspects analysed (Jones and Alabaster, 1999), assigning the same value to each unit when the aspect analysed is defined by various items (see Appendix Tables 1 and 2 to observe the items analysed and the scores assigned).

Along with the proposal for the aforementioned model, we have created an aggregated index (RSRC) which allows us to observe the practices regarding disclosure of CSR information for each of the universities in the sample. Thus, this index is made up of the sum of the indexes that define the general CSR index (GSRI) and the specific CSR index (SSRI). Moreover, this index is the sum of a series of dichotomic variables. We have decided not to weigh the informational segments that compose the index since, when we have used indexes to assess the quantity of information disclosed by public sector organisms, these have not been weighed (Rodríguez et al., 2006; Gandía and Archidona, 2008).

Finally, from this last index (RSRC), we have constructed a coincidence index (CI) which will serve us as an instrument to make a homogeneous comparison of the online disclosure practices of universities, thus analyzing whether or not those universities that occupy the best positions in terms of disclosure of information (according to the webometrics ranking) are disclosing CSR criteria as an essential aspect of their communication policies.

In order to obtain the necessary data, between June and September 2011 we looked at the webpages of the universities selected in order to carry out an exhaustive review and obtain the necessary information for our research. All of this process was performed separately by the three authors of this paper in order to ensure maximum objectivity, and the authors met to discuss the results and reach a consensus. If there were any disagreements with significant variations, the webpages in question were analyzed again by the three authors.

4. Analysis of the results

The data were analyzed using descriptive statistics such as the mean, the median, the standard deviation and the coefficient of variation. The standard deviation is a measure of the degree of dispersion of the data with respect to the average value. The objective of this measure is to examine the degree of homogeneity/heterogeneity in the behaviour of universities in relation to a specific item. We also used the coefficient of variation because this measure shows a better interpretation of the degree of variability as it is a normalized measure of dispersion of a probability distribution.

In section a.1) general information about CSR (see Table 3) shows the low level of commitment in the online disclosure of this type of information (an average of 1.42 out of 5). Whilst universities in the USA obtained the highest score, in the case of universities in Ireland and New Zealand the scores did not even reach 1. The least disclosed items were those related to the profile of stakeholders and to the indicators of execution in the different dimensions of CSR.

Furthermore, all of the universities follow common patterns in terms of the items that are disclosed –see Graph 1- and, with the exception of New Zealand, the performance of the various universities is homogeneous (see variation coefficients in Table 3). Once again, we can highlight the fact that the online information of these items disclosed by USA universities is the most homogeneous of the universities in the sample.

Analysis of the results obtained in a.2) specific CSR information confirms that there is no clear online strategy about disclosure of specific CSR contents (see the average score of 3.46 out of 8). In this regard, whereas universities from Ireland and New Zealand attach least importance to the disclosure of these questions -they also have the highest coefficients of variation (Table 3)-, universities in the USA, Canada and the UK are the best in terms of disclosing this information.

Our results confirm those obtained by prior research such as Lozano's work (2006a), highlighting that the most widely disclosed items are those related to recycling and waste management, energy and questions related to academic and research activities. On the contrary, those which have received least attention are those which deal with sustainable food and/or fair trade and the use of criteria that prioritize the purchase of ecological and reusable materials. However, a common pattern of performance among the universities in the sample cannot be identified -Graph 1-. The results obtained, in line with the previous research (Hammond and Churchman, 2008; Lozano, 2006a; 2011a), show the importance that environmental questions still have in the conception of university social responsibility.

TABLE 3. Descriptive Statistics

a) CONTENT OF THE SR INFORMATION DISCLOSED ON THE WEBPAGES OR ON SUSTAINABILITY REPORTS	AUSTRALIA				CANADA				IRELAND				NEW ZEALAND				UNITED KINGDOM				UNITED STATES				TOTAL	
	MEAN	MEDIAN	SD	CV	MEAN	MEDIAN	SD	CV	MEAN	MEDIAN	SD	CV	MEAN	MEDIAN	SD	CV	MEAN	MEDIAN	SD	CV	MEAN	MEDIAN	SD	CV	MEAN	SD
a.1) General SR content	**1.68**	**1.83**	**1.00**	**0.60**	**1.69**	**2.00**	**0.84**	**0.50**	**0.64**	**0.50**	**0.39**	**0.61**	**0.77**	**0.00**	**1.00**	**1.30**	**1.81**	**2.00**	**1.01**	**0.56**	**1.95**	**2.00**	**0.85**	**0.44**	**1.42**	**0.24**
G1. Expression of the vision and strategy of the university in SR subjects	0.44	0.50	0.33	0.76	0.38	0.50	0.22	0.57	0.12	0.00	0.22	1.83	0.23	0.00	0.32	1.37	0.52	0.50	0.37	0.71	0.60	0.50	0.35	0.59	0.38	0.07
G2. Information on the profile of stakeholders	0.02	0.00	0.10	5.00	0.06	0.00	0.17	2.76	0.00	0.00	0.00		0.03	0.00	0.13	3.87	0.08	0.00	0.28	3.46	0.02	0.00	0.10	5.00	0.04	0.09
G3. Centralized or decentralized disclosure of SR information by Universities	0.46	0.50	0.20	0.43	0.48	0.50	0.10	0.21	0.29	0.50	0.25	0.89	0.23	0.00	0.32	1.37	0.50	0.50	0.00	0.00	0.52	0.50	0.10	0.19	0.41	0.12
G4. Data on performance indicators	0.20	0.00	0.33	1.67	0.09	0.00	0.28	3.01	0.00	0.00	0.00		0.00	0.00	0.00		0.11	0.00	0.25	2.34	0.17	0.00	0.30	1.77	0.09	0.15
G5. Index of contents or a table to locate different elements of SR information	0.56	1.00	0.51	0.90	0.68	1.00	0.48	0.70	0.24	0.00	0.44	1.83	0.27	0.00	0.46	1.72	0.60	1.00	0.50	0.83	0.64	1.00	0.49	0.77	0.50	0.03
a.2) Specific SR content	**3.40**	**4.00**	**2.27**	**0.67**	**4.76**	**6.00**	**2.76**	**0.58**	**1.29**	**1.00**	**1.87**	**1.46**	**1.67**	**0.00**	**2.38**	**1.43**	**4.28**	**5.00**	**1.90**	**0.44**	**5.36**	**5.00**	**1.96**	**0.36**	**3.46**	**0.35**
S1. Energy	0.56	1.00	0.51	0.90	0.68	1.00	0.48	0.70	0.14	0.00	0.36	2.51	0.27	0.00	0.46	1.72	0.68	1.00	0.48	0.70	0.76	1.00	0.44	0.57	0.51	0.05
S2. Buildings and grounds	0.40	0.00	0.50	1.25	0.60	1.00	0.50	0.83	0.10	0.00	0.30	3.16	0.13	0.00	0.35	2.64	0.32	0.00	0.48	1.49	0.68	1.00	0.48	0.70	0.37	0.09
S3. Purchasing management	0.28	0.00	0.46	1.64	0.32	0.00	0.48	1.49	0.10	0.00	0.30	3.16	0.07	0.00	0.26	3.87	0.48	0.00	0.51	1.06	0.56	1.00	0.51	0.90	0.30	0.11
S4. Waste management and recycling	0.72	1.00	0.46	0.64	0.76	1.00	0.44	0.57	0.14	0.00	0.36	2.51	0.27	0.00	0.46	1.72	0.84	1.00	0.37	0.45	0.84	1.00	0.37	0.45	0.59	0.05
S5. Transportation	0.48	0.00	0.51	1.06	0.72	1.00	0.46	0.64	0.14	0.00	0.36	2.51	0.20	0.00	0.41	2.07	0.64	1.00	0.49	0.77	0.64	1.00	0.49	0.77	0.47	0.06
S6. Food	0.00	0.00	0.00		0.40	0.00	0.50	1.25	0.05	0.00	0.22	4.58	0.00	0.00	0.00		0.04	0.00	0.20	5.00	0.40	0.00	0.50	1.25	0.15	0.22
S7. Academic	0.56	1.00	0.51	0.90	0.76	1.00	0.44	0.57	0.43	0.00	0.51	1.18	0.40	0.00	0.51	1.27	0.56	1.00	0.51	0.90	0.84	1.00	0.37	0.45	0.59	0.06
S8. Research	0.40	0.00	0.50	1.25	0.52	1.00	0.51	0.98	0.19	0.00	0.40	2.11	0.33	0.00	0.49	1.46	0.72	1.00	0.46	0.64	0.64	1.00	0.49	0.77	0.47	0.04
a.3) Qualitative characteristics of SR information	**1.24**	**1.00**	**1.12**	**0.90**	**1.16**	**1.00**	**0.92**	**0.79**	**0.24**	**0.00**	**0.60**	**2.54**	**0.47**	**0.00**	**0.74**	**1.59**	**1.00**	**1.00**	**0.72**	**0.72**	**1.08**	**1.00**	**1.09**	**1.01**	**0.86**	**0.21**
Q1. Completeness	0.04	0.00	0.20	5.00	0.00	0.00	0.00		0.00	0.00	0.00		0.00	0.00	0.00		0.00	0.00	0.00		0.04	0.00	0.20	5.00	0.01	0.10
Q2. Timeliness	0.08	0.00	0.28	3.46	0.12	0.00	0.33	2.76	0.00	0.00	0.00		0.13	0.00	0.35	2.64	0.08	0.00	0.28	3.46	0.12	0.00	0.33	2.76	0.09	0.13
Q3. Comparability	0.16	0.00	0.37	2.34	0.06	0.00	0.22	3.66	0.00	0.00	0.00		0.00	0.00	0.00		0.04	0.00	0.14	3.46	0.04	0.00	0.14	3.46	0.05	0.14
Q4. Understandability	0.26	0.00	0.41	1.58	0.14	0.00	0.34	2.42	0.10	0.00	0.30	3.16	0.07	0.00	0.26	3.87	0.14	0.00	0.31	2.19	0.20	0.00	0.32	1.61	0.15	0.05
Q5. Relevance	0.66	1.00	0.43	0.65	0.76	1.00	0.41	0.54	0.14	0.00	0.32	2.25	0.27	0.00	0.46	1.72	0.70	1.00	0.43	0.62	0.68	1.00	0.41	0.60	0.53	0.05
Q6. Reliability	0.04	0.00	0.20	5.00	0.08	0.00	0.28	3.46	0.00	0.00	0.00		0.00	0.00	0.00		0.04	0.00	0.20	5.00	0.00	0.00	0.00		0.03	0.13

b) CONTEXT OF THE SR INFORMATION ON THE WEBPAGES	AUSTRALIA				CANADA				IRELAND				NEW ZEALAND				UNITED KINGDOM				UNITED STATES				TOTAL	
	MEAN	MEDIAN	SD	CV	MEAN	MEDIAN	SD	CV	MEAN	MEDIAN	SD	CV	MEAN	MEDIAN	SD	CV	MEAN	MEDIAN	SD	CV	MEAN	MEDIAN	SD	CV	MEAN	SD
b.1) Usability	**3.28**	**3.13**	**0.64**	**0.20**	**3.17**	**3.13**	**0.59**	**0.19**	**3.53**	**3.63**	**0.69**	**0.20**	**3.26**	**3.57**	**0.72**	**0.22**	**2.97**	**3.13**	**0.43**	**0.14**	**3.11**	**3.13**	**0.48**	**0.15**	**3.22**	**0.12**
U1. Reading and scanning	0.16	0.13	0.09	0.60	0.17	0.13	0.11	0.66	0.13	0.07	0.12	0.92	0.13	0.13	0.02	0.13	0.13	0.13	0.01	0.10	0.21	0.13	0.14	0.68	0.15	0.05
U2. Search	0.72	0.50	0.25	0.35	0.72	0.50	0.25	0.35	0.69	0.50	0.29	0.43	0.67	0.50	0.24	0.37	0.76	1.00	0.25	0.34	0.74	0.50	0.25	0.34	0.72	0.02
U3. Link characteristics	0.96	1.00	0.20	0.21	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.96	1.00	0.20	0.21	1.00	1.00	0.00	0.00	0.99	0.10
U4.Structure of the web page	0.48	0.00	0.51	1.06	0.32	0.00	0.48	1.49	0.76	1.00	0.44	0.57	0.53	1.00	0.52	0.97	0.16	0.00	0.37	2.34	0.16	0.00	0.37	2.34	0.40	0.06
U5. Characteristics of accesibility	0.96	1.00	0.20	0.21	0.96	1.00	0.20	0.21	0.95	1.00	0.22	0.23	0.93	1.00	0.26	0.28	0.96	1.00	0.20	0.21	1.00	1.00	0.00	0.00	0.96	0.09
b.2) Stakeholders participation	**2.34**	**2.33**	**0.62**	**0.26**	**2.08**	**2.16**	**0.60**	**0.29**	**1.52**	**1.50**	**0.40**	**0.26**	**1.83**	**1.83**	**0.41**	**0.22**	**2.22**	**2.16**	**0.53**	**0.24**	**2.18**	**2.16**	**0.63**	**0.29**	**2.03**	**0.11**
SK1. Characteristics of interactivity	0.38	0.33	0.26	0.69	0.34	0.33	0.20	0.59	0.19	0.00	0.22	1.18	0.26	0.33	0.26	0.97	0.44	0.33	0.28	0.65	0.32	0.33	0.24	0.77	0.32	0.03
SK2. Forums or chats	0.34	0.50	0.24	0.70	0.28	0.50	0.29	1.04	0.21	0.00	0.25	1.18	0.30	0.50	0.25	0.85	0.34	0.50	0.24	0.70	0.22	0.00	0.25	1.15	0.28	0.02
SK3. Uses 2.0 Web technology (facebook, twitter...)	0.54	0.50	0.14	0.26	0.56	0.50	0.17	0.30	0.50	0.50	0.00	0.00	0.50	0.50	0.00	0.00	0.52	0.50	0.10	0.19	0.60	0.50	0.25	0.42	0.54	0.10
SK4. If there are online surveys on university matters	0.32	0.50	0.24	0.77	0.14	0.00	0.23	1.64	0.12	0.00	0.22	1.83	0.20	0.00	0.25	1.27	0.32	0.50	0.24	0.77	0.22	0.00	0.33	1.48	0.22	0.04
SK5. If there is a university newsletter	0.76	1.00	0.25	0.34	0.76	1.00	0.25	0.34	0.50	0.50	0.00	0.00	0.57	0.50	0.18	0.31	0.60	0.50	0.20	0.34	0.82	1.00	0.24	0.30	0.67	0.10
b.3) Privacy and security	**3.72**	**4.00**	**0.61**	**0.16**	**3.48**	**3.00**	**0.65**	**0.19**	**3.24**	**3.00**	**1.00**	**0.31**	**3.40**	**4.00**	**1.24**	**0.37**	**3.76**	**4.00**	**0.66**	**0.18**	**3.72**	**4.00**	**0.84**	**0.23**	**3.55**	**0.25**
P1. Data collection	0.68	1.00	0.48	0.70	0.44	0.00	0.51	1.15	0.38	0.00	0.50	1.31	0.60	1.00	0.51	0.85	0.52	1.00	0.51	0.98	0.68	1.00	0.48	0.70	0.55	0.02
P2. If a digital signature can be used	0.16	0.00	0.37	2.34	0.08	0.00	0.28	3.46	0.10	0.00	0.30	3.16	0.20	0.00	0.41	2.07	0.24	0.00	0.44	1.82	0.36	0.00	0.49	1.36	0.19	0.08
P3. If there is a notification of privacy policy	0.88	1.00	0.33	0.38	0.96	1.00	0.20	0.21	0.86	1.00	0.36	0.42	0.80	1.00	0.41	0.52	1.00	1.00	0.00	0.00	0.68	1.00	0.48	0.70	0.86	0.17
P4. Access to private info	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.90	1.00	0.30	0.33	0.80	1.00	0.41	0.52	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.95	0.19
P5. Use of cookies	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00

Source: Own elaboration

GRAPH 1. Performance of the items at universities by countries

AUSTRALIA
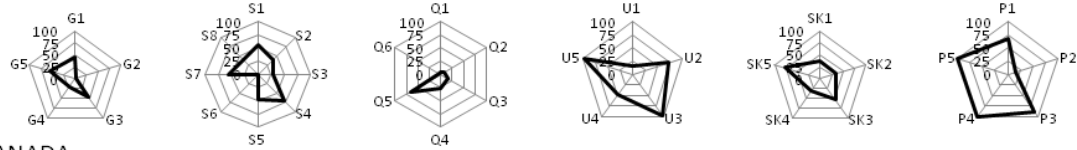
CANADA
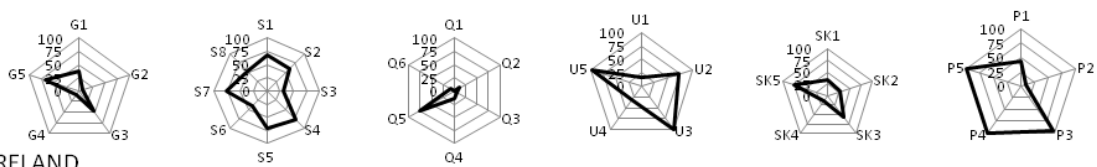
IRELAND
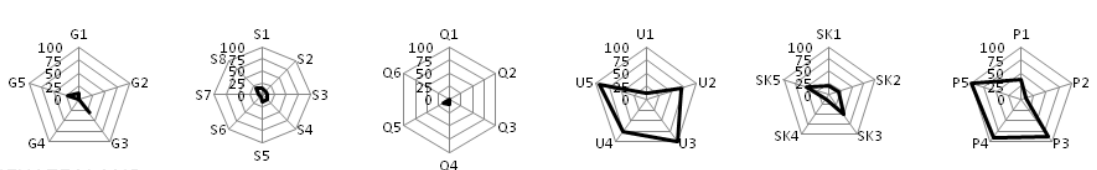
NEW ZEALAND
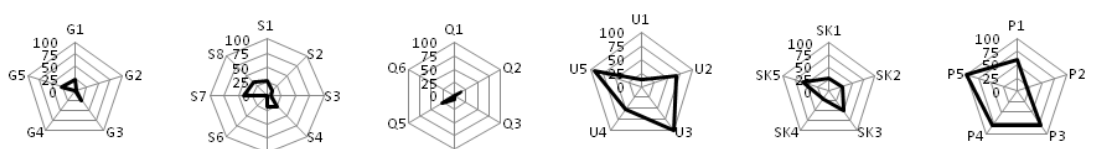
UNITED KINGDOM
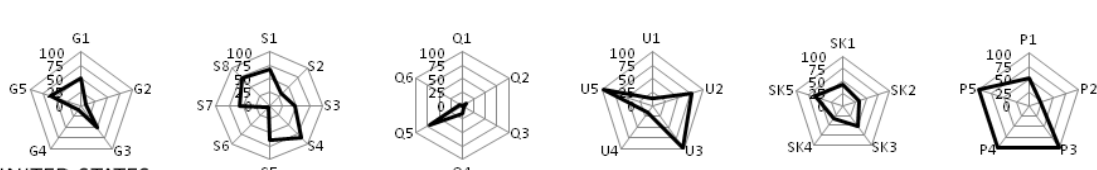
UNITED STATES

G: General SR information, **S**: Specific SR information, **Q**: Qualitative characteristics, **U**: Usability, **SK**: Stakeholders participation, **P**: Privacy and security

Source: Own elaboration

Regarding section a.3) qualitative characteristics of the CSR information, the low average score obtained by the sample (0.86 out of 6), shows the low importance that the universities analysed attach to the presence of these qualities in CSR information, especially universities in New Zealand and Ireland. Graph 1 shows us that the trend in universities is very similar, and the considerable deficiencies that exist in terms of the completeness, timeliness, comparability, understandability and reliability of

the CSR information disclosed by the universities in the sample. Indeed, it would seem that there may be little or no connection between what universities profess to do on their websites and what they actually do, since the CSR information disclosed by many universities are not usually accredited (see table 3). This represents a significant difference from the business sector in which many companies use external validation to demonstrate the credibility of their claims (Paul, 2008).

Furthermore, universities are using technical summaries to disclose this information (not annual reports or specific CSR reports), which makes it difficult to establish a benchmarking process between them (Lukman and Glavič, 2007). These technical summaries are usually accompanied by ratios or graphs with comments. Moreover, the information contained is not normally very timely, since there is no data for time periods lower than one year and they do not refer to previous years, thus making it impossible to establish comparisons. Furthermore, there are very few universities in the sample that offer information that has previously been certified, accredited or audited (Table 3).

Regarding section b) context of the CSR information disclosed, the scores related to b.1) usability reaches an average of 3.22 out of 5, with a very low standard deviation (0.12). As observed in Table 3, the average scores of the different universities in the sample are very similar –see also Graph 1 except for the item referred to the structure of the web page- and the weight of the score is mainly concentrated on the items related to the design of the webpages, since the universities have included instruments that aid web navigability, such as search tools or hyperlinks. In the case of universities in the USA, the UK and Canada, these search tools solve, at least partially, the general absence of a structured map of the webpage.

Although all universities obtained a high score regarding the characteristics of accessibility to information (subsection U5), few of them have a specific section for CSR. Furthermore, information is presented in formats that are not easy to use and adapt (such as Htlm or PDF) and information is only offered in one language which reduces the numbers of potential users.

In Section b.2, participation of stakeholders, the scores are those with the lowest average obtained. The average scores of the universities in the sample are similar and are mainly concentrated on the score given to the items that refer to the news on the webpage and the use of 2.0 web technology. Nevertheless, universities do not promote communication and participation with stakeholders through other channels, such as different emails to that of the webmaster, online chats, forums or surveys, which would help users to check specific information on CSR or to request additional information not included on the webpage, and even to update this information through a mailing list. Graph 1 clearly shows a common tendency at the universities in the sample in terms of dealing with stakeholder participation. These results confirm those obtained in previous studies such as those by Pavičić et al. (2009) or Benneworth and Jongbloed (2010) which highlight the lack of market orientation of universities in relation to stakeholders, as well as the minor role that they play in the management of these institutions.

Regarding section b.3) privacy and security of webpages, this has the highest average score of all of the questions analysed in section b) context of the CSR information. The highest score is concentrated on the items that refer to the development of aspects of notification of privacy policies, restriction of access to areas containing personal information and use of cookies. On the contrary, the least developed aspects are the use of a digital signature to allow greater security and data collection systems. As can be observed in Graph 1, with the exception of universities in New Zealand and Ireland, the rest of the universities in the sample perform in a similar way in the different items in this part of the study.

Finally, as can be observed in Graph 2, the coincidence index shows that the sample universities with the highest scores in our proposed evaluation model, are not those that have the highest webometrics ranking, since they are far from the ascending straight line that represents the coincidence of the position of a university in the two rankings proposed. Indeed, out of the 68 universities that make up the first two quartiles, the coincidence index does not reach 30% -see Table 4-. Therefore, it seems that CSR information does not play a relevant role in the communication

46

policies of the universities in the sample. Consequently, our results are contrary to prior research which argues that universities may well have begun to consider social responsibility to be a strategic and differentiating factor (Serap and Eker, 2007). Nevertheless, considering the results of section b.2 related to the participation of stakeholders, and in line with the work of Ferrer-Balas et al. (2008), the lack of societal pressure is an important obstacle for the implantation of social responsibility strategies at universities.

GRAPH 2. Position of the universities according to rankings
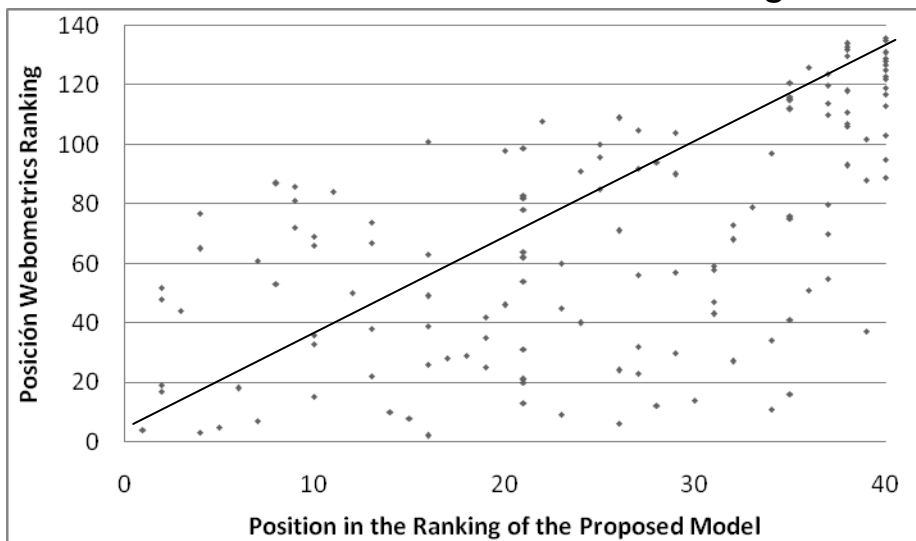
Source: Own elaboration

TABLE 4. Coincidence Index

Position in Webometric Ranking	Position in Proposed Model Ranking	Coincidence Index
1Q(1-30)	1Q(1-10)	26.47%
2Q(31-62)	2Q(11-20)	26.47%
3Q(63-92)	3Q(21-30)	35.29%
4Q(93-123)	4Q(31-40)	88.24%

Source: Own elaboration

5. Discussion and concluding remarks

Although the GRI framework could be a good framework for disclosing CSR, and it has been applied to universities, prior research has indicated the need to adapt it (Cole, 2003; Lozano, 2006b). Therefore, as happens in the business sector, it will be interesting to see whether the use

of the term 'sustainability' spreads in the future at universities and, in this regard, longitudinal studies will be necessary (Paul, 2008).

Nevertheless, nowadays there is a growing interest in increasing the social commitment of universities and in the disclosure of information about CSR as a fundamental part of university accountability. A first approach to this subject, made through Internet search engines, shows that universities in the UK, USA, New Zealand, Canada, Australia and Ireland show a greater Internet presence in terms of disclosure of information about CSR, which has led analysis to focus on good practice at Anglo-American universities.

Previous studies, such as that conducted by Lukman and Glavič (2007) and Lozano (2011), have argued that universities have become one of the main agents for promoting socially responsible policies and have been engaged in incorporating and institutionalizing sustainability into their curricula, research, operations, outreach activities, assessment and reporting. Nonetheless, in the field of reporting, our results show that the universities in the sample attach very little importance to the online disclosure of specific information about CSR, as they do not offer this information through their webpages, nor through sustainability reports or Social Responsibility Reports which, in turn, makes it difficult to establish a comparative benchmarking process.

Nevertheless, and in line with previous studies (Ferrer-Balas et al., 2008; Hammond and Churchman, 2008; Lozano, 2011a), an interesting result refers to the importance of environmental questions in the conception of university CSR. In fact, prior research in sustainability reporting at universities demonstrates that university leaders need to consider publishing more information on the social and educational dimensions (Lozano, 2010). But, universities do not make it easy to find information about CSR on their webpages. Indeed, information about CSR is only found in a very disperse fashion and this is normally through search engines and or through occasional inclusion included in technical reports, not using Annual Reports or online reports on CSR and this tends to question the importance attached by some authors to these means of communication (Lukman and Glavič, 2007; Lozano and Huisingh, 2011). In this regard, the

lack of consistency in CSR could make benchmarking difficult, which emphasizes the need for standardisation in reporting through the use of guidelines as it could ultimately help to increase transparency (Schneider et al., 2011).

Furthermore, although universities could take advantage of the benefits offered by ICT in order to encourage the participation of stakeholders in the management of university CSR, they have not changed their policies in order to meet the expectations of different stakeholders and do not seem to realize that these stakeholders demand more complete information about CSR in its different dimensions (Al-Khatar and Naser, 2003). These results differ from other studies which public universities are developing their relations with their stakeholders, adapting to their expectations and increasing their influence and participation in university management (Al-Khatar and Naser, 2003; Castelo and Lima, 2008).

The universities only appear to be disclosing information about CSR in order to fulfil basic policy demands, as a means of legitimacy and image protection, but without really getting involved in the process of accountability. This could lead universities to view environmentally responsive leadership models as a way to fulfil expectations from society and addressing environmental sustainability, without clearly defining the leadership model that universities should adopt, which could in turn make universities view sustainability commitment statements on their websites as merely enough to comply with the role expected of them, as occurs in the business sector (Heuer, 2010).

The evidence suggests that universities are not seeking to identify nor analyze the needs of stakeholders, despite the major influence they exert upon any organization (Johnson et al., 2006). Nonetheless, universities should take steps to identify stakeholders, to collect information, to measure performance and to use that information to inform decision-making for CSR, just as it has been analysed in business sector (Epstein and Widener, 2010). Therefore, the results of our study serve to underline the essential need for stakeholder dialogue as previously noted by Downey (2002) or by Epstein and Widener (2010). This is an important

question that, in our opinion, requires subsequent analysis which aims to include stakeholders in the management and strategy of universities.

Another interesting find refers to the fact that the universities in the sample with the highest ranking obtained in the proposed model do not occupy the highest places in the webometrics ranking. Indeed, the universities with the highest positions in webometrics ranking are those that provide least information on CSR. This leads us to conclude that currently information on CSR is not taken into account as relevant information in terms of parameters of disclosure. In our opinion, universities should reconsider their efforts in this field and set some specific objectives in order to improve in the near future.

In conclusion, the results of this study may lead to a profound debate if we take into account the fact that CSR is currently discussed in Public Administrations, and specifically in the case of Universities. As stated by the UNESCO, universities have the specific mission of contributing to sustainable development and the overall improvement of society. Having observed the scarce importance that universities attach to informing about CSR on their webpages, we think that it is a subject that requires special attention, especially if universities are to consider CSR as a strategic and differentiating factor.

6. References

Adomssent, M., Godemann, J. and Michelsen, G. (2007). Transferability of approaches to sustainable development at universities as a challenge. International Journal of Sustainability in Higher Education, 8 (4), 385–402.

Aguillo, I. (2009). Measuring the institution's footprint in the web. Library Hi Tech, 27 (4), 540.

Aguillo I. F., Ortega, J.L. and Fernández, M. (2008). Webometric Ranking of World Universities: Introduction, Methodology, and Future Developments. Higher Education in Europe, 33 (2-3), 233-244.

Albareda, L. (2010). Mapping the Novel Arrangements Adopted to Build the Corporate Responsibility Institutional Setting. The Journal of Corporate Citizenship, 40, 75–100.

Al-Khatar, K., and Naser, K. (2003). User's Perceptions of Corporate Social Responsibility and Accountability: Evidence from an Emerging Economy. Managerial Auditing Journal, 18 (6/7), 538.

Benneworth, P. and Jongbloed, V. (2010). Who matters to universities? A stakeholder perspective on humanities, arts and social sciences valorization. Higher Education, 59 (5), 567–588.

Boks, C. and Diehl, J.C. (2006). Integration of sustainability in regular courses: experiences in industrial design engineering. Journal of Cleaner Production, 14 (9-11), 932–939.

Borins, S. (2002). On the frontiers of electronic governance: a report on the United States and Canada. *International Review of Administrative Science,* 68(2), pp. 199–211.

Borkowski, S. C., Welsh, M. J. and Wentzel, K. (2010). Johnson & Johnson: A Model for Sustainability Reporting. Strategic Finance, September: 29–37.

Brinkhurst M., Rose, P., Maurice, G. and Ackerman, J.D. (2011). Achieving campus sustainability: top-down, bottom-up, or neither?. *International Journal of Sustainability in Higher Education*, 12 (4), pp. 338–354.

Caba, P.C., López, H. A.M. and Rodríguez, B. M.P. (2005). Citizens' access to on-line governmental financial information: Practices in the European Union countries. *Government Information Quarterly,* 22(2), pp. 258–276.

Castelo, B.M. and Lima, R.L. (2008). Factors influencing social responsibility disclosure by portuguese companies. *Journal of Business Ethics,* 83(4), pp. 685–701.

Cole, L. (2003). Assessing sustainability on Canadian university campuses: development of a campus sustainability assessment framework. Unpublished Master thesis, Royal Roads University, Victoria.

Cooke, T.E. (1989). Voluntary disclosure by Swedish companies. *Journal of International Financial Management and Accounting,* 1, pp. 171–195.

Cormier, D., Gordon, I. and Magnan, M. (2004). Corporate environmental disclosure: Contrasting management's perceptions with reality. *Journal of Business Ethics*, 49, pp. 143–65.

Dalal-Clayton, B. and Bass, S. (2002). Sustainable Development Strategies, 1st ed., Earthscan, London.

Dahle, M. and Neumeyer, E. (2001). Overcoming barriers to campus greening: A survey among Higher Education Institutions in London, UK. International Journal of Sustainability in Higher Education, 2 (2), 136-160.

Dale, A. and Newman, L. (2005). Sustainable development, education and literacy. International Journal of Sustainability in Higher Education, 6 (4), 351–362.

Daub, C.H. (2007). Assessing the quality of sustainability reporting: an alternative methodological approach. Journal of Cleaner Production, 15 (1), 75–85.

Deegan, C. (2002). The legitimising effect of social and environmental disclosures: A theoretical foundation. Accounting, Auditing and Accountability Journal, 15 (3), 282–311.

Djordjevic, A. and Cotton, D.R.E. (2011). Communicating the sustainability message in higher education institutions. International Journal of Sustainability in Higher Education, 12 (4), 381–394.

Downey, P.R. (2002). The essential stakeholder dialogue. Corporate Social Responsibility and Environmental Management, 9 (1), 37–45.

Dustin, E., Rasca, J. and McDiarmid, D. (2002). Quality web systems: performance, security and usability (Addison-Wesley Publishers B.V., Boston).

Emerson, T. and Welford, R. (1997). Defining the problem; diagnostic tools to explore the evolution of unsustainable practices in organizations. In Welford, R. (Ed.), Corporate Environmental Management 2: Culture and Organizations, London: Earthscan, 11-25.

Epstein, M. J. and Widener, S. K. (2010). Identification and Use of Sustainability Performance Measures in Decision-Making. The Journal of Corporate Citizenship, 40, 43–73.

Ferrer-Balas, D., Adachi, J., Banas, S., Davidson, C.I., Hoshikoshi, A., Mishra, A., Motodoa, Y., Onga, M., Ostwald, M. (2008). An international comparative analysis of sustainability transformation across seven universities. International Journal of Sustainability in Higher Education, 9 (3), 295–316.

Financial Accounting Standards Board (FASB). (1980). Qualitative characteristics of accounting information. Norwalk, Connecticut: Statement of financial accounting concepts number 2, FASB.

Gallego Álvarez, I., Rodríguez Domínguez, L. and García Sánchez, I.M. (2011). Information disclosed online by Spanish universities: content and explanatory factors. Online Information Review, 35 (3), 360–385.

Gandía, J. and Archidona, C. (2008). Determinants of web site information by Spanish city councils. Online Information Review, 32 (1), 35–57.

Global Reporting Initiative (GRI) (2000, 2002 and 2006). Sustainability reporting guidelines. http://www.globalreporting.org/ReportingFramework/G3Guidelines/

Glunk, U. and Smits, M. (2010). Awakening World-Changing Leadership through Management Education. The Journal of Corporate Citizenship, 39, 87–91.

Hammond, C. and Churchman, D. (2008). Sustaining academic life: A case for applying principles of social sustainability to the academic profession. International Journal of Sustainability in Higher Education, 9 (3), 235–245.

Heuer, M. (2010). Defining Stewardship: Towards an Organisational Culture of Sustainability. The Journal of Corporate Citizenship, 40, 31–41.

Holt, D. and Anthony, S. (2000). Exploring green culture in Nortel and Middlesex University. Eco-Management and Auditing, 7 (3), 143-154.

Holzer, M. and Kim, S.T. (2007). Digital governance in municipalities worldwide: A longitudinal assessment of municipal websites throughout the world. The E-Governance Institute. National Center for Public Performance.

Holzer, M. and Manoharan, A. (2007). Global trends in municipal e-government: An online assessment of worldwide municipal web portals (Marc Holzer in A.Agarwal and V.V. Ramana, Computer Society of India: India).

International Accounting Standards Board (IASB). (1989). Framework for the preparation and presentation of financial statements. London: International Accounting Standard Board, July.

Johnson, G., Scholes, K. and Whittington. (2006). Exploring corporate strategy: Enhanced media edition: Text and Cases (Enhanced Media Text and Case).

Jones, K. and Alabaster, T. (1999). Critical analysis of corporate environmental reporting scoring systems. Journal of Environmental Assessment Policy and Management, 1 (1), 27–60.

Kashmanian, R. M., Wells, R. P. and Keenan, C. (2011). Corporate Environmental Sustainability Strategy. Key Elements. The Journal of Corporate Citizenship, 44 , 107–130.

Kudo, H. (2008). Does e-government guarantee accountability in public sector? Experiences in Italy and Japan. Public Administration Quarterly, 32 (1), 93.

Lämsä, A., Vehkaperä, M., Puttonen, T. and Personen, H. (2007). Effects of business education on women and men students' attitudes on corporate responsibility in society. Journal of Business Ethics, 82, 45–58.

Lawrence, S. and Giles, C.L. (1999). Accessibility of information on the web. Nature, 8, 107–109.

Lozano, R. (2006a). Incorporation and institutionalization of SD into universities: breaking through barriers to change. Journal of Cleaner Production, 14 (9-11), 787–796.

Lozano, R. (2006b). A tool for a Graphical Assessment of Sustainability in Universities (GASU). Journal of Cleaner Production, 14, 963–972.

Lozano, R. (2010). Diffusion of sustainable development in universities' curricula: an empirical example from Cardiff University. Journal of Cleaner Production, 18 (7), 637–644.

Lozano, R. (2011a). State of Sustainability Reporting in Universities. International Journal of Sustainability in Higher Education, 12, 67–78.

Lozano, R. (2011b). Addressing Stakeholders and Better Contributing to Sustainability through Game Theory. Journal of Corporate Citizenship, Autumn, 45–62.

Lozano, R. and Peattie, K. (2011). Assessing Cardiff University's Curricula Contribution to Sustainable Development Using the STAUNCH(RTM) System. Journal of Education for Sustainable Development, 5 (1), 115–128.

Lozano, R. and Huisingh, D. (2011). Inter-linking issues and dimensions in sustainability reporting. Journal of Cleaner Production, 19 (2/3), 99–107.

Lozano, R. Lukman, R., Lozano, F.J., Huisingh, D. and Lambrechts, W. (2011) Declarations for sustainability in higher education: becoming better leaders, through addressing the university system. Journal of Cleaner Production, in press, 1–10.

Lukman, R. and Glavič, P. (2007). What are the key elements of a sustainable university? Clean Technologies and Environmental Policy, 9 (2), 103-114.

Lukman, R., Krajnc, D. and Glavic, P. (2010). University ranking using research, educational and environmental indicators. Journal of Cleaner Production, 18 (7), 619–628.

Mellé Hernández. (2007). Social Responsibility in the Public Sector. Ekonomiaz, 65, 84–107.

Middleton, I., McConnell, M. and Davidson, G. (1999). Presenting a model for the structure and content of a university World Wide Web site. Journal of Information Science, 25 (3), 219–227.

Mochizuki, Y. and Fadeeva, Z. (2010). Competences for sustainable development and sustainability: Significance and challenges for ESD. International Journal of Sustainability in Higher Education, 11 (4), 391–403.

Muijen, H. (2004). Corporate social responsibility starts at university. Journal of Business Ethics, 53 (1/2), 235–246.

Mulder, K.F. (2010). Don't preach. Practice! Value laden statements in academic sustainability education. International Journal of Sustainability in Higher Education, 11 (1), 74–85.

Nicolaides, A. (2006). The implementation of environmental management towards sustainable universities and education for sustainable development as an ethical imperative. *International* Journal of Sustainability in Higher Education, 7 (4), 414–424.

Paul, K. (2008). Corporate Sustainability, Citizenship and Social Responsibility Reporting: A Website Study of 100 Model Corporations. The Journal of Corporate Citizenship, 32, 63–78.

Pavičić, J., N. Alfirević, and Mihanović, Z. (2009). Market orientation in managing relationships with multiple constituencies of Croatian higher education. Higher Education, 57 (2), 191–207.

Perdan, S., Azapagic, A. and Clift, R. (2000). Teaching sustainable development to engineering students. International Journal of Sustainability in Higher Education, 1 (3), 267–279.

Pesonen, H.L. (2003). Challenges of integrating environmental sustainability issues into business school curriculum: A case study from the University of Jyväskylä, Finland. Journal of Management Education, 27 (2), 158–171.

Robbins, M. D., Simonsen, B. and Feldman, B. (2008). Citizens and Resource Allocation: Improving Decision Making with Interactive Web-Based Citizen Participation. Public Administration Review, 68 (3), 564–575.

Rodríguez, B. M.P. (2009). Evaluating corporate environmental reporting on the Internet: The utility and resource industries in Spain. Business and Society, 48 (2), 179–205.

Rodríguez, B. M.P., Caba, P.C. and López, H.A. M. (2006). Cultural contexts and governmental digital reporting. International Review of Administrative Sciences, 72 (2), 269.

Schimmel, K., Motley, D., Racic, S., Marco, G. and Eschenfelder, M. (2010). The importance of university web pages in selecting a higher education institution. Research in Higher Education Journal, 9, 1–16.

Schneider, S. C., Zollo, M., and Manocha, R. (2010). Developing Socially Responsible Behaviour in Managers: Experimental Evidence of the Effectiveness of Different Approaches to Management Education. The Journal of Corporate Citizenship, 39, 21–40.

Schneider, J., Campbell, D., Vargo, C. and Hall, R. (2011). An Analysis of Reported Sustainability-Related Efforts in the Petroleum Refining Industry. The Journal of Corporate Citizenship, 44, 69–84.

Serap, A. M.G. and 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.

Setó-Pamies, D., Domingo-Vernis, M. and Rabassa-Figueras, N. (2011). Corporate social responsibility in management education: Current status in Spanish universities. Journal of Management & Organization, 17 (5), 604–620.

Stephens, J.C., Hernandez, M.E., Román, M., Graham, A.C. and Scholz, R.W. (2008). Higher education as a change agent for sustainability in different cultures and contexts. International Journal of Sustainability in Higher Education, 9 (3), 317–338.

Strandberg. L. and Brandt, N. (2001). An inter-Nordic Internet course for regional and local officials and practitioners. International Journal of Sustainability in Higher Education, 2 (3), 220–225.

UNESCO (United Nations Educational, Scientific and Cultural Organization) (1998). WORLD DECLARATION ON HIGHER EDUCATION FOR THE TWENTY-FIRST CENTURY: VISION AND ACTION [Preparing for sustainable future: Higher education and sustainable human development]. World Conference on Higher Education, August, in Paris. ED-98/CONF.2002/7.2.

UNESCO 2005. UN decade of education for sustainable development 2005–2014. International implementation scheme. Draft (Paris, UNESCO).

UNESCO (2006). Education for sustainable development. Quality education for all: basic competences for lifelong learning. The European Dimension and the Baltic Vision. Retrieved January 2012 http://www.unesco.org/education/efa/region_forums/eur_north_amer/svietimasvisiems_pdf

University Build the Country Project. (2006). University Social Responsibility: a way to be college. Theory and practice in the Chilean experience. Santiago de chile: Gráfica Funny, 2006.

Vallaeys, F. (2006). Brief theoretical framework of university social responsibility. Pontificia Universidad Católica de Perú. Available from http://blog.pucp.edu.pe/item/4880/breve-marco-teorico-de-rsu (June 1, 2012).

Van Weenen, H. (2000). Towards a vision of a sustainable university. *International Journal of Sustainability in Higher Education,* 1 (1), 20-34.

Vuontisjärvi, T. (2006). Corporate Social Reporting in the European Context and Human Resource Disclosures: An Analysis of Finnish Companies. Journal of Business Ethics, 69 (4), 331–354.

Wilkinson, D., Harries, G., Thelwall, M. and Price, L. (2003). Motivations for academic web site interlinking: evidence for the Web as a novel source of information on informal scholarly communication. Journal of Information Science, 29 (1), 49–56.

Wimmer, M. A. (2002). A European perspective towards online one-stop government: the eGOV project. Electronic commerce research and applications, 1 (1), 92–103.

Wormell, I. (2001). Informetrics and webometrics for measuring impact, visibility, and connectivity in science, politics, and business. Competitive Intelligence Review, 12 (1), 12.

CHAPTER 3: ONLINE DISCLOSURE OF UNIVERSITY SOCIAL RESPONSIBILITY. A COMPARATIVE STUDY OF PUBLIC AND PRIVATE AMERICAN UNIVERSITIES

1. Introduction

Over the last few years, there has been a certain consensus that universities, as an integral element of the public sector, must play a fundamental role in social responsibility (SR), incorporating SR principles both in their teaching and research and in their mission, vision and corporate strategy (Muijen, 2004; Lukman and Glavič, 2007; Cotton et al. 2007; Hopkinson, Hughes, and Layer 2008), thus advancing the principles of sustainable development (Lukman and Glavič, 2007).

Many definitions have been made of SR and of corporate social responsibility (CSR). In international terms, and according to the EU Green Paper in this respect (2001), SR is the concept by which firms voluntarily contribute to enhancing society and preserving the environment. In this area, numerous initiatives have been undertaken, such as those sponsored by the United States Environmental Agency and the case of the US Sustainability Program Area, which includes guidance, examples, and information resources to aid Federal facilities in developing and maintaining sustainable facilities and helping to develop and promote sustainable practices within their environmental programs or activities (FedCenter).

In applying the concept of CSR to universities, the *University Build the Country* Project (2006) defines CSR as the capacity of the university to disseminate and implement a body of principles and general and specific values, by means of four key processes – management, teaching, research and university extension – thus responding to the needs of the university community and of the country as a whole.

Therefore, universities are expected to provide educational services and to facilitate knowledge transfer in accordance with ethical principles and those of good governance, respect for the environment, social engagement and the promotion of civic values, thus taking responsibility for the consequences and the impacts of their actions.

These considerations are especially significant in view of the essential role played by universities in transmitting knowledge (Grubb and Lazerson, 2005; Stephens et al., 2008). Nowadays, universities are extending the

scope of their actions (Segalàs et al., 2009) and promoting the development of SR in two clearly defined directions.

On the one hand, SR concepts are being incorporated into university education, thus contributing to the training of professionals with a strong sense of ethics, social values and concern for the repercussions of business activities in economic, social and environmental terms (Bampton and Maclagan, 2005; Corney and Reid, 2007; Katayama and Gough, 2008; Roberts and Roberts, 2008; Sterling and Witham, 2008; Aznar, 2011). In this regard, in the context of education for sustainable development, the teaching of corporate social responsibility (CSR) in management schools has been relevant (Setó-Pamies et al., 2011). The role of higher education for promoting sustainable development is very relevant because prior research has demonstrated that, in corporations, managerial commitment to CSR is linked with the acquired qualities (education and training) rather than their inherent physical characteristics (Quazy, 2003). In fact, the crucial role of education and awareness in achieving behavior change are central to sustainability (Tang et al., 2011) because universities should train future business leaders to provide them with skills that are needed in the turbulence of changing requirements concerning social responsibility issues (Pesonen, 2003). Therefore, corporations interested in integrating social issues into their strategic business plan in order to gain a sustainable competitive advantage requires managers with a higher level of formal education and training (Quazy, 2003).

On the other, universities are broadening their activities in the field of SR, in greater awareness of the positive/negative repercussions of their actions on society as a whole, along with the need to play a leading role in these actions as a role model of ethical behavior in society (Vallaeys, 2006). In this sense, although some universities already have considerable experience in setting up SR-related initiatives (Van Weenen, 2000; Lukman and Glavič, 2007, Hoare et al., 2008), most of these are focused on environmental measures (Serap and Eker, 2007; Hammond and Churchman, 2008).

Previous studies have highlighted the pressures imposed on universities in different countries, such as New Zealand from 1985 to 1989 and the United Kingdom from 1992 to 1994 (Banks, Fisher and Nelson, 1997), for the provision of more detailed and wider-ranging accountability, especially in regard to the disclosure of university SR issues. In fact, the increased use of sustainability reporting at universities has become a symbol of the ever-crowding demand by stakeholders for more transparency and accountability (Borkowski, et. al., 2010). Traditionally, the information disclosure at universities had been limited to financial information (Mellé, 2007). Therefore, the application of SR considerations in the field of higher education necessarily involves identifying stakeholders' expectations, establishing mechanisms for dialogue with them and improving information transparency, thereby consolidating university accountability.

Meeting the expectations of the diverse stakeholders in universities would, primarily, constitute an instrument of legitimization, favoring the acceptance and approval by stakeholders of a university's activities in its social environment (Patten, 1992; Deegan and Rankin, 1997; Neu, Warsame and Pedwell, 1998; Zimmerman and Zeitz, 2002; Deegan, 2002; Deephouse and Carter, 2005; Wilmshurst and Frost, 2002; Gallego, Rodríguez, and García, 2011). Consequently, universities must establish communication strategies for SR which, in addition to presenting universities as active participants in this field, allow them to fulfill the informational expectations of stakeholders and give an image of universities as socially responsible institutions (Branco and Rodrigues, 2006), which will ultimately lead to an improvement in their reputation (Castelo and Lima, 2008).

In accordance with SR theory, previous studies have found a positive correlation between the activities of organizations and their disclosure of social and environmental information (Deegan and Rankin, 1997; Deegan, 2002; Cho and Patten, 2007). In fact, authors such as Cormier and Gordon (2001) have argued that public sector organizations face greater information disclosure pressures, associated with transparency and

accountability issues, as they depend to a greater degree on social support from different stakeholders.

In addition, in order to achieve legitimization, universities could promote the disclosure of SR. In this regard, universities can be viewed as a type of incubator or laboratory in which the birth or creation of social movements and their discourses is more likely (Nichols, 2010). Students are more likely to have a certain social psychological orientation (Sherkat and Blocker, 1994), are more likely to be involved in activism (Biggs, 2006) and they usually focus their activism on the campus or locale, making universities useful units of analysis for the study of predictors of activism overall (Van Dyke, 1998), and the diffusion or adoption of certain tactics or discourses (Andrews and Biggs, 2006). In this regard, if the sustainability discourse is being institutionalized within a university with the disclosure of sustainability reporting, outcomes for student organizations that are vulnerable to the discourse range from opposition or no response, to endorsement of the frame through frame alignment, to transformation or founding of organizations as embodiments of the discourse (Nichols, 2010).

The parallel development in recent years of new information and communication technologies (ICTs) could encourage the development of this question at universities, because ICTs, especially the Internet, can play a key role in transparency (Meijer, 2009), enhancing communication and enabling greater access for all concerned (Borins, 2002).

Governments have introduced these ICTs into the delivery of public services (Bekkers and Zouridis, 1999; Wimmer, 2002) as a means of improving communication between public managers and citizens, of encouraging participation in the decision-making process (West, 2004; Carter and Belanguer, 2005; Pina, Torres and Royo, 2007; Robbins et al., 2008), and of improving the formulation of public policy and increasing public confidence, by fostering communication and accountability to all stakeholders (Pina et al., 2007; Kudo, 2008). The interactivity supplied by the Internet enables governments to be more responsive to the population's needs and demands (Pina et al., 2007) and the use of new ICTs, and specifically the Internet, has proved to be a very important tool in these processes (Schimmel et al., 2010; Gordon et al., 2002). Nevertheless,

questions concerning accountability in the field of SR seem to have been overlooked.

Therefore, we believe it would be interesting to determine whether universities really act as models of ethical behavior in society and as centers for knowledge transfer and research, as regards SR; whether they are taking advantage of the opportunities provided by new ICTs, and particularly the Internet, in their communication policies and practices as a means of disclosing SR information, promoting ethical behavior by their students and of facilitating interaction with stakeholders.

With respect to universities, most previous SR research has been aimed at assessing students' perceptions of this concept (Matten and Moon, 2004; Ibrahim, Angelidis and Howard, 2006; Christensen et al., 2007; Lämsä et al., 2007; Tuncer, 2008), at analyzing the educational approach to sustainability and SR (Holdsworth et al., 2008; Buchan, Spellerberg and Blum, 2007; Ciurana and Filho, 2006; Davis et al., 2003), or at examining cases based on specific universities where there are specific, clear-cut SR strategies, primarily concerning environmental issues (De Keizer, 2004; Tarabula-Fiertak, Gajus-Lankamer and Wójcik, 2004; Serap and Eker, 2007; Ferrer-Balas et al., 2008; Hammond and Churchman, 2008), but to date no studies have been made to determine whether universities are making use of ICTs, and of the Internet in particular, as a means of promoting ethical behavior and of applying SR principles. According to previous research in the private sphere (Jones, 2001; Aras and Crowther, 2009), such an approach could enhance their reputation and public image, among other benefits, and enable them to gain a competitive advantage and thus become an attractive option for more students. However, to the best of our knowledge there are no published studies focusing on the analysis of university online communication policies in terms of SR.

Anglo-American universities (Thomas and Nicita, 2002; Sterling and Scott, 2008) and, more specifically, those in the USA, have shown an outstanding commitment and pioneering spirit in developing SR policies (Calder and Clugston, 2003) and in including them in their management and in their main academic and research functions (Calder and Clugston, 2003). Furthermore, the American university system has traditionally been characterized by the coexistence of public and private universities (Gordon

et al., 2002) which, while sharing some common features, are fundamentally different in terms of their funding. Private universities in the USA largely depend on the tuition fees paid by their students and on private donations (Gordon et al., 2002), while public onesare State funded.

This difference in funding, along with falling student numbers and the consequent reduction in state funding (Gordon et al., 2002), has led to increasing competition to attract students. Private universities are investing in resources in order to distinguish themselves from public universities, not only as concerns the quality of the education provided and of the research carried out, but also in other essential questions such as SR, because it has been shown that socially responsible behavior by universities, and the way in which this behavior is reflected through information transparency, could give them a competitive advantage in the higher education market, which in turn could provide greater legitimacy in relationships with stakeholders. Indeed, organizational legitimacy is currently more notable for its absence than its presence (Pfeffer and Salancik, 1978). This means that organizations must not only take actions but also inform society in general about their actions in order to obtain, maintain or restore legitimacy (Cormier, Gordon and Magnan, 2004; Campbell, 2003). If this were not done, negative attention might be attracted, together with attacks from stakeholders in response to perceived illegitimate actions (Deephouse and Suchman, 2008).

Despite the above considerations, no previous studies have analyzed whether American universities, probably at the forefront in SR issues, are concerned about the disclosure of information in this respect and whether they are using ICTs to fulfill these new informational requirements and to improve their interaction with stakeholders. Furthermore, given the important differences between private and public universities, one would expect them to behave differently in the field of information transparency in terms of university social responsibility (USR).

Therefore, this article has two main aims: on the one hand, to analyze whether in the framework of university accountability, information transparency in questions of SR is starting to play a key role, bearing in

mind both the information requirements of stakeholders and the need for legitimacy in universities' interaction with society as a whole. And on the other, to analyze whether USR issues are being used as a differentiating factor in the highly competitive world of US higher education; to this end, we examine whether the different natures of public and private universities produce any differences in their online communication policies in terms of USR. This paper, therefore, seeks to enhance our understanding of USR issues today, especially regarding ethical behavior and environmental education, because these issues are currently the most extensively developed, according to our analysis of universities' communication policies.

To achieve our research goals, various approaches were taken: the first step was to design a study to determine whether universities are promoting transparency and accountability through the publication of USR information. Thus, taking into account prior research in the field, we created a model to analyze and assess the online disclosure of SR information by universities. This model was applied to a sample of leading US universities, both public and private, to determine whether the online disclosure of SR information has become a key aspect of university communication policies. Finally, using statistical methodology, we analyzed how the public or private natures of universities, which directly affects their management systems, could be a factor in terms of differentiation and competitiveness, which would allow us to identify certain differences in their policies regarding online SR communication.

The rest of this paper is organized as follows: the next section analyzes the relevance of USR and its disclosure, highlighting the differences that may exist between public and private universities, and setting out the research hypotheses to be tested. The following section focuses on analyzing the results of the empirical study carried out at US universities, explaining the sample selection and research methodology used. We then discuss the results obtained, with respect to the initial hypotheses and, finally, present our main conclusions.

2. Social responsibility in the university system of the USA.

Sustainability is a complex term (Porter and Van der Linde, 1995; Aras and Crowther, 2009), and one that is closely related to corporate social responsibility (Matten and Moon, 2004; Walshe, 2008). The European Commission defines CSR as a corporate contribution to sustainable development (Kleine and Von Hauff, 2009) and the link between these terms emerges from a stakeholder approach (Kleine and Von Hauff, 2009; Van Marrewijk, 2003).

The concept of sustainable development, introduced by the Brundtland Report (World Commission on Environment and Development 1987), includes economic, social and environmental aspects of corporations (triple bottom line) and has since been widely implemented in corporations in the last years (Garriga and Melé, 2004; Aras and Crowther, 2009). One main tool to achieve this aim has been the introduction of the term Education for Sustainable Development, which was first used at the World Conference on Environment and Development (Rio de Janeiro), where priority was given to the role of education in pursuing those kinds of development (Lukman and Glavič, 2007). It focused on the process of orienting and re-orienting education in order to foster values and attitudes regarding respect for the environment, and envisaged ways and means of doing so (UNESCO, 2006). With respect to higher education, there are various possible perspectives on sustainable development, not necessary mutually exclusive (Katayama and Gogugh, 2008), and which are closely linked to innovation and operational efficiency (Porter and Van der Linde, 1995).

In fact, there is a clear need for universities to take over leading positions by demonstrating practices that sustain, rather than degrade, the natural ecosystems, and educating in such a way that approaches a sustainable society (Lukman and Glavič, 2007). In this regard, over the last few years, society has increasingly demanded that universities improve their performance and operational efficiency by incorporating sustainable development criteria into their activities (Forrant and Silka, 2006). Many universities are leaders in the field of social change (McNamara, 2008) and

occupy a unique position in attempts to meet the challenges of SR (Recommendations for Education for a Sustainable and Safe Future, a document written for "The UN Decade of Education for Sustainable Development 2005-2014"). This way, the provision of sustainable vision, mission and suggestions for managing duality between the principles of economic growth and natural laws, on the one hand, and cultural awareness and social responsibility, on the other, are recommended, when creating a sustainable university (Lukman and Glavič, 2007).

Universities are responding to the call for leadership by integrating questions of SR and sustainability in their teaching programs, and broadening their sphere of action as a response to their impact on their environment both in their operational development and in daily life on campus (Thomas and Nicita, 2002; McNamara, 2008; Ellis and Weekes, 2008; Hopkinson, Hughes and Layer, 2008; Lipscombe, 2008; Sterling and Scott, 2008; Beringer and Adomßent, 2008). A good example of SR policies in practice can be found at English-speaking universities and, specifically, at American universities, which have long been distinguished by their commitment to "service to the community" (Decter, 2009). The U.S.A has the second largest number of higher education institutions in the world and the highest number of students in higher education (UNESCO, 2005). They are characteristically large-scale public or private institutions, which may contain both small colleges focused on humanities and large research centers (Goldin and Katz, 1999; Geng et al., 2004).

American universities are strongly committed to SR, in terms of both the scale and impact of their actions in society, and their tradition and social influence. The Association for the Advancement of Sustainability in Higher Education (AASHE) publishes a weekly list of sustainability initiatives and the achievements of higher education institutions in the U.S.A. and Canada, thus promoting the integration of sustainability in the spheres of teaching, research and management. The American College & University Presidents' Climate Commitment, on the other hand, attempts to fight global warming by obtaining commitments to neutralize the emissions of greenhouse gases and to boost research in this field in higher education (McNamara, 2008). Another interesting project is the Sustainability Education and Economic

Development Center (SEED), which is the first national center for online resources and tools devoted to supporting schools in the creation of quality environmental programs.

The University of Yale among others, organizes informal conferences that attract a great number of scholars to discuss the role of higher education in the pursuit of sustainable development, the problems of modern-day education and the strategies necessary in order to make the campus a model for socially responsible behavior (Calder and Clugston, 2003). Other universities adopt their own strategies to implant SR policies, in the firm belief that these institutions can and should intervene in social questions (Horton-Williams, 2010).

In some cases, universities have even created their own specialized centers or institutes, such as the Sustainable Endowments Institute, a project funded by Rockefeller Philanthropy Advisors, which has also promoted other projects such as the College Sustainability Report Card (2007). The latter project seeks to establish priorities for sustainability in university initiatives and investment policies, offering annual progress assessments in the field of university sustainability (McNamara, 2008).

In terms of the inclusion of SR questions in the fields of educational research at American universities, widely varying approaches have been taken. Many courses and subjects now include social, environmental, and/or economic questions within different degree programs (Romero and Silveri, 2006; Clark et al., 2011), such as Environmental Studies, Ecological Agriculture, Natural and Environmental Resource Development and Sustainable Development, but all share the goal of teaching environmental sustainability (Grecho, 2010). Other courses and programs focus on restructuring and the long-term use and maintenance of natural resources to satisfy basic human needs while protecting the interests of future generations (Corcoran and Wals, 2004). Furthermore, there has been a major curricular debate concerning questions of equality and non-discrimination (Rosen and Mehan, 2003).

In the area of research, American universities are supporting changes in the learning process. In this respect, Wright (2007) compiled a list of 19

important categories in terms of research priorities, including the incorporation of sustainability, institutional culture and governance, and leadership and management (McNamara, 2008).

Nevertheless, for a number of years the educational system has been faced with major problems, including reduced government support, increasing costs of research and competition from business institutions (Santos, Heltor and Caraca, 1998). Important changes have been made in higher education funding (Heller and Kimberly, 2006), and many universities are now working with severely limited budgets (McNamara, 2008). This is also the case with private universities, whose income is mainly derived from tuition fees and donations (Gordon et al., 2002).

In the light of this situation, private universities are fighting to attract as many students as possible in a very competitive market, and many have adopted business practices from the private sector. Differentiation thus becomes a competitive advantage, to be achieved not only through teaching and research but also through a wide range of other measures including SR (Daub, 2007). Carlson (2008) argued that universities with advanced environmental programs and a sustainable campus may have unique advantages in terms of attracting students, fees and subsidies. In the same vein, other studies, focusing particularly on the private sphere, have demonstrated that SR actions improve the image and reputation of an institution (Jones, 2001).

Thus, universities are taking SR actions both to establish the legitimacy of their operations (Huang and Wang, 2012) and to better attract students, fees and subsidies (Carlson, 2008). Nonetheless, in order to obtain or maintain this legitimacy, they must not only take actions but also inform society at large about these actions (Cormier et al., 2004). It has been shown that one of the main strategies applied by organizations to gain legitimacy for their actions has been to align the perception of their actions with what is expected by their stakeholders, by means of information disclosure (Daub, 2007; Archel et al., 2009).

By informing stakeholders of their socially responsible actions universities would expect to improve their transparency and accountability

(Meijer, 2009). In order to do so, they could take advantage of the advantages provided by new ICTs, making use particularly of the Internet and university websites; previous studies have shown that the information posted on university websites has a major influence on students' choice of university (Schimmel et al., 2010), and in this decision particular importance is given to information regarding sustainability (Gordon et al., 2002).

In view of these considerations, we believe it would be useful to observe whether universities, as models of socially responsible behavior in society and centers of knowledge *par excellence*, are making use of ICTs as a means of disclosing SR information. Although some studies have analyzed universities' use of websites or web 2.0 sites (Clapper and Burke, 2005; Eijkman, 2009), very little attention has been paid to their disclosure of SR information. Moreover, few studies have analyzed the public or private nature of universities as a differentiating factor, and when this is the case, they have focused on other disciplines such as productivity in research (Holsapple and O'Leary, 2009).

Given the competition among private universities to obtain financial resources and to acquire a competitive advantage in terms of the disclosure of USR information, we would expect these universities to offer more such information on their official websites. Therefore, the following hypothesis is proposed:

H1:   The level of online disclosure of SR information at private universities in   the U.S.A. is greater than that made by public universities in the same country.

The disclosure of USR information as a differentiating element could mean that the highest-ranking institutions for teaching and research quality would be those which most promote the online disclosure of this type of information, since the most prestigious universities would become leaders in the movement for social change (McNamara, 2008). Therefore, we propose the following hypothesis:

H2:   The universities with the highest prestige and academic quality are those which   most promote the online disclosure of SR information as an important element of competitiveness and commitment to society.

This analysis would be incomplete without taking into account the public and/or private nature of university institutions since this could be another differentiating factor in the online disclosure of SR information (Holsapple and O'Leary, 2009). Indeed, if our testing of Hypothesis 2 revealed no differences, this would imply the existence of a certain homogeneity in the treatment of information, regardless of the quantity of information disclosed or the way in which it is presented. However, we could not, for this reason alone, affirm that SR is not a factor that promotes differentiation and competitiveness because the public or private nature of the institution may be a decisive factor in the degree of online SR information disclosed and this is not taken into account in H2. Accordingly, the following hypothesis must be examined:

H3:   Regarding the public or private nature of the universities in the sample, the universities with the highest prestige and academic quality are those which most promote the online disclosure of SR information as an important element of   competitiveness and commitment to society.

3. Empirical research at American universities

3.1 Selection of the sample

Sample selection for the empirical study was developed in two stages. Firstly, we identified those universities making the greatest effort to disclose SR information on the Internet. To do so, we conducted an online search for universities that most frequently address SR questions on their websites and/or publish annual SR reports. As previous studies have shown that the annual report is the main instrument of information disclosure and communication, and constitutes an essential element of accountability (Deegan and Rankin, 1997; Vuontisjärvi, 2006), we also analyzed these documents to observe whether they included information about USR questions.

This initial search showed that the most highly developed policies are those relating to environmental protection, as was to be expected from the definition of SR and from previous studies. These policies have a longer history in the field of education (Tilbury, 1995; Filho, 1997; Thomas and Nicita, 2002; De Keizer, 2004; Tarabula-Fiertak, Gajus-Lankamer and Wójcik, 2004; Serap and Eker, 2007; Kushmerick, Young and Stein, 2007; Ferrer-Balas et al., 2008; Hammond and Churchman, 2008; Hurlimann, 2009).

In addition, prior research indicates that managers have a very sketchy understanding of key principles that underlie the concept of sustainable development because they only know about some aspects of environmental management and corporate social responsibility (Springett, 2003). For example, in Northern European audiences seemed especially aware of environmental issues and interested in dealing with them, and both US and European regulatory agencies have developed and shared innovative programs that encouraged business' role in environmental improvement (Meyer, 1999; Eagan et al., 2002).

Also, managers have shown an emphasis on managing waste, recycling and using resources, but they generally have not read or been educated in this area, which could make universities to play a relevant role in this regard (Springett, 2003) and in the need to teach students to communicate effectively across disciplines, cultures and industries (Eagan et al., 2002). In fact, environmental sustainability is a main concern regarding the achievement of business students' perceptions of the legitimacy of environmentally sustainable business practices (Thomas, 2005). Therefore, universities are unique, playing an important role in imparting of new knowledge, its dissemination through education information and communication technologies, and its usage in new industrial processes or services (European Commission, 2003).

Finally, under the orthodox paradigm of business and business theory, education for sustainability may be seen as representing a threat to this paradigm, which helps to explain the focus on 'environment' that characterized early initiatives, such as the introduction of environmental

strategy courses into business curricula (Springett, 2005). The same conclusion was reached concerning the first sustainability and SR reports found; again, environmental issues were most visible in the information disclosed. In fact, prior research in sustainability reporting at universities demonstrates that university leaders need to consider publishing more information on the social and educational dimensions (Lozano, 2010). Also, the environmental impacts of college and university campuses and efforts to reduce these impacts on universities campus are well documented (see, e.g. Perrin, 2001), and sustainable universities campus are often linked to environmental planning campuses (White, 2003).

Taking into account previous comments, using general search engines such as Yahoo, Google and Terra, we fed in key concepts such as *sustainability report, environmental report, environment, ecology, water, recycling, green building, biodiversity* and *non-profit*, together with the term *university*. In order to obtain a broad range of articles, the search was conducted in four main languages: Spanish, Portuguese, French and English. The results obtained show that American universities are making the greatest efforts worldwide to disclose SR information online, since, according to the information obtained from the above search engines and SR reports, the vast majority of this information comes from US universities.

We stress that the selection of universities in our paper has limitations because it only considers the universities that implement socially responsible actions and disclose such policies via the Internet. Therefore, the present study does not address universities that, while committed to SR, do not disclose their commitment or, even if they do, if other means are used, such as printed materials (posters, brochures, magazines, etc.). Nevertheless, despite these limitations, we believe the sample is appropriate for the goals of this study, i.e., to analyze information transparency regarding SR issues disclosed via the Internet. Moreover, and as noted above, universities would be interested in using the Internet to disseminate information, to underscore the legitimacy of their actions (Huang and Wang, 2012).

Secondly, the selection of 105 American universities in our sample was made taking into account the Academic Ranking of World Universities (ARWU), more commonly known as the Shanghai Ranking. Although this ranking has been questioned and its methodological limitations highlighted (Dehon, McCathie and Verardi, 2010; Billaut, Bouyssou and Vincke, 2010), the ARWU is generally agreed to be acceptable in terms of objectivity and comprehensiveness (Marginson, 2007; Hazelkorn, 2007; Buela-Casal et al., 2007). Furthermore, it is one of the instruments most widely employed in research studies for measuring institutional quality (Marginson, 2005; Docampo, 2008, 2011; Lukman, Krajnc and Glavic, 2010).

The ARWU publishes an index of world universities based on their academic quality and overall excellence and this has been used in numerous previous studies (Fadeeva and Mochizuki, 2010; Leydesdorff and Shin, 2011). In order to obtain a significant sample, we selected all of the American universities that figured in the first 500 universities in the Shanghai Ranking.

Thus, we obtained a sample comprising 154 American universities, of which 105 were public (68.18%) and 49 were private (31.82%).

3.2. Research methodology

In order to analyze to what extent the universities in the sample disclose SR information online, and taking into account the scarcity of previous studies in this respect, we propose an assessment model based on a series of indexes focused on our main research questions, regarding both the information disclosed and the form and context in which this disclosure takes place.

Initially, we considered earlier studies of online information disclosure (Deegan and Gordon, 1996; Elvins, 2002; Marston and Polei, 2004; Caba, López and Rodríguez, 2005; Caba, Rodríguez and López, 2008; Pettersen and Solstad, 2007; Rodríguez, 2009; Gallego et al., 2011), along with others that analyzed visibility (Middleton, McConnell and Davidson, 1999), accessibility (Lawrence and Giles, 1999), usability (Badre, 2002; Dustin, Rasca and McDiarmid, 2002; Chandler and Hyatt, 2002), privacy and

informational content (Holzer and Manoharan, 2007; Holzer and Kim, 2007). This analysis of the previous literature led us to structure the empirical research in two parts, with a total of six indexes.

The first part includes the SR information content disclosed by the universities in the sample. In order to study this content, we followed the GRI guidelines, held to be the best options for assessing and reporting sustainability reports (Lozano, 2006). In addition, we analyzed SR reports from different universities, considering a set of specific qualitative features in the information, even when these were derived from another sphere, e.g. financial information. Thus, three different sections were established: General SR Information (GSRI); Specific SR Information (SSRI); and the Qualitative Characteristics of SR Information (QCSRI), defined as questions that must be considered in order to determine the quality of the SR information disclosed (see Table 1).

The second part of our empirical study refers to the context in which the SR information disclosure takes place, and is structured in three sections taking into account the usability, interaction, privacy and security of websites. The usability of the website (USRI) refers to the ease with which users can make use of websites in order to achieve a specific goal. In order to obtain information from stakeholders, to identify their expectations and to establish mechanisms for interaction with them, we analyze the mechanisms that favor the participation of stakeholders (SKSRI) in the universities in the sample. Finally, we analyze the level of privacy and security of websites (PSRI), with particular attention to the capacity for personalization in the publication of SR information (see Table 2).

Regarding the score assigned to each of the questions included in our proposal for the assessment of SR information disclosure, and taking into account previous approaches (Cooke, 1989; Roberts, 1991; West, 2000; CYPRG, 2010; Larran and Giner, 2002; Caba et al., 2005), we opted for a binary dichotomous scoring system (0/1), reflecting the absence or presence of each item on the website or in the sustainability/SR report. This method was adopted in order to reduce the degree of subjectivity, in a scoring system for which there are no explicit, predefined rules (Jones,

Alabaster and Walton, 1998). Thus, the same value is awarded to each item when the aspect being analyzed is described by various items (Marston and Shrives, 1991; Purushothaman et al., 2000; Ho, Tower and Barako, 2008) – see Tables 1 and 2 in the Annex to observe the score for each item.

The paired t-test and the Mann-Whitney U test were used to test the hypotheses posed. As a prior step to the application of the t-test, the Levene test was used to determine the existence or otherwise of the equality of the variances between the samples selected. The t-test for independent samples is commonly used to test the hypothesis of equality of two measurements and is the most powerful proof available when the normality assumption is satisfied (Wilks, 1962; Rohatgi, 1976; Lehmann and Romano, 2006). Nevertheless, if the normality assumption is violated, the paired t-test may not detect a true difference. In order to avoid the assumption of a specific model of distribution, non-parametric methods (e.g. the Mann-Whitney U test) or permutation methods can be used (Good, 2005) may be used. Of these, the Mann-Whitney test may be a more powerful test of the null hypothesis (Wilks, 1962; Rohatgi, 1976; Hollander and Wolfe, 1999; Gibbons and Chakraborti, 2003). Therefore, in this paper we used both parametric methods (t-test) and non-parametric methods (Mann-Whitney U test) to test the differences between pairs of public and private universities in the sample in order to determine whether the difference in measurements between the groups was statistically significant and, therefore, if there were any other differences in the practices of online SR information disclosure between the two types of universities. The results of this analysis are shown in the following section.

From June to August 2011, we visited the websites of the selected universities in order to obtain the information necessary for this study. To ensure objectivity, the process was carried out separately by each of the three authors, who subsequently discussed the results and reached a consensus. If there were any significant discrepancies, the websites were examined again by all three authors.

TABLE 1. Content of SR Reporting

GENERAL SR INFORMATION		$GSRI= \sum_{i=1}^{m} g_i$
Concept	**Items**	**Score**
G1. Statement of vision and strategy of the university on issues about social responsibility	a) If main SR commitments are disclosed. b) If the webpage or Sustainability Report includes a declaration on SR from the governing body.	0/0.5 based on the absence-presence of each item
G2. Information about profile of stakeholders	a) If the university webpage or the SR/SustainabilityReport identify the stakeholders. b) If there is specific information about the informational needs of each group of stakeholders.	0/0.5 based on the absence-presence of each item
G3. Centralized or decentralized disclosure of SR information by universities	a) If the disclosure of SR information is developed in a centralized way on the university webpage. b) If this disclosure is developed through dependent centres at said university.	0/0.5 based on the absence-presence of each item
G4. Data on performance indicators	a) economic indicators. b) social indicators. c) environmental indicators.	0/0.33 based on the absence- presence of each item
G5. Index of contents or a table to locate different elements of information about SR	Provides the reader with an index or a table to locate different SR elements.	0/1 based on the absence-presence of that item
SPECIFIC SR INFORMATION		$SSRI= \sum_{i=1}^{m} g_i$
Concept	**Items**	**Score**
S1. Energy	Information is disclosed about the installation of systems that save electricity such as movement sensors, incandescent lightbulbs or other alternative sources of energy.	0/1 based on the absence/presence of this item
S2. Buildings and grounds	Information is disclosed about criteria for construction, renovation and rehabilitation of existing buidlings in line with "green criteria".	0/1 based on the absence/presence of this item
S3. Purchasing management	Information is disclosed about the need to prioritize the purchase of reusable, ecological materials that require a minimum of packaging.	0/1 based on the absence/presence of this item
S4. Waste management and recycling	Information is disclosed about questions related to the promotion of the recycling of office material and solid waste providing recipients for articles such as paper, printer cartridges and batteries.	0/1 based on the absence/presence of this item
S5. Transportation	Information is disclosed about the creation of incentives for the university community to use public transport or alternative means of transport such as bicycles and bus.	0/1 based on the absence/presence of this item
S6. Food	Information is disclosed about fair trade and sustainable food through the provision of ecological products in campus cafés and shops.	0/1 based on the absence/presence of this item
S7. Academic	Information is disclosed about courses, seminars and conferences related to SR.	0/1 based on the absence/presence of this item
S8. Research	Information is disclosed about University research centres linked to SR.	0/1 based on the absence/presence of this item
QUALITATIVE CHARACTERISTICS OF SR INFORMATION		$QSRI= \sum_{i=1}^{m} g_i$
Concept	**Items**	**Score**
Q1. Completeness	It is possible to check and/or download the Report online.	0/1 based on the absence-presence of that item
Q2. Timeliness	It offers SR information more frequently than on a yearly basis (monthly, termly, etc).	0/1 based on the absence-presence of that item
Q3. Comparability	a) It is possible to compare information from two or more years. b) It offers comparative summaries on sustainable information provided by the university.	0/0.5 based on the absence-presence of each item
Q4. Understandability	a) It offers ratios and graphics to help to clarify the SR information included in the Reports. b) It inclIncludes comments on the SR information provided.	0/0.5 based on the absence-presence of each item
Q5. Relevance	a) It provides technical SR reports made by the University b) It presents SR information in and ordered and classified manner.	0/0.5 based on the absence-presence of each item
Q6. Reliability	The information has been accredited.	0/1 based on the absence-presence of that item

Source: Own elaboration based on the GRI guidelines, adaptations about SR Reports published by universities and on the recommendations of FASB, 1980; IASB, 1989.

TABLE 2. Context in which SR Reporting takes place

USABILITY		$USRI= \sum_{i=1}^{m} g_i$
Concept	**Items**	**Score**
U1. Reading and scanning	a) A specific section on the universities' websites for disclosing sustainability information exists. b) Electronic formats used to process the sustainability reporting: - htlm - pdf doc - xml o xbrl - xls c) Sustainability reporting is disclosed in different languages	0/0.33 based on the absence- presence of each item. REgarding the type of format (item b), the score of 0.33 is split in the following way: - htlm: 0.066 - pdf or doc: 0.066 - xml or xbrl: 0.099 - xls: 0.099
U2. Search	a) A basic search tool is included in the university website. b) An advanced search tool is included in the university website.	0/0.5 based on the absence-presence of each item
U3. Link characteristics	A system of hyperlinks for the information offered is provided.	0/1 based on the absence-presence of that item
U4.Structure of the web page	A web map showing the contents is available	0/1 based on the absence-presence of that item
U5. Characteristics of accesibility	All information provided on the website is freeware and it can be downloaded	0/1 based on the absence-presence of that item
STAKEHOLDER PARTICIPATION		$SKSRI= \sum_{i=1}^{m} g_i$
Concept	**Items**	**Score**
SK1. Characteristics of interactivity	a) A different e-mail address to the webmaster's is provided to request information or explanations. b) Personal contacts with responsible persons of the university for the information provided are supplied on the website c) The website has a mailing list to update information to those information users that apply this service	0/0.33 based on the absence-presence of each item
SK2. Forums/chats	a) Forums with general contents b) Forums related to SR or sustainability	0.5 if the online forum/chat used allows discussion of general subjects and 1 if there is a specific forum/chat used for SR subjects
SK3. Web 2.0 technology	a) Web 2.0 technology about the University in general b) Web 2.0 technology about aspects of SR or sustainability	0.5 if the use of Web 2.0 technology is aimed at general university subjects and 1 is the Web 2.0 technology is used for
SK4. Online surveys	a) Surveys not specific to SR b) Surveys specific to SR	0.5 of the university uses online surveys of a general nature and 1 if the university uses surveys about SR
SK5. Newsletter	a) General news b) Specific news about SR or sustainability	0.5 if the news disclosed by the university is of a general nature and 1 if it is SR news
PRIVACY AND SECURITY		$PSRI= \sum_{i=1}^{m} g_i$
Concept	**Items**	**Score**
P1. Data collection	The university collects specific data from the user	0/1 based on the absence-presence of that item
P2. Digital signature	A digital signature can be used	0/1 based on the absence-presence of that item
P3. Notificación de privacity policy	If there is notification of a privacy policy	0/1 based on the absence-presence of that item
P4. Access to private info	If there is restricted information	0/1 based on the absence-presence of that item
P5. Use of cookies	Use of techniques such as cookies that collect information on user access or behaviour on the webpage	0/1 based on the absence-presence of that item

Source: Own elaboration based on CYPRG lines 2010 and previous literature (Fang, 2002; Holzer and Manoharan, 2007; Holzer and Kim, 2007)

4. Analysis of the results

4.1. Descriptive statistics

In Table 3.a) *Content of the SR information disclosed*, the low values obtained by the universities in section 3.a.1) *General SR information* (mean value: 1.57 out of 5) reveal the low level of commitment by the universities in the sample in terms of SR information disclosure. Although there were no major differences between the scores obtained by public and private universities, the latter were found to disclose more information (mean value: 1.74) and to do so in a more homogeneous manner (coefficient of variation: 0.44). Furthermore, of all of the items in this section, those which were least disclosed referred to the profile of stakeholders (G2) and to the indicators of execution of the different dimensions of SR (G4). As shown in Figure 1, G2 and G4 are the lowest-scoring points, for both public and private universities, and thus the aspects that are least disclosed.

Table 3.a.2) *Specific SR Information* confirms that the universities currently disclose information of this kind; this section scored highest of all, although this was only just over 50% of the maximum possible score in the model proposed (mean value: 4.2 out of 8).

The most widely disclosed questions, within the framework of Specific SR Information, were those referring to energy, the management of residues and recycling, and the academic sphere, whilst those least disclosed referred to sustainable food/fair trade or the purchase of sustainable food. Nevertheless, as can be seen in Figure 1, we cannot rule out a common pattern of behavior among these universities, since each one highlights different subjects. In Figure 1, the curves corresponding to items S1-S8 present a variety of shapes, for both public and private universities, showing that there was no common pattern in the disclosure of the items examined. The results obtained, in line with previous research – see Ferrer-Balas et al. (2008) and Hammond and Churchman (2008), among others – demonstrate the importance of environmental questions within the concept of university social responsibility.

FIGURE 1. Performance of the items at universities by public or private
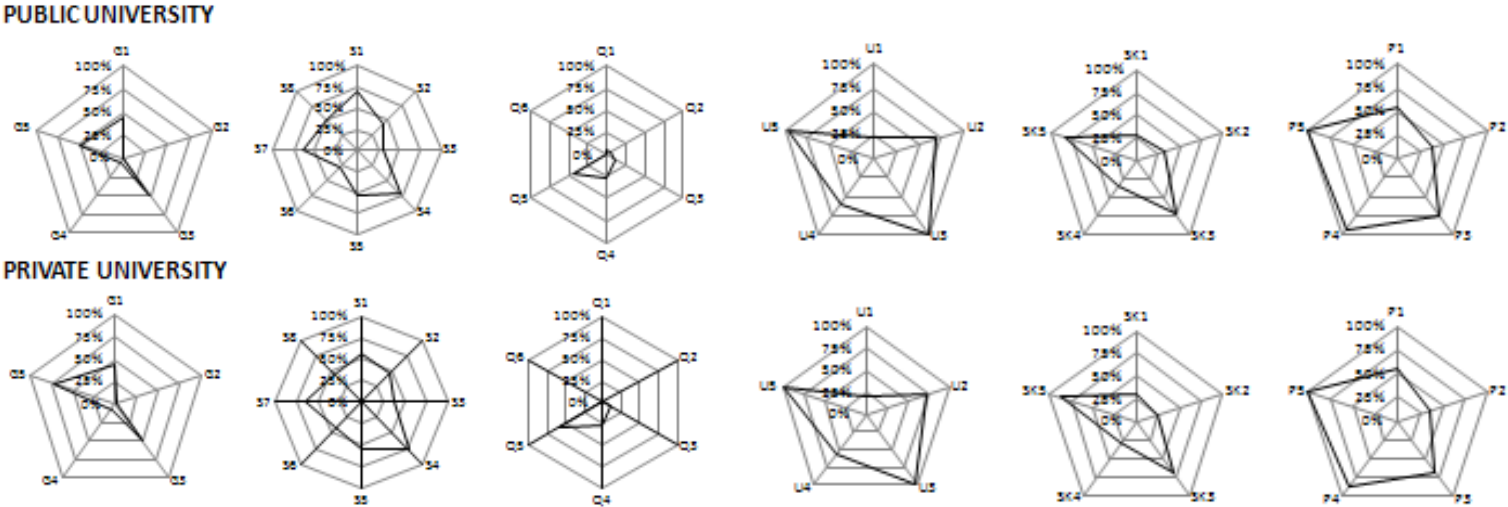
G: General SR information, **S**: Specific SR information, **Q**: Qualitative characteristics, **U**: Usability, **SK**: Stakeholders participation, **P**: Privacy and security

Source: Own elaboration

Regarding the qualitative characteristics of the information (Section a.3, Table 3), low scores were obtained for the content of the SR information disclosed (0.96 out of 6), showing the low priority currently given to these questions, with the private universities obtaining a slightly higher score than the public ones (1.01 and 0.91 respectively) (Table 3). Figure 1 shows that the behavioral trends of the universities in this question are very similar; unlike the specific area of SR, the third section of the Figure (items Q1-Q6) reflects similar patterns of behavior by both public and private universities.

Nevertheless, we emphasize that very few of the universities analyzed offer annual SR reports on their websites; the SR issues that are disclosed are mainly in the shape of technical summaries, not annual SR reports. These technical summaries are usually accompanied by ratios or graphs with comments intended to make the information more comprehensible for external users. Furthermore, when annual SR reports are published, in many cases the information provided is neither timely nor comparable, since no data are provided for periods of time of less than one year, and nor is there any reference to previous years, thus making it impossible to establish comparisons.

These results show that, on the contrary to the hypotheses of Lukman and Glavič (2007), the universities in our sample do not communicate their socially sustainable actions and policies, either through sustainability or social responsibility reports, which makes it difficult to establish a benchmarking process between them. Moreover, very few universities in the sample communicate information that has been previously certified, accredited or audited (see Table 3).

Regarding section b), *Context of the SR information disclosed*, the mean score related to b.1) *Usability* is 3.47 out of 5 with a very low standard deviation (0.61). As can be observed in Table 3, the scores of the different universities in the sample are very similar and the bulk of the score is based on items related to website design, since most universities include instruments that facilitate web browsing, such as search engines and hyperlinks, that help users to examine the information in greater depth.

These search tools partially overcome the general absence of a structured website map.

Also notable is the high score obtained by all of the universities in section U5 *Characteristics of accessibility*: the SR information on the website is accessible in that it is both free of charge and easy to download. Nevertheless, very few universities have a specific section for SR information, and moreover this information is only available in one language, which limits the number of people who can use and understand it. Finally, the formats in which this information is presented are not easy to adapt, since most of the universities have opted to use HTLM or PDF. Figure 1 shows that the universities in the sample behave in a similar way regarding the different concepts included in this section (items U1-U5), as was the case in the previous section on qualitative characteristics.

TABLE 3. Descriptive Statistics

a) CONTENT OF THE SR INFORMATION DISCLOSED ON THE WEBPAGES OR ON SUSTAINABILITY REPORTS	PUBLIC				PRIVATE				TOTAL	
	MEAN	MEDIAN	SD	CV	MEAN	MEDIAN	SD	CV	MEAN	SD
a.1) General SR content	**1,47**	**1,50**	**0,94**	**0,64**	**1,74**	**2,00**	**0,77**	**0,44**	**1,57**	**0,89**
G1. Expression of the vision and strategy of the university in SR subjects	0,45	0,50	0,36	0,81	0,44	0,50	0,28	0,64	0,45	0,34
G2. Information on the profile of stakeholders	0,00	0,00	0,05	10,05	0,01	0,00	0,07	7,00	0,01	0,06
G3. Centralized or decentralized disclosure of SR information by Universities	0,48	0,50	0,30	0,63	0,51	0,50	0,26	0,52	0,49	0,29
G4. Data on performance indicators	0,06	0,00	0,16	2,76	0,07	0,00	0,18	2,45	0,07	0,17
G5. Index of contents or a table to locate different elements of SR information	0,48	0,00	0,50	1,06	0,71	1,00	0,46	0,64	0,56	0,50
a.2) Specific SR content	**4,08**	**4,00**	**2,51**	**0,62**	**4,22**	**5,00**	**2,53**	**0,60**	**4,18**	**2,51**
S1. Energy	0,70	1,00	0,46	0,66	0,55	1,00	0,50	0,91	0,66	0,48
S2. Buildings and grounds	0,44	0,00	0,50	1,14	0,47	0,00	0,50	1,07	0,45	0,50
S3. Purchasing management	0,31	0,00	0,47	1,51	0,39	0,00	0,49	1,27	0,34	0,48
S4. Waste management and recycling	0,73	1,00	0,44	0,61	0,78	1,00	0,42	0,54	0,75	0,44
S5. Transportation	0,53	1,00	0,50	0,94	0,53	1,00	0,50	0,95	0,54	0,50
S6. Food	0,27	0,00	0,45	1,67	0,41	0,00	0,50	1,22	0,32	0,47
S7. Academic	0,62	1,00	0,49	0,78	0,65	1,00	0,48	0,74	0,64	0,48
S8. Research	0,50	1,00	0,50	1,01	0,45	0,00	0,50	1,12	0,49	0,50
a.3) Qualitative characteristics of SR information	**0,91**	**0,50**	**1,28**	**1,41**	**1,01**	**0,50**	**1,02**	**1,01**	**0,96**	**1,20**
Q1. Completeness	0,06	0,00	0,23	4,00	0,02	0,00	0,14	7,00	0,05	0,21
Q2. Timeliness	0,03	0,00	0,19	6,60	0,02	0,00	0,14	7,00	0,03	0,18
Q3. Comparability	0,12	0,00	0,30	2,56	0,10	0,00	0,32	3,16	0,11	0,31
Q4. Understandability	0,27	0,00	0,50	1,85	0,27	0,00	0,41	1,54	0,27	0,47
Q5. Relevance	0,43	0,50	0,42	0,98	0,60	0,50	0,44	0,74	0,49	0,43
Q6. Reliability	0,01	0,00	0,10	10,05	0,00	0,00	0,00		0,01	0,08
b) CONTEXT OF THE SR INFORMATION ON THE WEBPAGES	PUBLIC				PRIVATE				TOTAL	
	MEAN	MEDIAN	SD	CV	MEAN	MEDIAN	SD	CV	MEAN	SD
b.1) Usability	**3,47**	**3,57**	**0,62**	**0,18**	**3,46**	**3,63**	**0,63**	**0,18**	**3,47**	**0,61**
U1. Reading and scanning	0,22	0,13	0,29	1,32	0,20	0,13	0,28	1,39	0,22	0,29
U2. Search	0,70	0,50	0,25	0,35	0,74	0,50	0,25	0,34	0,71	0,25
U3. Link characteristics	1,00	1,00	0,00	0,00	0,98	1,00	0,14	0,15	0,99	0,08
U4.Structure of the web page	0,60	1,00	0,49	0,82	0,55	1,00	0,50	0,91	0,58	0,50
U5. Characteristics of accesibility	0,96	1,00	0,19	0,20	0,98	1,00	0,14	0,15	0,97	0,18
b.2) Stakeholders participation	**2,51**	**2,50**	**0,79**	**0,32**	**2,39**	**2,33**	**0,68**	**0,29**	**2,48**	**0,76**
SK1. Characteristics of interactivity	0,29	0,33	0,27	0,93	0,30	0,33	0,24	0,82	0,29	0,26
SK2. Forums or chats	0,33	0,50	0,24	0,72	0,23	0,00	0,27	1,16	0,30	0,25
SK3. Uses 2.0 Web technology (facebook, twitter...)	0,72	0,50	0,26	0,36	0,70	0,50	0,25	0,35	0,71	0,25
SK4. If there are online surveys on university matters	0,34	0,50	0,33	0,97	0,29	0,50	0,27	0,95	0,33	0,32
SK5. If there is a university newsletter	0,83	1,00	0,24	0,29	0,87	1,00	0,22	0,26	0,84	0,23
b.3) Privacy and security	**3,61**	**4,00**	**1,00**	**0,28**	**3,47**	**3,00**	**1,04**	**0,30**	**3,56**	**1,01**
P1. Data collection	0,55	1,00	0,50	0,90	0,55	1,00	0,50	0,91	0,55	0,50
P2. If a digital signature can be used	0,40	0,00	0,49	1,23	0,37	0,00	0,49	1,33	0,38	0,49
P3. If there is a notification of privacy policy	0,75	1,00	0,44	0,59	0,67	1,00	0,47	0,70	0,72	0,45
P4. Access to private info	0,92	1,00	0,27	0,29	0,88	1,00	0,33	0,38	0,91	0,29
P5. Use of cookies	1,00	1,00	0,00	0,00	1,00	1,00	0,00	0,00	1,00	0,00

Source: Own elaboration.

Section b.2, *Participation of stakeholders* produced the lowest average score (2.48). The scores for public and private universities were practically the same and mainly reflected items referring to news on the website and the use of web 2.0 technology. On the whole, the universities do not promote communication and participation with stakeholders through other channels e.g. by providing e-mail addresses other than that of the webmaster, which might help users find specific SR information or request additional information to that included on the website, or by updating this information through the creation of a mailing list. Other possible tools for user participation, such as forums, chats, and online surveys, were also largely absent from university webpages. Figure 1 shows the common pattern apparent among the universities in the sample, regarding the participation of stakeholders (SK1-SK5), irrespective of the public or private nature of the institution.

The results in this area are in line with those obtained in previous studies such as Magalhaës (2000), Pavičić, Alfirević, and Mihanović (2009) or Benneworth and Jongbloed (2010), which highlighted the lack of market orientation of universities in their relationship with stakeholders, along with the weak role played by the latter in the government of these institutions. However, our results differ from those of other studies which have concluded that universities are strengthening their relationships with stakeholders by adapting to their expectations and increasing their influence and participation in university management (Al-Khatar and Naser, 2003; Jongbloed, Enders and Salerno, 2008; Castelo and Lima, 2008; Gaete, 2009; Krazimierz, 2010, among others).

Section b.3) *Privacy and security of websites* obtained the highest average score (3.56) out of all of the questions analyzed in section b), *Context of the SR information*. This high score is derived from the items that refer to policies on notification of privacy, restricted access to areas containing personal information and the use of cookies. On the contrary, the least developed question is the use of digital signatures that would allow for greater security in data collection systems. Figure 1 shows that the universities in the sample show similar behavior patterns for the different items in this section (items P1-P5), and this figure is one of the highest

scoring in which there is a large degree of homogeneity among the universities sampled.

4.2. Testing the hypotheses

The results obtained, in both the parametric and the non-parametric tests, revealed no significant differences between public and private universities regarding the content of online SR information and the context in which it is disclosed (Hypothesis 1, see Table 4). Thus, public and private universities in the U.S.A. currently adopt similar practices in the online disclosure of SR information and do not seem to be taking into account the possibility that this disclosure could be a differentiating element giving rise to a competitive advantage. This finding differs from those of previous studies which have found significant differences in relation to the behavior of public and private universities in other questions, such as scientific research (Holsapple and O'Learly, 2009).

TABLE 4. Hypothesis Testing number 1

			CONTENT			CONTEXT		
			GSRI	SSRI	QSRI	USRI	SKSRI	PSRI
Parametric Test	Levene's Test	F		0,07	2,418	0,035	1,617	0,016
		Sig.		0,791	0,122	0,853	0,205	0,901
	T-test	t	-1,763	-0,166	-0,35	-0,078	0,968	0,747
		Sig. (2-tailed)	**0,081**	**0,869**	**0,73**	**0,938**	**0,335**	**0,456**
Non-Parametric Test	Statistic	U Mann-Whitney	2211	2512	2183	2504	2317	2387
		W Wilcoxon	7776	8077	7748	8069	3542	3612
	Sig. Asymptote (2-tailed)		**0,156**	**0,812**	**0,118**	**0,787**	**0,32**	**0,45**

Source: Own elaboration.

Nevertheless, we did observe certain differences in the level of online disclosure of SR information among the universities in the sample, in terms of teaching and research quality (Hypothesis 2, see Table 5). Thus, the

highest rated universities according to the Shanghai Ranking, the first quartile, differ significantly in their SR informational content from those in the lowest places (the third and fourth quartiles). Moreover, it is noticeable that the main differences are found in terms of specific SR information content, especially in relation to environmental information, and this could be both a differentiating factor and a confirmation of the results obtained in previous studies (such as Carlson, 2008) which suggested that universities with environmental programs would have an advantage in terms of obtaining funds.

Furthermore, there were no significant differences in the different quartiles of the sample of universities regarding the context in which the SR information is disclosed (Hypothesis 2, Table 5). Thus, excellence in university teaching and research does not imply any better or worse development of web tools for the online disclosure of SR information. Therefore, there is a certain homogeneity in the framework in which SR information is disclosed, and some neglect in terms of the presentation of information as a differentiating factor, since previous studies have stressed the need to improve informational accessibility, which is an element that is taken into account by prospective students (Schimmel et al., 2010).

Finally, we examined the quartiles composed only of public universities, on the one hand, and private universities, on the other (Hypothesis 3). Among the public universities, there were differences in the SR information disclosed between the universities in the first and third quartiles and between those in the second and third quartiles, for both general and specific content. There were also significant differences in all of the quartiles regarding the context of the information, in terms of the usability of the websites (see Table 6). Therefore, it seems that the public universities presenting the highest teaching and research quality have different disclosure models from less highly rated ones.

TABLE 5. Hypothesis Testing number 2

			1Q-2Q						1Q-3Q						1Q-4Q					
			CONTENT			CONTEXT			CONTENT			CONTEXT			CONTENT			CONTEXT		
			GSRI	SSRI	QSRI	USRI	SKSRI	PSRI	GSRI	SSRI	QSRI	USRI	SKSRI	PSRI	GSRI	SSRI	QSRI	USRI	SKSRI	PSRI
Parametric Test	Levene's Test	F	0,002	3,081		0,085	1,309	0,504	0,513	3,909		0,608	2,104	3,081	1,134			0,019	0,045	0,014
		Sig.	0,967	0,083		0,772	0,256	0,48	0,476	0,052		0,438	0,151	0,083	0,29			0,892	0,833	0,905
	T-test	t	3,824	4,941	2,344	-1,109	0,158	-0,564	0,888	2,252	0,867	-0,408	1,577	-1,681	1,226	3,255	1,264	-1,119	1,03	0,256
		Sig. (2-tailed)	0,00	0,00	0,02	0,27	0,88	0,58	0,38	0,03	0,39	0,69	0,12	0,10	0,22	0,00	0,21	0,27	0,31	0,80
Non-Parametric Test	Statistic	U Mann-Whitney	393	314,5	492,5	615	718,5	664	662,5	549	724	675,5	614,5	585,5	588	462,5	679	597,5	644,5	729
		W Wilcoxon	1134	1056	1234	1356	1460	1405	1443	1329	1504	1417	1395	1327	1368	1243	1459	1339	1425	1509
	Sig. Asymptote (2-tailed)		0,00	0,00	0,01	0,26	0,97	0,53	0,42	0,05	0,86	0,50	0,20	0,10	0,11	0,00	0,52	0,14	0,32	0,90

			2Q-3Q						2Q-4Q						3Q-4Q					
			CONTENT			CONTEXT			CONTENT			CONTEXT			CONTENT			CONTEXT		
			GSRI	SSRI	QSRI	USRI	SKSRI	PSRI	GSRI	SSRI	QSRI	USRI	SKSRI	PSRI	GSRI	SSRI	QSRI	USRI	SKSRI	PSRI
Parametric Test	Levene's Test	F	0,461	0,046	1,587	1,044		1,146	1,249	0,348	0,449	0,152	2,136	0,29	3,488	0,139	0,219	0,284	1,868	2,312
		Sig.	0,499	0,831	0,212	0,31		0,288	0,267	0,557	0,505	0,698	0,148	0,592	0,066	0,71	0,641	0,596	0,176	0,132
	T-test	t	-2,867	-2,382	-1,97	0,79	1,295	-1,138	-2,88	-1,394	-1,357	0,004	0,804	0,823	0,25	0,94	0,543	-0,796	-0,513	1,938
		Sig. (2-tailed)	0,01	0,02	0,05	0,43	0,20	0,26	0,01	0,17	0,18	1,00	0,42	0,41	0,80	0,35	0,59	0,43	0,61	0,06
Non-Parametric Test	Statistic	U Mann-Whitney	480,5	514	520	676,5	618	636,5	477,5	604,5	531	726,5	655,5	666	711	666	708	666,5	714	580,5
		W Wilcoxon	1222	1255	1261	1457	1398	1378	1219	1346	1272	1468	1436	1446	1491	1446	1488	1447	1494	1361
	Sig. Asymptote (2-tailed)		0,01	0,02	0,02	0,51	0,21	0,26	0,01	0,16	0,02	0,88	0,38	0,42	0,62	0,34	0,59	0,34	0,64	0,06

Source: Own elaboration

TABLE 6. Hypothesis Testing number 3: Public USA Universities

| | | | 1Q-2Q | | | | | | 1Q-3Q | | | | | | 1Q-4Q | | | | | |
| | | | CONTENT | | | CONTEXT | | | CONTENT | | | CONTEXT | | | CONTENT | | | CONTEXT | | |
			GSRI	SSRI	QSRI	USRI	SKSRI	PSRI	GSRI	SSRI	QSRI	USRI	SKSRI	PSRI	GSRI	SSRI	QSRI	USRI	SKSRI	PSRI
Parametric Test	Levene's Test	F	0,587	0,241	3,865	0,171		0,04	0,824	2,463		0,24	0,002	1,547	0,295	2,242		0,009	3,37	1,81
		Sig.	0,448	0,626	0,056	0,681		0,842	0,368	0,123		0,626	0,962	0,219	0,59	0,141		0,926	0,073	0,185
	T-test	t	0,428	0,271	1,021	-2,686	-0,57	0,247	2,301	3,398	1,743	-2,398	-0,254	-1,248	0,92	2,033	1,105	-2,301	0,652	-1,504
		Sig. (2-tailed)	0,67	0,79	0,31	0,01	0,57	0,81	0,03	0,00	0,09	0,02	0,80	0,22	0,36	0,05	0,28	0,03	0,52	0,14
Non-Parametric Test	Statistic	U Mann-Whitney	232,5	244	227	144,5	227,5	242,5	203	149	219	207	298	252,5	250,5	193	255,5	189	272	220,5
		W Wilcoxon	557,5	569	552	354,5	437,5	567,5	699	645	715	417	508	462,5	685,5	628	690,5	399	707	430,5
		Sig. Asymptote (2-tailed)	0,69	0,89	0,59	0,02	0,61	0,86	0,04	0,00	0,06	0,04	0,82	0,24	0,42	0,05	0,47	0,04	0,71	0,13

| | | | 2Q-3Q | | | | | | 2Q-4Q | | | | | | 3Q-4Q | | | | | |
| | | | CONTENT | | | CONTEXT | | | CONTENT | | | CONTEXT | | | CONTENT | | | CONTEXT | | |
			GSRI	SSRI	QSRI	USRI	SKSRI	PSRI	GSRI	SSRI	QSRI	USRI	SKSRI	PSRI	GSRI	SSRI	QSRI	USRI	SKSRI	PSRI
Parametric Test	Levene's Test	F		1,3	0,748	0,001		0,83	0,049	1,171	0,003	0,258	0,446	1,145	0,169	0	1,159	0,355		0,092
		Sig.		0,259	0,391	0,982		0,366	0,826	0,284	0,955	0,613	0,507	0,289	0,682	0,984	0,286	0,553		0,762
	T-test	t	2,107	3,307	1,123	0,462	0,343	-1,579	0,555	1,873	0,151	0,732	1,587	-1,832	-1,543	-1,359	-1,045	0,269	1,042	-0,364
		Sig. (2-tailed)	0,04	0,00	0,27	0,65	0,73	0,12	0,58	0,07	0,88	0,47	0,12	0,07	0,13	0,18	0,30	0,79	0,30	0,72
Non-Parametric Test	Statistic	U Mann-Whitney	264	206,5	305,5	358	386	300	336	260,5	355	335,5	279	258,5	348,5	357	365	449	382	416
		W Wilcoxon	760	702,5	801,5	854	882	625	771	695,5	790	770,5	714	583,5	844,5	853	861	945	817	912
		Sig. Asymptote (2-tailed)	0,04	0,00	0,15	0,62	0,98	0,13	0,64	0,08	0,89	0,64	0,15	0,06	0,13	0,17	0,18	0,99	0,32	0,59

Source: Own elaboration.

Moreover, analyzing the quartiles that make up the set of private universities in the sample, the main differences found concerned the indexes that assess the content of the SR information, between the first and second quartiles, and between the first and fourth quartiles, while there were no significant differences between the first and third quartiles in relation to the information disclosed (Table 7). There was a notable degree of homogeneity in the treatment of the context in which SR information is disclosed online and these universities, too, appear to be unaware of the

differentiating effect that such disclosure could provide (or of the means available to achieve this).

TABLE 7. Hypothesis Testing number 3: Private USA Universities

| | | | 1Q-2Q | | | | | | 1Q-3Q | | | | | | 1Q-4Q | | | | | |
| | | | CONTENT | | | CONTEXT | | | CONTENT | | | CONTEXT | | | CONTENT | | | CONTEXT | | |
			GSRI	SSRI	QSRI	USRI	SKSRI	PSRI	GSRI	SSRI	QSRI	USRI	SKSRI	PSRI	GSRI	SSRI	QSRI	USRI	SKSRI	PSRI
Parametric Test	Levene's Test	F	3,366		0,454	0,347		0,814	0,378	0,426	0,109	0,475	1,81	0,93	2,519	1,627	1,095	0,01	0,723	1,483
		Sig.	0,077		0,506	0,56		0,374	0,544	0,52	0,744	0,497	0,191	0,344	0,125	0,213	0,305	0,921	0,403	0,234
	T-test	t	2,906	2,671	2,172	-0,764	0,424	0,635	0,704	1,597	1,08	-0,234	-0,752	-0,692	2,601	4,911	2,376	0,363	0,629	-0,351
		Sig. (2-tailed)	0,01	0,02	0,04	0,45	0,68	0,53	0,49	0,12	0,29	0,82	0,46	0,50	0,02	0,00	0,03	0,72	0,54	0,73
Non-Parametric Test	Statistic	U Mann-Whitney	52	58,5	55,5	103	108,5	101,5	60	42,5	51,5	68,5	61,5	62,5	43,5	15,5	34,5	86,5	79,5	78,5
		W Wilcoxon	143	149,5	146,5	274	199,5	192,5	96	78,5	87,5	239,5	232,5	233,5	98,5	70,5	89,5	141,5	134,5	249,5
	Sig. Asymptote (2-tailed)		0,01	0,02	0,01	0,57	0,73	0,50	0,49	0,10	0,25	0,84	0,56	0,58	0,02	0,00	0,01	0,87	0,61	0,57

| | | | 2Q-3Q | | | | | | 2Q-4Q | | | | | | 3Q-4Q | | | | | |
| | | | CONTENT | | | CONTEXT | | | CONTENT | | | CONTEXT | | | CONTENT | | | CONTEXT | | |
			GSRI	SSRI	QSRI	USRI	SKSRI	PSRI	GSRI	SSRI	QSRI	USRI	SKSRI	PSRI	GSRI	SSRI	QSRI	USRI	SKSRI	PSRI
Parametric Test	Levene's Test	F	1,017	1,483	1,412	0,024	0,198	2,984	0,046	1,398	0,261	0,204	1,62	3,332	0,793	0,12	2,923	0,242	0,35	0,073
		Sig.	0,326	0,238	0,249	0,878	0,662	0,1	0,832	0,25	0,615	0,656	0,217	0,082	0,386	0,733	0,107	0,63	0,562	0,79
	T-test	t	-1,637	-0,9	-0,752	0,33	-0,884	-1,194	-0,214	1,211	0,414	0,882	0,127	-0,809	1,466	2,292	1,085	0,428	1,047	0,249
		Sig. (2-tailed)	0,12	0,38	0,46	0,75	0,39	0,25	0,83	0,24	0,68	0,39	0,90	0,43	0,16	0,04	0,29	0,67	0,31	0,81
Non-Parametric Test	Statistic	U Mann-Whitney	32,5	42	45	48,5	41	40	62,5	47	58,5	45	64	49	25	16,5	30,5	32	28,5	38,5
		W Wilcoxon	123,5	133	136	84,5	132	131	153,5	102	113,5	100	119	140	80	71,5	85,5	87	83,5	93,5
	Sig. Asymptote (2-tailed)		0,15	0,46	0,59	0,80	0,42	0,35	0,87	0,26	0,67	0,21	0,95	0,30	0,18	0,03	0,38	0,47	0,30	0,89

Source: Own elaboration.

5. Discussion and conclusions

Ever more involvement is demanded of universities in society (Valleys, 2006; Jongbloed et al., 2008), and in the face of this social pressure, they are responding by showing greater interest in social commitment, both in the implementation of SR criteria in their own management and in their teaching and research functions, whilst also

seeking to broaden the quantity and quality of the SR information disclosed externally.

The recent development of new technologies, and in particular of the Internet, has provided means by which the expectations of different stakeholders can be identified and channeled, improving dialogue, informational transparency and accountability. Nevertheless, our empirical results show that, far from using new technology to improve informational transparency and accountability, universities are overlooking this opportunity to disclose SR information and to involve and interact with stakeholders in the management of university SR questions.

This attitude could hamper students' learning of ethical behavior; even if universities are implementing socially responsible policies, these are not aimed at meeting the needs of stakeholders, involving them in the management of SR issues, or at facilitating community engagement or global citizenship (Hopkinson et al., 2008), because ICTs are not being used to enable this interaction, to ascertain stakeholders' concerns or to disclose SR information. Thus, little interest is shown in universities' information policies in viewing such questions as an essential element of accountability. If universities fail to adequately convey their SR actions, they may not be perceived as dynamic, open systems capable of learning and changing (Beringer and Adomßent, 2008).

The American universities in the sample show little commitment to disclosing SR information online, offering neither USR information nor SR/sustainability reports on their websites. This prevents them from being truly accountable to stakeholders, and makes it difficult to establish benchmarking procedures between universities which could lead to ongoing improvement and greater competitiveness.

Furthermore, the SR information that is currently disclosed mainly concerns environmental questions, as these have the greatest impact at universities (Ferrer-Balas et al., 2008; Hammond and Churchman, 2008). Nonetheless, the management duality between the principles of economic growth and natural laws, on the one hand, and cultural awareness and social responsibility, on the other, are recommended when creating a

sustainable university (Lukman and Glavič, 2007). Therefore, universities should widen their online disclosures on SR information to social and economic aspects in order to provide a general view of their sustainability policies and actions, giving them an image of universities as socially responsible institutions, which will ultimately lead to an improvement in their reputation (Castelo and Lima, 2008).

In addition, in general environmental information is not easy to find on websites, as it is normally dispersed and mainly included in technical reports and not in annual SR reports. Thus, universities are not using annual SR reports as a medium for communication and accountability to society.

On the other hand, although universities could make use of the opportunities provided by ICTs to improve participation and interaction with stakeholders, it is clear that at present they have little awareness of the importance of this question, at least in terms of SR, contrary to the conclusions reached in previous studies which have suggested that universities are strengthening the influence and participation of stakeholders. Our results suggest that universities are not fully committed to society and that they are not making use of new technology to learn the opinions of their stakeholders regarding the design and implementation of SR policies. This conclusion does not imply that universities are not developing and implementing SR policies on their campuses, but rather that such policies are not being disclosed via the channels provided by new technologies, such as the Internet. Consequently, these universities are not being transparent and/or are not taking advantage of ICTs to improve their accountability to stakeholders and to engage with the community and with global citizenry on this issue.

Indeed, university SR initiatives seem to focus more on questions of their legitimacy and public image than on the needs and demands of the society in which they operate. This is corroborated by our findings; although American universities as a whole are homogeneous regarding their online disclosure of SR information, there are significant differences in terms of the general and specific content offered by the most prestigious universities,

according to the Shanghai Ranking, and other universities in the third and fourth quartiles of this ranking (see Hypothesis 2). Nevertheless, this is not a differential factor in terms of the context in which this information is published, which could be an important factor in the decisions taken by students (Schimmel et al., 2010). These results seem to suggest that although universities understand the disclosure of SR information to be necessary, in terms of accountability and competitiveness, the context in which this takes place is not considered an essential question.

These results were obtained for both public and private universities (Hypothesis 3). In both groups, the best universities (according to the Shanghai Ranking) were those most interested in the disclosure of university SR information. Although this factor was more apparent in private universities (Hypothesis 1), the differences were not statistically significant. Therefore, given the current shortage of public resources and falling student numbers, private universities could take advantage of these opportunities to strengthen their potential, particularly in the case of SR (Jones, 2001; Carlson, 2008), in order to obtain a competitive advantage and a differentiating element compared to public universities. In fact, in order to obtain more competitive advantage, prior research supports that private universities could be more likely to establish the role of a sustainability coordinator because of their form of governance, and their ability to establish a greater level of interaction between students and faculty due to their usual smaller size (Breneman, 1994). Nevertheless, from the results obtained, we conclude that the opportunity to obtain a competitive advantage and a differentiating element compared to public universities regarding the disclosure of online SR information is not being taken (Hypothesis 1). Therefore, two remaining questions for future research are raised. First, if online SR at universities is viewed as a possible tool to obtain competitive advantage by universities. Second, if online SR is linked to the increase of university financial resources or other different ways to obtain a higher financial or social profitability.

On the other hand, analysis of the differences between public and private universities, grouped by their prestige and position in the Shanghai Ranking, reveals diverse reasons for these differences. At public

universities, the differences are mainly in terms of the specific content of the SR information disclosed, together with questions of usability, while at private universities the main differences are related to the online disclosure of both general and specific information, and to the qualitative characteristics of the information (Hypothesis 3). These results suggest that whilst public universities disclose SR information online with a homogeneous information structure and place greater emphasis on specific information, its accessibility, and the privacy, security and participation of stakeholders, private universities seek to establish differences in terms of the quantity and quality of the information disclosed online, without creating a homogeneous structure for the provision of this information.

In conclusion, universities currently disclose very little SR information online, and when they do so, it is usually for reasons of legitimacy and image (as reported in previous studies), not to satisfy the demands of stakeholders or to respond to demands for accountability and community engagement. Indeed, universities do not generally analyze the needs of stakeholders, in spite of the great influence they have on any organization (Johnson, Scholes and Whittington, 2006), and the channels of communication with stakeholders are clearly insufficient.

In this regard, a main remaining question raised by our research could be to analyze if the online disclosure of SR information by universities, as useful units of analysis for the study of predictors of activism overall (Van Dyke, 1998) and the diffusion or adoption of certain tactics or discourses (Andrews and Biggs, 2006), could help to improve managerial commitment to CSR in corporations through education and training of future managers, and through the creation of social movements and SR discourses within student organizations since student organizations have been demonstrated to be vulnerable to the discourse of sustainability reporting (Nichols, 2010).

In addition, universities play an essential role in SR by incorporating its principles into their teaching and research, and should seek to improve their performance in terms of their online disclosure of USR information, as a factor that could help differentiate them in a competitive environment. A

line of interest for future study would be to further examine the key factors underlying the online disclosure of SR information, and to analyze the models required to manage and properly channel the university SR information provided to stakeholders. This question may be decisive both in students' choice of university and in shaping the prestige of these institutions.

6. References

Al-Khatar, K., and Naser, K. (2003). User's Perceptions of Corporate Social Responsibility and Accountability: Evidence from an Emerging Economy. Managerial Auditing Journal, 18 (6/7), 538.

Andrews, K.T. and Biggs, M. (2006). The Dynamics Of Protest Diffusion: Movement Organizations, Social Networks, and News Media In The 1960 Sit-Ins. American Sociological Review, 71, 752-777.

Aras, G., and Crowther, D. (2009). Corporate Sustainability Reporting: A Study in Disingenuity?. Journal of Business Ethics, 87 (Supplement 1), 279–288.

Archel, P., Husillos, J., Larrinaga, C. and Spence, C. (2009). Social disclosure, legitimacy theory and the role of the state. Accounting, Auditing & Accountability Journal, 22 (8), 1284-1307.

Aznar Minguet, M., P. Martinez Agut, B. Palacios and A. Piñero and M.A. Ull. (2011). Introducing sustainability into university curricula: an indicator and baseline survey of the views of university teachers at the University of Valencia. Environmental Education Research, 17 (2), 145–166.

Badre, A. (2002). Shaping Web Usability: Interaction Design in Context. Boston: Addison-Wesley Publishers B.V..

Bampton, R. and Maclagan, P. (2005). Why teach ethics to accounting students? A response to the sceptics. Business Ethics, 14 (3), 290.

Banks W., J. Fisher, and Nelson, M. (1997). University Accountability in England, Wales, and Northern Ireland: 1992-1994. Journal of International Accounting Auditing and Taxation, 6 (2), 211.

Bekkers, V.J.J.M. and Zouridis, S. (1999). Electronic service delivery in public administration: Some trends and issues. International Review of Administrative Sciences, 65 (2), 183-196.

Benneworth, P. and Jongbloed, V. (2010). Who matters to universities? A stakeholder perspective on humanities, arts and social sciences valorization. Higher Education, 59 (5), 567-588.

Beringer, A. and Adomßent, M. (2008). Sustainable university research and development: inspecting sustainability in higher education research. Environmental Education Research, 14 (6), 607–623.

Biggs, M. (2006). Who Joined The Sit-Ins and Why: Southern Black Students In The Early 1960s. Mobilization, 11, 321-336.

Billaut, J.C., Bouyssou D. and Vincke, P. (2010). Should you believe in the Shanghai ranking?. Scientometrics, 84 (1), 237-263.

Borins, S. (2002). Leadership and Innovation in the Public Sector. Leadership and Organization Development Journal, 23 (8), 467.

Borkowski, S. C., M. J. Welsh and Wentzel, K. (2010). Johnson & Johnson: A Model for Sustainability Reporting. Strategic Finance, September, 29-37.

Branco, M.C. and Rodrigues, L.L. (2006). Corporate social responsibility and resource based perspectives. Journal of Business Ethics, 69 (2), 111–132.

Breneman, D. (1994). Liberal Arts Colleges: Thriving? Surviving? Or Endangered. Washington D.C.The Brookings Institution.

Buchan, G.D., I.F. Spellerberg, and Blum, W.E.H. (2007). Education for Sustainability. Developing a Postgraduate-level Subject with an International Perspective. International Journal of Sustainability in Higher Education, 8 (1), 4-15.

Buela-Casal, G., O. Gutiérrez-Martínez, M. Bermúdez-Sánchez, and Vadillo-Muñoz, O. (2007). Comparative study of international academic rankings of universities. Scientometrics, 71, 349–365.

Caba P.C., A.M.H. López, and Rodríguez. M.P.B. (2005). Citizens' access to on-line governmental financial information: Practices in the European Union countries. Government Information Quarterly, 22 (2), 258–276.

Caba P.C., M.P.B. Rodríguez and López. A.M.H. (2008). e-Government process and incentives for online public financial information. Online Information Review, 32 (3), 379.

Calder, W. and Clugston, R.M. (2003). Progress Toward Sustainability in Higher Education' Environmental Law Institute. Washington, DC. Reprinted with permission from ELR, http://www.eli.org, 1-800-433-5120.

Campbell, D. (2003). Intra- and intersectoral effects in environmental disclosures: evidence for legitimacy theory?. Business Strategy and the Environment, 12 (6), 357-371.

Carlson, S. (2008). How green was my college. Chronicle of Higher Education, 54 (34), 4-5.

Carter, L. and Belanger, F. (2005). The utilization of e-government services: citizen trust, innovation and acceptance. Information Systems Journal, 15, 5-25.

Castelo, B.M. and Lima, R.L. (2008). Factors Influencing Social Responsibility Disclosure by Portuguese Companies. Journal of Business Ethics, 83 (4), 685–701.

Chandler, K. and Hyatt, M. (2002). Customer-centered design: a new approach to Web usability. (Prentice Hall, New Jersey).

Cho, D.H., and Patten, D.M. (2007). The role of environmental disclosures as a tool of legitimacy: a research note. Accounting, Organizations and Society, 32 (7-8), 639-47.

Christensen, L.J., E. Peirce, L.P. Hartman, W.H. Hoffman, and J. Carrier. (2007). Ethics, CSR, and sustainability education in the Financial Times top 50 global business schools: Baseline data and future research directions. Journal of Business Ethics, 73, 347–368.

Ciurana, G.A.M. and Filho, W.L. (2006). Education for Sustainability in University Studies. Experiences from a Project Involving European and Latin American Universities. International Journal of Sustainability in Higher Education, 7 (1), 81-93.

Clapper, D.L. and Burke, D.D. (2005). EDU Dilemma: the web accessibility challenge facing public and private universities. Journal of Strategic E – Commerce, 3 (1/2). Entrepreneurship, 71.

Clark, S. G., M.B. Rutherford, M.R. Auer, D.N. Cherney, R.L. Wallace, D.J. Mattson, D.A. Clark, L. Foote, N. Krogman, P. Wilshusen, and T. Steelman. (2011). College and University Environmental Programs as a Policy Problem (Part 2): Strategies for Improvement. Environmental Management, 47 (5), 716.

Cooke, T.E. (1989). Voluntary Disclosure by Swedish Companies. Journal of International Financial Management and Accounting, 1, 171-195.

Corcoran, P.B. and. Wals, A.E.J. (2004). Higher Education and the Challenge of Sustainability: Problematics, Promises, and Practice. Kluwer Academic Publishers, Norwell, MA.

Cormier, D. and Gordon, I.M. (2001). An examination of social and environmental reporting strategies. Accounting, Auditing & Accountability Journal, 14 (5), 587-616.

Cormier, D., Gordon, I. and Magnan, M. (2004). Corporate environmental disclosure: Contrasting management's perceptions with reality. Journal of Business Ethics, 49, 143–65.

Corney, G. and Reid, A. (2007). Student teachers' learning about subject matter and pedagogy in education for sustainable development. Environmental Education Research, 13 (1), 33–54.

Cotton, D.R.E., M.F. Warren, O. Maiboroda, and Bailey, I. (2007). Sustainable development, higher education and pedagogy: A study of lecturers' beliefs and attitudes. Environmental Education Research, 13 (5), 579–97.

Cyberspace Policy Research Group. (2010). Web Attribute Evaluation System (WAES). Retrieved June 1, 2011 from http://www.cyprg.arizona.edu/waes.htm

Daub, C.H. (2007). Assessing the quality of sustainability reporting: an alternative methodological approach. Journal of Cleaner Production, 15 (1), 75-85.

Davis, S.A, T.H. Edmister, K. Sullivan, and West, C.K. (2003). Educating Sustainable Societies for the Twenty-first Century. International Journal of Sustainability in Higher Education, 4 (2), 169-179.

De Keizer, B. (2004). Corporate Social Responsibility at the University of Amsterdam (paper presented at the University Industry Forum, Bonn).

Decter, Moira H. (2009). Comparative review of UK-USA industry-university relationships. Education and Training, 51 (8/9), 624-634.

Deegan, C. (2002). The Legitimising Effect of Social and Environmental Disclosures. A Theoretical Foundation. Accounting, Auditing and Accountability Journal, 15 (3), 282–311.

Deegan, C. and Gordon, B. (1996). A study of the environmental disclosure practices of Australian corporations. Accounting and Business Research, 26 (3), 187-199.

Deegan, C. and Rankin, V. (1997). The materiality of environmental information to users of annual reports. Accounting, Auditing and Accountability Journal, 10 (4), 562.

Deephouse, D. and Suchman, M. (2008). Legitimacy in organizational institutionalism. In The Sage handbook of Organizational

Institutionalism, ed. R. Greenwood, C. Oliver, K. Sahlin, and R. Suddaby, 49–77. Thousand Oaks, CA: Sage.

Deephouse, D.L. and Carter, S.M. (2005). An Examination of Differences Between Organizational Legitimacy and Organizational Reputation. Journal of Management Studies, 42 (2), 329–360.

Dehon, C., A. McCathie and Verardi, V. (2010). Uncovering Excellence in Academic Rankings. A case study on the Shanghai Ranking. Scientometrics, 83 (2), 515-524.

Docampo, D. (2008). International rankings and quality of the university systems. Revista de Educacion, Special Issue, 149-176.

Docampo, D. (2011). On using the Shanghai ranking to assess the research performance of university systems. Scientometrics, 86 (1), 77–92.

Dustin, E., J. Rasca and McDiarmid, D. (2002). Quality web systems: performance, security and usability. (Addison-Wesley Publishers B.V., Boston).

Eagan, P., T. Cook and Joeres, E. (2002). Teaching the importance of culture and interdisciplinary education for sustainable development. International Journal of Sustainability in Higher Education, 3 (1), 48-66.

European Commission (2003). Communication from the commission: the role of the universities in the Europe of knowledge. Retrieved December 2005, http://www.europa.eu.int/eurlex/en/com/cnc/2003/com2003_0058en 01.pdf

Eijkman, H. (2009). Using Web 2.0 to decolonize transcultural learning zones in higher education. Campus-Wide Information Systems, 26 (3), 240-255.

Ellis, G. and Weekes, T. (2008). Making sustainability 'real': using group enquiry to promote education for sustainable development. Environmental Education Research, 14 (4), 482–500.

Elvins, L. (2002). Best practices for online reporting in corporate responsibility. Ethical Corporation Magazine. Retrieved June 1, 2011, from http://www.greenbiz.com/home

European Commission. (2001). GREEN PAPER. Promoting a European framework for corporate social responsibility. Brussels, 18.7.2001

Fadeeva, Z. and Mochizuki, Y. (2010). Higher education for today and tomorrow: university appraisal for diversity, innovation and change towards sustainable development. Sustainability Science, 5 (2), 249.

Fang, Z. (2002). E-government in the digital era: Concept, practice, and development. International journal of the computer. The Internet and Management, 10 (2), 1-22.

FedCenter. http://www.fedcenter.gov/programs/sustainability/

Ferrer-Balas, D., J. Adachi, S. Banas, C.I. Davidson, A. Hoshikoshi, A.. Mishra, Motodoa, M. Onga; M. Ostwald. (2008). An international comparative analysis of sustainability transformation across seven universities. International Journal of Sustainability in Higher Education, 9 (3), 295-316.

Filho, W. Leal. (1997). Integrating environmental education and environmental management. Management of Environmental Quality, 8 (4), 133-135.

Forrant, R. and Silka, L. (Eds.). (2006). Inside and out: Universities and education for sustainable development. Amityville, NY: Baywood.

Gaete, R.A. (2009). Stakeholder participation in the evaluation of socially responsible behavior of university management: prospects, obstacles and proposals. Paper presented at the XV AECA Congress. (Valladolid, España), 1-15.

Gallego Álvarez, I., L. Rodríguez Domínguez, and García Sánchez, I.M. (2011). Information disclosed online by Spanish universities: content and explanatory factors. Online Information Review, 35 (3), 360-385.

Garriga E. and Melé, D. (2004). Corporate Social Responsibility Theories: Mapping the Territory. Journal of Business Ethics, 53, 51–71.

Geng, Q., C. Townley, Kun Huang and Jing Zhang. (2005). Comparative Knowledge Management: A Pilot Study of Chinese and American Universities. Journal of the American Society for Information Science and Technology, 56 (10), 1031–1044.

Gibbons, J.D. and Chakraborti, S. (2003). Nonparametric Statistical Inference, 4th Edition, Marcel Dekker, New York.

Global Reporting Initiative (GRI) (2000). Sustainability reporting guidelines. Retrieved June 1, 2011 from http://www.sustainableproducts.com/download/gri.pdf

Global Reporting Initiative (GRI) (2002). Sustainability reporting guidelines. Retrieved June 1, 2011 from http://www.uneptie.org/scp/gri/pdf/gri_2002_guidelines.pdf

Global Reporting Initiative (GRI) (2005). Sector supplement for public agencies, Global Reporting Initiative, Amsterdam. Retrieved June 1, 2011 from http://www.globalreporting.org/ReportingFramework/SectorSupplem ents/

Global Reporting Initiative (GRI) (2006). G3 Sustainability reporting guidelines. Global Reporting Initiative. Retrieved June 1, 2011 from http://www.globalreporting.org/ReportingFramework/G3Guidelines/

Goldin, C. and Katz, L.F. (1999). The Shaping of Higher Education: The Formative Years in the United States, 1890 to 1940. Journal of Economic Perspectives, 13 (1), 37-62.

Good, Phillip I. (2005). Introduction to Statistics Through Resampling Methods and R/S-PLUS ISBN: 978-0-471-71575-7, Paperback, 248 pages.

Gordon T., M. Fischer, D. Malone and Tower, G. (2002). A comparative empirical examination of extent of disclosure by private and public

colleges and universities in the United States. Journal of Accounting and Public Policy, 21 (3), 235.

Grecho, A.S. (2010). Determining Criteria and Indicators for Success in Higher Education Programs Focused on Environmental Sustainability. (Under the direction of Gary B. Blank.) 23-June-2010.

Grubb, W. N. and Lazerson, M. (2005). The Education Gospel and the Role of Vocationalism in American Education. American Journal of Education, 111 (3), 297-319.

Hammond, C. and Churchman, D. (2008). Sustaining academic life: A case for applying principles of social sustainability to the academic profession. International Journal of Sustainability in Higher Education, 9 (3), 235-245.

Hazelkorn, E. (2007). The impact of league tables and ranking systems on higher education decision making. Higher Education Management and Policy, 19 (2), 81–105.

Heller, D.E. and Kimberly, R.R. (2006). Shifting the Burden: Public and Private Financing of Higher Education in the United States and Implications for Europe. Tertiary Education and Management, 12, 91–117.

Ho P., G. Tower and Barako, D. (2008). Improving governance leads to improved corporate communication. Corporate Ownership and Control, 5, 26-33.

Hoare et al. (2008). Teaching against the grain: multi disciplinary teamwork effectively delivers a successful undergraduate unit in sustainable development. Environmental Education Research, 14 (4), 469–481.

Holdsworth, S., C. Wyborn, S. Bekessy and Thomas, E.I. (2008). Professional Development for Education for Sustainability. How advanced are Australian Universities?. International Journal of Sustainability in Higher Education, 9 (2), 131-146.

Hollander, M. and Wolfe, D.A. (1999). Nonparametric statistical methods, John Wiley and Sons, New York, 1999.

Holsapple, C. and O'Leary, D. (2009). How Much and Where? Private Versus Public Universities' Publication Patterns in the Information Systems Discipline. Journal of the American Society for Information Science and Technology, 60 (2), 318–331.

Holzer, M. and Manoharan, A. (2007). Global Trends in Municipal E-Government: An Online Assessment of Worldwide Municipal Web Portals. (Marc Holzer in A.Agarwal and V.V. Ramana, Computer Society of India: India).

Holzer, M. and Kim, S.T. (2007). Digital Governance in Municipalities Worldwide, A Longitudinal Assessment of Municipal Websites Throughout the World. The E-Governance Institute. National Center for Public Performance.

Hopkinson P., P. Hughes and Layer, G. (2008). Sustainable graduates: linking formal, informal and campus curricula to embed education for sustainable development in the student learning experience. Environmental Education Research, 14 (4), 435–454.

Horton-Williams, C.D. (2010). Higher education leadership stages and strategies that relate to campus environmental sustainability. ProQuest Dissertations and Theses; 2010.

Huang, S.K. and Wang, Y.L. (2012). A comparative study of sustainability management education in China and the USA. Environmental Education Research, 1–17.

Hurlimann, A.C. (2009). Responding to environmental challenges: an initial assessment of higher education curricula needs by Australian planning professionals. Environmental Education Research, 15 (6), 643–659

Ibrahim, N.A, J.P. Angelidis, and Howard, D.P. (2006). Corporate Social Responsibility: A Comparative Analysis of Perceptions of Practicing

Accountants and Accounting Students. Journal of Business Ethics, 66, 157-167.

Johnson,G., K. Scholes, and Whittington. (2006). Exploring Corporate Strategy: Enhanced Media Edition: Text and Cases (Enhanced Media Text and Case).

Jones, K. (2001). Study on environmental reporting by companies. Sunderland, England: Center for Environmental Informatics.

Jones, K., Alabaster, T. and Walton, J. (1998). Virtual Environments for Environmental Reporting. Greener Management International, 21, 121–137.

Jongbloed, B., J. Enders, and Salerno, C. (2008). Higher Education and its Communities: Interconnections, Interdependencies and a research agenda. Higher Education, 56, 303-324.

Katayama J. and Gough, S. (2008). Developing sustainable development within the higher education curriculum: observations on the HEFCE strategic review. Environmental Education Research, 14 (4), 413–422.

Kleine, A., and M. von Hauff. (2009). Sustainability-driven implementation of corporate social responsibility: Application of the integrative sustainability triangle. Journal of Business Ethics, 85, 517–33.

Krazimierz, M. (2010). Redefining external stakeholders in Nordic Higher Education. Tertiary Education and Management, 16 (1), 45-60.

Kudo, H. (2008). Does e-government guarantee accountability in public sector? Experiences in Italy and Japan. Public Administration Quarterly, 32 (1), 93.

Kushmerick, A., L. Young, and Stein, S.E. (2007). Environmental justice content in mainstream US, 6–12 environmental education guides. Environmental Education Research, 13 (3), 385–408.

Lämsä, A., M. Vehkaperä., T. Puttonen, and Personen, H. (2007). Effects of business education on women and men students' attitudes on

corporate responsibility in society. Journal of Business Ethics, 82, 45-58.

Larrán, M, and Giner, B. (2002). The use of the Internet for corporate reporting by Spanish companies. The International Journal of Digital Accounting Research, 2 (1), 53-82.

Lawrence, S. and Giles, C.L. (1999). Accessibility of information on the web. Nature, 8, 107-109.

Lehmann, E.L. and Romano, J.P. (2006). Testing statistical hypotheses Springer New York (3rd edition), corr. 2nd printing 2006, XIV, 786 pages, ISBN: 0-387-98864-5.

Leydesdorff, L. and C.S. Jung C. (2011). How to evaluate universities in terms of their relative citation impacts: Fractional counting of citations and the normalization of differences among disciplines. Journal of the American Society for Information Science and Technology, 62 (6), 1146–1155.

Lipscombe, B.P. (2008). Exploring the role of the extra curricular sphere in higher education for sustainable development in the United Kingdom. Environmental Education Research, 14 (4), 455–468.

Lozano, R. (2006). A tool for a Graphical Assessment of Sustainability in Universities (GASU). Journal of Cleaner Production, 14 (9-11), 963-972.

Lozano, R. (2010). The state of sustainability reporting in universities. International Journal of Sustainability in Higher Education, 12 (1), 67-78.

Lukman, R. and Glavič, P. (2007). What are the key elements of a sustainable university? Clean Technologies and Environmental Policy, 9 (2), 103-114.

Lukman, R., D. Krajnc, and Glavic, P. (2010). University ranking using research, educational and environmental indicators. Journal of Cleaner Production, 18 (7), 619–628.

Magalhäes, A. (2000). Portuguese Higher Education and the Imaginary Friend: the Stakeholders' Role in Institutional Governance. European Journal of Education, 35 (4), 439-448.

Marginson, S. (2005). There must be some way out of here, keynote address to the Tertiary Education Management Conference, Perth, Australia, retrieved from www.education.monash.edu.au/centres/mcrie/docs/conferencekeynotes/tem-address-280905.doc

Marginson, S. (2007). Global university rankings: implications in general and for Australia. Journal of Higher Education Policy and Management, 29, 131–142.

Marston, C. and Polei, A. (2004). Corporate reporting on the Internet by German companies. International Journal of Accounting Information Systems, 5 (3), 285-311.

Marston, C.L. and Shrives, P.J. (1991). The use of disclosure indices in accounting research: a review article. British Accounting Review, 23, 195-210.

Matten, D. and Moon, J. (2004). Corporate social responsibility education in Europe. Journal of Business Ethics, 54, 323-337.

McNamara, Kim H. (2008). Fostering sustainability in higher education: a mixed-methods study of transformative leadership and change strategies. Submitted to the Ph.D. in Leadership and Change Program of Antioch University.

Meijer, A. (2009). Understanding Modern Transparency. International Review of Administrative, 75, 255.

Mellé Hernández, E. (2007). Social Responsibility in the Public Sector. Ekonomiaz, 65, 84-107.

Meyer, G.E. (1999). A Green Tier for Greater Environmental Protection. Wisconsin: Department of Natural Resources, Madison.

Middleton, I., M. McConnell, and Davidson, G. (1999). Presenting a model for the structure and content of a university World Wide Web site. Journal of Information Science, 25 (3), 219-227.

Muijen, H. (2004). Corporate Social Responsibility Starts at University. Journal of Business Ethics, 53 (1/2), 235–246.

Neu, D., H. Warsame and Pedwell, K. (1998). Managing Public Impressions: Environmental Disclosures in Annual Reports. Accounting, Organizations and Society, 23 (3), 265–282.

Nichols, M.R. (2010). The Institutionalization of Sustainability at Universities: Effects on Student Collective Action. Ph. Doctoral Thesis, Canada: Chapel Hill.

Patten D.M. (1992). Intra-industry environmental disclosures in response to the Alaskan oil spill: a note on legitimacy theory. Accounting, Organizations and Society, 17 (5), 471-5.

Pavičić, J., N. Alfirević, and Mihanović, Z. (2009). Market orientation in managing relationships with multiple constituencies of Croatian higher education. Higher Education, 57 (2), 191–207.

Perrin, N. (2001). The greenest campuses: an idiosyncratic guide. The Chronicle of Higher Education, 47 (30), B7-B10.

Pesonen, H-L. (2003). Challenges of integrating environmental sustainability issues into business school curriculum: A case study from the University of Jyväskylä, Finland. Journal of Management Education, 27 (2), 158-171.

Pettersen, I-J. and Solstad, E. (2007). The Role of Accounting Information in a Reforming Area: a Study of Higher Education Institutions. Financial Accountability and Management, 23 (2), 133-154.

Pfeffer, J. and Salancik, C. (1978). The external control of organizations: A resource dependence perspective. New York, NY: Harper & Row.

Pina, V. L., Torres and Royo, S. (2007). Are ICTs improving transparency and accountability in the EU regional and local government? An empirical study. Public Administration, 85 (2), 449–472.

Porter, M., and C. Van der Linde. (1995). Toward a new conception of the environment-competitiveness relationship. Journal of Economic Perspectives, 9, 97–118.

Programme United Nations. (2005). Human Development Indicators (UNDP.org. Archived from the original on June 20, 2007. Retrieved June, 2011.

Purushothaman, M., G. Tower, P. Hancock, and Taplin, R. (2000). Determinants of Corporate Social Reporting Practices of Listed Singapore companies. Pacific Accounting Review, 12 (2), 101-133.

Quazi, A.M. (2003). Identifying the determinants of corporate managers' perceived social obligations. Management Decision, 41 (9), 822-831.

Robbins, M. D., B. Simonsen, and Feldman, B. (2008). Citizens and Resource Allocation: Improving Decision Making with Interactive Web-Based Citizen Participation. Public Administration Review, 68 (3), 564-575.

Roberts C. and Roberts, J. (2008). Starting with the staff: how swapshops can develop ESD and empower practitioners. Environmental Education Research, 14 (4), 423–434.

Roberts, C. (1991). Environmental disclosures: A note on reporting practices in mainland Europe. Accounting, Auditing and Accountability, 4 (3), 62–71.

Rodríguez Bolívar, M.P. (2009). Evaluating Corporate Environmental Reporting on the Internet: The Utility and Resource Industries in Spain. Business and Society, 48 (2), 179-205.

Rohatgi, V.K. (1976). An Introduction to Probability Theory and Mathematical Statistics. Wiley, New York.

Romero, A. and Silveri, P. (2006). Not all are created equal: an analysis of the environmental programs/departments in U.S. academic institutions from 1900 until May 2005. Journal of Integrative Biology, 1 (1), 1–15.

Rosen, L. and Mehan, H. (2003). Reconstructing Equality on New Political Ground: The Politics of Representation in the Charter School Debate at the University of California, San Diego. American Educational Research Journal, 40 (3), 655-682.

Santos, F., M.V. Heltor, and Caraca, J. (1998). Organisational challenges for the university. Higher Education Management, 10 (3), 87–107.

Schimmel, K., D. Motley, S. Racic, G. Marco, and Eschenfelder, M. (2010). The importance of university web pages in selecting a higher education institution. Research in Higher Education Journal, 9, 1-16.

Segalàs, J., D. Ferrer-Balas, M. Svanström, U. Lundqvist, Mulder, K.F. (2009). What has to be learnt for sustainability? A comparison of bachelor engineering education competences at three European universities. Sustainability Science, 4 (1), 17.

Serap A., M.G. and 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.

Setó-Pamies, D., M. Domingo-Vernis and Rabassa-Figueras, N. (2011). Corporate social responsibility in management education: Current status in Spanish universities. Journal of Management & Organization, 17 (5), 604-620.

Sherkat, D. E. and Blocker, T.J. (1994). The Political Development of Sixties' Activists: Identifying the Influence of Class, Gender, and Socialization on Protest Participation. Social Forces, 72, 821-842.

Springett, D. (2003). Business conceptions of sustainable development: a perspective from critical theory. Business Strategy and the Environment, 12 (2), 71-86.

Springett, D. (2005). Education for Sustainability' in the Business Studies Curriculum: a Call for a Critical Agenda. Business Strategy and the Environment, 14 (3), 146-159.

Stephens, J.C., M.E. Hernandez, M. Román, A.C. Graham and Scholz, R.W. (2008). Higher education as a change agent for sustainability in different cultures and contexts. International Journal of Sustainability in Higher Education, 9 (3), 317-338.

Sterling, S. and Scott, W. (2008). Higher education and ESD in England: A critical commentary on recent initiatives. Environmental Education Research, 14 (4), 386–98.

Sterling, S., and Witham, H. (2008). Pushing the boundaries: the work of the Higher Education Academy's ESD Project. Environmental Education Research, 14 (4), 399–412.

Tang, K, D. A. Robinson and Harvey, M. (2011). Sustainability managers or rogue mid-managers?: A typology of corporate sustainability managers. Management Decision, 49 (8), 1371-1394.

Tarabula-Fiertak, M.E. Gajus-Lankamer and Wójcik, M.A. (2004). Environmental Teaching in Higher Education. International Research in Geographical and Environmental Education, 13 (3), 284-290.

Thomas, T.E. (2005). Are Business Students Buying It? A Theoretical Framework for Measuring Attitudes Toward the Legitimacy of Environmental Sustainability. Business Strategy and the Environment, 14 (3), 186-197.

Thomas, I. and Nicita, J. (2002). Sustainability Education and Australian Universities. Environmental Education Research, 8 (4).

Tilbury, D. (1995). Environmental Education for Sustainability: defining the new focus of environmental education in the 1990s. Environmental Education Research, 1 (2), 195-212.

Tuncer, G. (2008). University Students' Perception on Sustainable Development: A Case Study from Turkey. International Research in Geographical and Environmental Education, 17 (3).

UNESCO (2005). UN decade of education for sustainable development 2005–2014. International implementation scheme. Draft (Paris, UNESCO).

UNESCO (2006). Education for sustainable development. Quality education for all: basic competences for lifelong learning. The European Dimension and the Baltic Vision. Retrieved January 2012 http://www.unesco.org/education/efa/region_forums/eur_north_amer/svietimasvisiems_pdf

University Build the Country Project. (2006). University Social Responsibility: a way to be college. Theory and practice in the Chilean experience. Santiago de chile: Gráfica Funny, 2006.

Vallaeys, F. (2006). Brief theoretical framework of university social responsibility. Pontificia Universidad Católica de Perú. Retrieved June 1, 2011 from http://blog.pucp.edu.pe/item/4880/breve-marco-teorico-de-rsu

Van Dyke, N. (1998). Hotbeds of Activism: Locations of Student Protest. Social Problems, 45, 205-220.

Van Marrewijk, M. (2003). Concepts and definitions of CSR and corporate sustainability: Between agency and communion. Journal of Business Ethics, 44, 95–105.

Van Weenen, H. (2000). Towards a vision of a sustainable university. International Journal of Sustainability in Higher Education, 1 (1), 20-34.

Vuontisjärvi, T. (2006). Corporate Social Reporting in the European Context and Human Resource Disclosures: An Analysis of Finnish Companies. Journal of Business Ethics, 69 (4), 331.

Walshe, N. (2008). Understanding students' conceptions of sustainability. Environmental Education Research, 14 (5), 537–58.

West, D.M. (2000). Assessing E-Government: The internet, democracy, and service delivery by state and federal governments. Retrieved June 1, 2001, from http://www.insidepolitics.org/egovtreport00.html.

West, D.M. (2004). E-Government and the Transformation of Service Delivery and Citizen Attitudes. Public Administration Review, 64 (1), 15-27.

White, S.S. (2003). Sustainable campuses and campus planning: Experiences from a classroom case study at the University of Kansas. International Journal of Sustainability in Higher Education, 4 (4), 344–356.

Wilks, Samuel S. (1962). Mathematical Statistics, John Wiley and Sons.

Wilmshurst, T.D. and Frost, G.R. (2000). Corporate Environmental Reporting: A test of legitimacy theory. Accounting Auditing & Accountability Journal, 13 (1), 10-26.

Wimmer, M.A. (2002). A European perspective towards online one-stop government: the eGOV project. Electronic commerce research and applications, 1 (1), 92-103.

World Commission on Environment and Development (1987). Our Common Future. http://conspect.nl/pdf/Our_Common_Future-Brundtland_Report_1987.pdf

Wright, T. (2007). Developing research priorities with a cohort of higher education for sustainability experts. International Journal of Sustainability in Higher Education, 8 (1), 34-43.

Zimmerman, M.A. and Zeitz, G.J. (2002). Beyond Survival: Achieving New Venture Growth by Building Legitimacy. Academy of Management Review, 27 (3), 414–431.

CHAPTER 4: DIVULGACIÓN ONLINE DE INFORMACIÓN DE RESPONSABILIDAD SOCIAL EN LAS UNIVERSIDADES ESPAÑOLAS

1. Introducción

Las universidades, como parte integrante del sector público y como líderes de los cambios socioeconómicos, pueden desempeñar un papel protagonista en la solución de los problemas y como modelo de comportamiento ético hacia la sociedad (Vallaeys, 2006). Para ello, están incorporando principios de RS tanto en el diseño de su oferta formativa e investigadora (De la Calle, García Ramos y Giménez, 2007; Martínez, 2008), como en su misión, visión y estrategia (Núñez y Alonso, 2009; Ramos, 2010). Además, a las universidades se les está demandando establecer mecanismos de diálogo con los grupos de interés, y mejorar la transparencia informativa (Núñez y Alonso, 2009; Ramos, 2010; Casani, Pérez-Esparrells y Rodríguez, 2010). De este modo, reforzarían el cumplimento del deber de rendición de cuentas, sobre todo en lo que concierne a la divulgación de aspectos de RS universitaria (Casani et al., 2010) ya que, de manera tradicional, dicha divulgación ha estado centrada en información de carácter económico (Mellé, 2007).

El desarrollo paralelo que ha existido en los últimos años de las Nuevas Tecnologías de la Información y Comunicación (TICs) podría favorecer la mejora de la rendición de cuentas en las universidades. Las TICs, y especialmente Internet, podrían desempeñar un papel clave en la transparencia (), mejorando el proceso de comunicación y permitiendo un mayor acceso a la información a las partes interesadas (Borins, 2002).

No obstante, pocas son las investigaciones que se hayan interesado por conocer si las universidades están preocupadas por establecer políticas de comunicación de información sobre aspectos de RS y si éstas se están apoyando en las TICs para responder estos nuevos requerimientos de información así como para mejorar la interacción con sus grupos de interés.

Por tanto, el objetivo de este artículo es analizar si la transparencia informativa en temas de RS está adquiriendo un papel esencial en las políticas de comunicación online de las universidades para satisfacer las necesidades de información de los grupos de interés. También, analizamos si existen diferencias entre las universidades según su diferente carácter

público/privado, prestigio y calidad académica, así como entre aquellas universidades que ofrecen niveles altos de comunicación de información en Internet.

En este sentido, la contribución de nuestro artículo es doble. Por un lado, en base a investigaciones previas en distintos campos de conocimiento, proponemos inicialmente un modelo que permite analizar y valorar la divulgación online de información de RS. Estando actualmente en una etapa de reformas del sistema universitario español, dicho modelo es aplicado al conjunto de todas las universidades españolas con la finalidad de observar si la divulgación online de información de RS, a través de sus páginas web, está siendo un aspecto fundamental en sus políticas de comunicación. Por otro lado, utilizando metodología estadística, analizamos diferencias entre universidades según las variables comentadas previamente.

Para la consecución del objetivo, el artículo se organiza como sigue. En la siguiente sección, se analiza la relevancia e iniciativas de la RS en el ámbito universitario de España. La tercera sección del trabajo se dirige a analizar el estudio empírico realizado. Con posterioridad, presentamos los resultados, finalizando con una sección de discusiones y conclusiones.

2. Importancia e iniciativas de la RS en las universidades españolas

En la literatura, podemos encontrar numerosas definiciones del término de RS. A nivel internacional, y según el Libro Verde de la Unión Europea (2001), la RS es el concepto por el cual las empresas deciden contribuir voluntariamente a mejorar la sociedad y a preservar el medio ambiente. Aplicando el concepto de RS al ámbito universitario, el Proyecto Universidad Construye País (2006) define la RS Universitaria como "la capacidad que tiene la Universidad de difundir y poner en práctica un conjunto de principios y valores generales y específicos, por medio de cuatro procesos clave, como son la gestión, la docencia, la investigación y la extensión universitaria, respondiendo así ante la propia comunidad universitaria y ante el país donde está inserta". Por su parte Vallaeys (2008) la define como "una política de calidad ética del desempeño de la comunidad universitaria (estudiantes, docentes y personal administrativo) a

través de la gestión responsable de los impactos educativos, cognitivos, laborales y ambientales que la Universidad genera, en un diálogo participativo con la sociedad para mejorar la academia y promover el Desarrollo Sostenible". Con ello pretende indicar que la RS universitaria es una estrategia de gerencia ética e inteligente de los impactos que genera la organización en su entorno humano, social y natural. Las universidades españolas no cuentan con una larga tradición en el desarrollo de iniciativas de RS, aunque actualmente están experimentando una progresión muy importante al respecto (Mellé, 2007; Lozano, 2006). En el ámbito de las reformas del sistema universitario español (RD 20/2011, RD 14/2012), el gobierno español ha desarrollado una iniciativa, conocida como la Estrategia Universidad 2015 (EU2015), consecuencia de la adaptación de la universidad española al Espacio Europeo, y en cuyas líneas de actuación contempla la RS de las universidades como aspectos de gran relevancia, justificado por la clara vocación y orientación social de las universidades (Ministerio de Ciencia e Innovación, 2009).De igual modo, la Conferencia de Rectores (CRUE, 2011) ha manifestado recientemente su preocupación para que la universidad española se instituya como un elemento clave y motor de las transformaciones de la sociedad y que las universidades socialmente responsables no queden al margen de los nuevos retos que se plantean (CRUE, 2011).

El reflejo de todos los cambios acaecidos en el ámbito universitario tras el proceso de reformas comunitarias y del plan de Bolonia ha hecho que las universidades recojan de una forma más explícita su función de "agente social" dentro de sus planes estratégicos que impregnan sus acciones formativas y de investigación así como lo relativo a programas concretos de gestión socialmente responsable (Núñez y Alonso, 2009). Además, entre las actividades de este tipo destacarían el compromiso social, políticas solidarias, las iniciativas de los consejos sociales, la creación de observatorios, su adhesión a pactos y proyectos internacionales, entre otros (De la Cuesta, De la Cruz y Rodríguez, 2010). En este sentido, varias universidades españolas se han adherido a los principios de la United Nations Global Compact, cuyo objetivo es el de mejorar la educación de los futuros líderes empresariales en temas sociales, de derechos humanos y de

protección al medio ambiente (Setó-Pamies, Domingo-Vernis y Rabassa-Figueras, 2011).

Concretamente, en cuanto a los aspectos de la enseñanza universitaria, se ha creado un Grupo de Trabajo sobre Calidad Ambiental y Desarrollo Sostenible (2002) que aprobó una serie de directrices para la incorporación de la Sostenibilidad en los planes de estudios, además de crear un Comité, conocido como CADEP (Comisión Sectorial de la CRUE para la Calidad Ambiental, Desarrollo Sostenible y la Prevención de Riesgos) que aglomera las experiencias universitarias y los progresos realizados en materia de gestión ambiental y sostenibilidad y promueve la cooperación entre universidades en dichas materias (Aznar, Martinez-Agut, Palacios, Piñero y Ull, 2011). Por tanto, el interés por la enseñanza de la ética empresarial y de RS en el sistema universitario español ha ido en aumento. Así, podemos destacar universidades que apuestan por asignaturas que forman al universitario desde la dimensión social de la persona (De la Calle et al., 2007). En este sentido, resulta de especial interés las propuestas de "aprendizaje servicio" desarrolladas en universidades españolas que tienden a enfatizar en cada titulación enfoques orientados a que el estudiante se implique y se comprometa con la comunidad y el ejercicio de responsabilidad ética que, desde su futura profesión, tendrá que ejercer (Martínez, 2008).Sin embargo, debe advertirse que tal y como señala Martínez (2008), que con excepción de algunas universidades, "*la formación ética dirigida a la construcción de la personalidad moral y a la formación ciudadana no son objetivos que de manera habitual puedan identificarse como tales en la concreción de los planes docentes y en las prácticas del aprendizaje en la universidad*".

Desde la perspectiva de la investigación, se han creado grupos de investigación, como el de la Universidad Jaume I (Sostenibilidad en las organizaciones y Gestión de la RS), que integra un grupo de profesionales que desarrollan servicios de consultoría y formación en el ámbito de la RS, el de las universidades andaluzas, que están impulsando la elaboración de una propuesta de Memoria de RS del sistema universitario andaluz como acción de mejora de la calidad de las mismas (Memoria de la RS del Sistema Universitario Andaluz, 2009), o Arquitectura y Compromiso Social,

una asociación vinculada a la Universidad de Sevilla, que realiza investigación participativa en el ámbito de la planificación urbanística (www.arquisocial.org).

Por otra parte, desde el punto de vista de la gestión universitaria, son numerosas las iniciativas emprendidas ya que las universidades españolas han incluido aspectos de la RS en sus planes estratégicos (Álamo y García, 2007) que posteriormente se han plasmado en un gran conjunto de actividades y proyectos. La acción social de la universidad se manifiesta, además de las actuaciones específicas en esta área con su propio personal, en los programas de cooperación, acción solidaria y voluntariado que promueven la mayoría de las instituciones de educación superior en nuestro país (Casani et al., 2010). Entre ellas, la universidad de Zaragoza desarrolló un proyecto para obtener un modelo de RS que mejorara la calidad universitaria ("Universidades responsables"), y la Universidad de Valladolid con su proyecto "Factoría de RS en la UVs", ha ejecutado una serie de actividades de RS para difundir y poner en práctica este ámbito entre el alumnado y el personal de la universidad (Gaete, 2011). Además, las universidades españolas han creado oficinas y sedes que gestionan aspectos que engloba la sostenibilidad, como la Oficina de Cooperación y Solidaridad (Universidad Autónoma de Madrid); el Campus Euro-Americano por la RS (Universidad Francisco de Vitoria); la Oficina de Medio Amiente (Universidad Europea de Madrid); el Proyecto de Accesibilidad Global (Universidad de Jaén); y el Programa de Voluntariado Ambiental (Universidad de Salamanca) junto a un numeroso conjunto de iniciativas al respecto. De igual modo, considerando la cooperación al desarrollo como un componente inherente de la misión de la educación superior (Arias y Molina, 2008), las universidades pueden favorecer activamente esta vertiente a través del debate sobre las condiciones del desarrollo a nivel mundial, la proyección y transferencia de conocimientos a la sociedad y la solidaridad internacional como desafíos para contribuir a la trasformación social (Unceta, 2001, 2007; Arias y Molina, 2008; Gaete, 2009). Ahora bien, a este creciente interés de las universidades por el desarrollo de actuaciones socialmente responsables, hay que añadir el actual escenario de crisis económica que ha incidido negativamente en la financiación universitaria (Pérez, 2004; Casani

et al., 2010) con una reducción del alumnado que, a través de sus matrículas, suponen la principal fuente de ingresos de las universidades privadas (Rodríguez, 1993). En este entorno, la diferenciación se convierte en una ventaja competitiva y ésta se debe conseguir no sólo a través de la educación e investigación, sino con un amplio conjunto de aspectos entre los que destacan la RS que puede estar asociada a la atracción y captación de recursos económicos de la sociedad (Casani et al., 2010). Siendo la información que suministran las universidades en sus páginas webs un fuerte indicador en la toma de decisiones de los estudiantes (Schimmel, Motley, Racic, Marco y Eschenfelder, 2010), donde la información de carácter sostenible posee una especial relevancia (Casani et al., 2010), podría ser interesante conocer si las universidades, como modelos de comportamiento socialmente responsable en la sociedad y centro de conocimiento por excelencia, están haciendo uso de las TICs como medio de divulgación de información socialmente responsable.

No obstante, ante la fuerte competencia a la que se encuentran sometidas por la obtención de recursos financieros y la posible ventaja competitiva que podrían tener con la divulgación online de información de RS, se espera que las universidades privadas, cuya financiación principal proviene de las matrículas y tasas del alumnado, sean aquellas que presenten unos mayores niveles de divulgación de esta información en sus páginas webs oficiales. De lo anterior, se deriva la siguiente hipótesis:

H1: El nivel de divulgación online de información de RS en las universidades privadas españolas es mayor al de las universidades públicas españolas.

Ahora bien, la divulgación de RS universitaria, como elemento diferenciador de las universidades, podría dar lugar a que aquellas que presentan una mejor posición en los rankings mundiales de calidad en educación e investigación, sean aquellas que estén apostando, en mayor medida, por la divulgación online de este tipo de información. Esto se entiende así puesto que las universidades de mayor prestigio a nivel mundial son las que deberían convertirse en líderes vitales de los grandes movimientos de cambio social. Siendo esto así, se plantea la siguiente hipótesis de trabajo:

H2: Las universidades de mayor prestigio y calidad académica son las que están impulsando, en mayor medida, la divulgación online de información de RS como un aspecto más de competitividad y compromiso con la sociedad.

La información divulgada es útil si satisface las necesidades de información de los diferentes grupos de interés. El desarrollo de las TICs podría facilitar el acceso y oportunidad de dicha información permitiendo un cumplimiento más eficiente del deber de rendición de cuentas de las universidades y mejorando la legitimidad de las mismas. De hecho, la literatura previa ha puesto de manifiesto que los grupos de interés están presionando a las universidades para que suministren información de RS o medioambiental de manera que les permita obtener una mejor comprensión de las acciones que están llevando a cabo, su funcionamiento y organización (Casani et al., 2010). Por tanto, las universidades, dentro de sus políticas de comunicación, podrían utilizar las TICs para cumplir con dichas exigencias de información, influyendo así en la opinión pública y derivando todo ello en una imagen positiva de universidad socialmente responsable (Ramos, 2010). Todo ello redundará, finalmente, en un aumento de su reputación y en una mejora de su relación con los grupos de interés. De ahí se deriva la necesidad de plantearse la contrastación de la siguiente hipótesis:

H3: Las universidades que ofrecen el más alto nivel de comunicación de la información a través de Internet son aquellas que, dentro de sus políticas en materia de comunicación en la web, dan una alta prioridad a la divulgación online de información relacionada con la RS.

3. Investigación empírica en las universidades españolas

3.1. Selección de la muestra

Las universidades españolas han sido objeto de nuestro trabajo debido a la reciente reforma del sistema universitario español y al creciente interés de la RS en dichas instituciones, materializándose en la puesta en marcha de numerosos proyectos e iniciativas al respecto tanto en su docencia e investigación como en la gestión universitaria. Con el objetivo de

conocer las prácticas actuales de divulgación online de información socialmente responsable y los mecanismos de interacción con los grupos de interés, se ha seleccionado todo el conjunto de universidades españolas según datos de la CRUE y el portal Universia (Portal de Universidades de España – www.universia.es), formado por un total de 75 universidades (48 de carácter público y 27 privadas).

3.2. Modelo de evaluación de la divulgación online de información de RS

En lo que a la metodología de investigación se refiere, este artículo propone un modelo de evaluación mediante la creación de una serie de índices que pretenden examinar los principales aspectos tanto en relación al contenido como a la forma y contexto en que se produce dicha divulgación. Para ello, inicialmente consideramos varios estudios que analizan la divulgación de información en Internet (Caba, López y Rodríguez, 2005; Caba, Rodríguez y López, 2008; Rodríguez, 2009; Gallego, Rodríguez, y García, 2011), la visibilidad (Middleton, McConnell y Davidson, 1999), accesibilidad (Lawrence y Giles, 1999), usabilidad (Chandler y Hyatt, 2003), privacidad, y contenido de la información (Holzer y Manoharan, 2007; Holzer y Kim, 2007). Basado en el análisis de esta literatura previa, nuestro trabajo de investigación se ha estructurado principalmente en dos partes concretadas a través del estudio de seis índices –véanse tablas 1 y 2-.

Una primera parte recoge el contenido de la información de RS divulgada por parte de las universidades. Para estudiar este contenido hemos seguido las directrices del GRI, por un lado, y analizado las Memorias de RS de las distintas universidades, por otro. Del mismo modo, se han examinado un conjunto de características cualitativas propias de la información que, siendo de carácter general, proceden de otros ámbitos como, por ejemplo, el de la información financiera. Consecuentemente, distinguimos tres secciones, información general de RS (GSRI), información específica de RS (SSRI) donde se analizan un conjunto de temáticas específicas y las características cualitativas de la información (QCSRI) como aspectos que deben cumplirse para garantizar la calidad de la información de RS –véase tabla 1-.

La segunda parte de nuestro estudio hace referencia al contexto en el que se produce la divulgación de la información de RS y ha sido estructurada en tres secciones teniendo presente las características de usabilidad, interacción, y privacidad y seguridad de las páginas webs. Por un lado pretendemos analizar la usabilidad del sitio web (USRI), esto es, la facilidad con la que los usuarios pueden hacer uso de las páginas webs con el fin de alcanzar un objetivo concreto. Por otro, con el objetivo de obtener información de los grupos de interés, conocer sus expectativas y establecer mecanismos de interacción con ellos, analizaremos cuales son los mecanismos que favorecen la participación de los grupos de interés (SKSRI) en las universidades. Finalmente, se analizan las características de privacidad y seguridad de las páginas webs (PSRI) que pretenden observar principalmente la capacidad de personalización que puede tener la difusión de la información de RS –véase tabla 2-.

En relación con la valoración asignada a cada uno de los aspectos recogidos en nuestro modelo de evaluación, y basándonos en la literatura previa (Larrán y Giner, 2002; Caba et al., 2005), se ha optado por un sistema de valoración dicotómico binario (0/1) de conformidad con la ausencia o presencia de cada aspecto en el sitio Web o en el Informe de Sostenibilidad/RS. Con el objetivo de reducir la subjetividad en la valoración cuando no existen normas explícitas para la asignación de valor de cada uno de los aspectos analizados (Jones, Alabaster y Walton, 1998), se ha repartido por igual la unidad en el caso de que el aspecto analizado esté definido por varios ítems (Ho, Tower y Barako, 2008) -véanse las Tablas 1 y 2 para observar la puntuación particular de cada ítem-.

TABLA 1. Contenido de la información de RS divulgada

INFORMACIÓN GENERAL RS		$GSRI= \sum_{i=1}^{m} g_i$
Concepto	**Items**	**Valoración**
G1. Exposición de la visión y estrategia de la universidad en temas de RS	a) Si se divulgan los principales compromisos en relación a la RS. b) Si la página web o Informe de Sostenibilidad incluye una declaración de la alt	0/0,5 en base a su ausencia-presencia de cada item
G2. Información sobre el perfil de los grupos de interés	a) Si en la página web de la universidad o en su Memoria de Sostenibilidad/RS se identifican el conjunto de grupos de interés	0/0,5 en base a su ausencia-presencia de cada item
G3. Divulgación centralizada o descentralizada de la información de RS por parte de las universidades	a) Si la divulgación de información de RS se desarrolla de forma centralizada en la página web de la universidad. b) Si dicha divulgación se desarrolla a tra	0/0,5 en base a su ausencia-presencia de cada item
G4. Datos sobre los indicadores de performance	a) Indicadores económicos. b) Indicadores sociales.	0/0,33 en base a la ausencia- presencia de cada item
G5. Índice de contenidos o una tabla de localización de los distintos elementos a informar en materia de RS	Facilita al lector un índice o una tabla de localización de los diferentes elementos a informar en RS.	0/1 en base a su ausencia-presencia de dicho item

INFORMACIÓN ESPECIFICA RS		$SSRI= \sum_{i=1}^{m} g_i$
Concepto	**Items**	**Valoración**
S1. Energía	Se divulgan aspectos sobre la instalación de equipos que ahorraran el consumo eléctrico como sensores de movimientos, bombillas incandescentes u otras fuentes alternativas de energía.	0/1 en base a su ausencia-presencia de dicho item
S2. Construcciones y terrenos	Se divulgan aspectos sobre criterios de construcción, renovación y rehabilitación de edificios existentes de conformidad con las "normas verdes".	0/1 en base a su ausencia-presencia de dicho item
S3. Compras sostenibles	Se divulgan aspectos sobre la necesidad de priorizar la compra de materiales reutilizables, ecológicos y que requieren un mínimo envase.	0/1 en base a su ausencia-presencia de dicho item
S4. Gestión de residuos y reciclaje	Se divulgan aspectos sobre el fomento del reciclaje de material de oficina y de residuos sólidos proporcionando recipientes para artículos como el papel, cartuchos de impresora y baterías.	0/1 en base a su ausencia-presencia de dicho item
S5. Transporte	Se divulgan aspectos sobre la creación de incentivos para la comunidad universitaria para utilizar un transporte público o alternativo, tales como el autobús o el uso de la bicicleta.	0/1 en base a su ausencia-presencia de dicho item
S6. Alimentos sostenibles y/o comercio justo	Se divulgan aspectos sobre el comercio justo y alimentos sostenibles mediante la disposición de productos biológicos en las cafeterías y tiendas del campus.	0/1 en base a su ausencia-presencia de esta característica
S7. Aspectos académicos	Se divulga información sobre la realización de cursos, seminarios o conferencias relacionadas con la RS.	0/1 en base a su ausencia-presencia de esta característica
S8. Investigación	Se divulga la existencia de centros de investigación de la Universidad vinculados a la RS.	0/1 en base a su ausencia-presencia de dicho item

CARACTERÍSTICAS CUALITATIVAS INFORMACIÓN RS		$QSRI= \sum_{i=1}^{m} g_i$
Concepto	**Items**	**Valoración**
Q1. Integridad	Se posibilita la consulta y/o descarga de la Memoria online.	0/1 en base a su ausencia-presencia de dicho item
Q2. Oportunidad	Ofrece información de RS en períodos inferiores al año (mensual, trimestral etc).	0/1 en base a su ausencia-presencia de dicho item
Q3. Comparabilidad	a) Si existe la posibilidad de comparar información de dos o mas años. b) Si se ofrecen resúmenes comparativos de la información sostenible realizados	0/0,5 en base a su ausencia-presencia de cada item
Q4. Comprensibilidad	a) Se ofrecen ratios y gráficos para ayudar a aclarar la información de RS incluida en los informes. b) Incluyen comentarios	0/0,5 en base a su ausencia-presencia de cada item
Q5. Relevancia	a) Se suministran informes técnicos de RS por parte de la Universidad de forma ordenada y clasificada. b) Se presenta la información de RS	0/0,5 en base a su ausencia-presencia de cada item
Q6. Fiabilidad	Existe información que ha sido auditada.	0/1 en base a su ausencia-presencia de dicho item

Fuente: Elaboración propia basada en las directrices de la GRI, adaptaciones sobre los informes de SR publicados por las universidades, y en las recomendaciones del FASB, 1980; IASB, 1989

TABLA 2. Contexto de la información de RS divulgada

USABILIDAD		$USRI = \sum_{i=1}^{m} g_i$
Concepto	**Items**	**Valoración**
U1. Lectura y análisis	a) Una sección específica en las páginas web de las universidades para revelar la información de sostenibilidad. b) Formatos electrónicos que se utilizan para procesar los informes de sostenibilidad:	0/0,33 en base a la ausencia- presencia de cada item.
U2. Búsqueda	a) Una herramienta de búsqueda básica se incluye en la página web de la universidad b) Una herramienta de búsqueda avanzada se incluye en la página web de la universidad.	0/0,5 en base a su ausencia-presencia de cada item
U3. Características de los Link	Se ofrece un sistema de enlaces para la información	0/1 en base a su ausencia-presencia de dicho item
U4.Estructura de la página web	La página web dispone de un mapa web	0/1 en base a su ausencia-presencia de dicho item
U5. Características de accesibilidad	Toda la información proporcionada en el sitio web es gratuita y puede descargarse	0/1 en base a su ausencia-presencia de dicho item
PARTICIPACIÓN GRUPOS DE INTERÉS		$SKSRI = \sum_{i=1}^{m} g_i$
Concepto	**Items**	**Valoración**
SK1. Características de interactividad	a) Se proporciona un correo electrónico diferente a la dirección del webmaster para solicitar información o explicaciones.	0/0,33 en base a la ausencia- presencia de cada item
SK2. Foros/chat	a) Foros de contenido general b) Foros relacion	0,5 si el foro/chat online utilizado permite la discusión de temas de carácter general y 1 en el caso de que exista un foro/chat específico que se utilice para la discusión de temas de RS
SK3. Tecnología web 2.0	a) Tecnología web2.0 sobre la Universidad en general b) Tecnología web2.0 sobre aspectos de RS o sosten	0,5 si la utilización de la tecnología web2.0 se destina a temas generales de la universidad y 1 si se utiliza la tecnología web2.0 para temas exclusivos de RS
SK4. Encuestas online	a) Encuestas no específicas de RS b) Encuestas específic	0,5 si la universidad utiliza encuestas online de carácter general y 1 si la universidad utiliza encuestas sobre RS
SK5. Newsletter	a) Noticias generales b) Not	0,5 si las noticias que divulga la universidad son de carácter general y 1 si son noticias de RS
PRIVACIDAD Y SEGURIDAD		$PSRI = \sum_{i=1}^{m} g_i$
Concepto	**Items**	**Valoración**
P1. Colección de datos	La universidad recaba datos específicos del usuario.	0/1 en base a su ausencia-presencia de dicho item
P2. Firma digital	Se puede firmar con la firma digital	0/1 en base a su ausencia-presencia de dicho item
P3. Notificación de política privada	Si existe notificación de política privada	0/1 en base a su ausencia-presencia de dicho item
P4. Acceso a información privada	Si existe información restringida	0/1 en base a su ausencia-presencia de dicho item
P5. Uso de cookies	Utilización de técnicas de recopilación de información de los visitantes del sitio web como el uso de cookies	0/1 en base a su ausencia-presencia de dicho item

Fuente: Elaboración propia en base a líneas CYPRG 2010 y la literatura previa (Fang, 2002; Holzer y Manoharan, 2007; Holzer y Kim, 2007)

3.3. Metodología utilizada para el contraste de las hipótesis propuestas

Para testar las hipótesis planteadas se han utilizado la prueba t-test pareada y los métodos de U de Mann-Whitney. Previos a utilizar el t-test, se aplicó la prueba de Levene para comprobar la igualdad de las varianzas. El t-test para muestras independientes se utiliza comúnmente para probar la hipótesis de igualdad de dos medias y es la prueba más potente cuando se satisface la condición de normalidad (Wilks, 1962; Rohatgi, 1976; Lehmann y Romano, 2006). Sin embargo, si el supuesto de normalidad es violado, el t-test puede no detectar una diferencia verdadera. Para solventar este problema, aplicamos la prueba de Mann-Whitney por ser una metodología sólida y ampliamente utilizada para contrastar las hipótesis planteadas en este artículo (Wilks, 1962; Rohatgi, 1976;; Gibbons y Chakraborti, 2003). Por lo tanto, en este trabajo se utilizan pruebas paramétricas (t-test) y no paramétricas (U de Mann-Whitney test) para probar las diferencias entre pares de las universidades.

Además, a fin de poder contrastar la segunda y tercera hipótesis planteada se han utilizado diferentes rankings como benchmark. Así, para la hipótesis segunda hemos utilizado el Ranking Académico de Universidades del Mundo (AMRU-ranking de Shanghái) que recoge, según un índice, las universidades del mundo con mayor calidad académica y ha sido ampliamente utilizado en la literatura previa para clasificar a las universidades según calidad y excelencia (Leydesdorff y Shin, 2011). Por su parte, para contrastar la tercera hipótesis se ha utilizado el ranking webometrics que clasifica, según un índice, las universidades del mundo que presentan las mejores políticas de comunicación en Internet (Aguillo, 2009).

Para obtener los datos necesarios, entre los meses de enero 2012 a abril 2012, se visitaron las páginas web de las universidades españolas para recabar la información necesaria para nuestra investigación en cuanto a la divulgación online de información de RS y el contexto en el que se divulgaba dicha información. Este proceso fue llevado a cabo por los tres autores de esta investigación de forma separada para garantizar una mayor

objetividad, reuniéndose posteriormente para discutir los resultados y llegar a un consenso. En caso de discrepancias con variaciones significativas se volvían a analizar conjuntamente las páginas webs.

4. Análisis de los resultados

4.1. Datos de estadística descriptiva obtenidos del modelo de evaluación

Los bajos valores obtenidos en la tabla 3 sección a.1), información general de RS, ponen de manifiesto que las universidades españolas están poco comprometidas con la divulgación online de información de dichos aspectos (media de 1,30 sobre 5). No obstante, aunque dicha divulgación es escasa, existen diferencias entre las universidades privadas y públicas alcanzando una mayor puntuación en estas últimas (0,57 y 1,69 respectivamente). Los ítems menos divulgados en este apartado son los que hacen referencia al perfil de los grupos de interés y a los indicadores de ejecución en las diferentes dimensiones de la RS a pesar de la importancia atribuida por autores como Casani et al. (2010) que destacan la importancia divulgar indicadores de seguimiento de los resultados obtenidos. Mientras los ítems más valorados, a diferencia de los resultados obtenidos por Gaete (2011), hacen referencia a la divulgación de valores sostenibles y de RS en su misión o visión estratégica (Tabla 3).

En relación al apartado a.2) información específica de RS, aunque determinados ítems alcanzan unos valores muy elevados, este tipo de información, en su conjunto, no está siendo muy divulgada en las universidades españolas (media de 2,09 sobre 8) (Tabla 3). Además, aunque no existe una pauta común en la divulgación online de información específica de RS, parece desprenderse que los ítems referentes a la docencia e investigación son los mayoritariamente divulgados. Quizás esto se deba a que cada vez existen más cátedras y grupos de investigación que están teniendo un papel más protagonista en las acciones de RS así como ONG y asociaciones con vinculación estrecha a las universidades que impregnan tales actividades (Arias y Molina, 2008).

Para el caso particular de las universidades públicas, tienen especial relevancia la difusión online de aspectos relacionados con la gestión de residuos, reciclaje y energía. En cualquier caso, los resultados obtenidos en las universidades españolas, en línea con investigaciones previas en otras universidades (Ferrer-Balas et al., 2008; Hammod y Churchman, 2008), evidencian el peso que la dimensión medioambiental aún tiene en la concepción de la RS universitaria.

En lo que se refiere al cumplimiento de las características cualitativas de la información (apartado a.3) observamos que, dentro de la heterogeneidad existente, se obtienen los valores más bajos dentro del contenido de la información de RS divulgada (0,91 sobre 6). Además, son muy pocas las universidades analizadas que ofrecen en sus páginas webs Informes o Memorias de RS y es por ello que los aspectos de RS que se están comunicando por las universidades lo sean principalmente a través de resúmenes técnicos. Estos resúmenes técnicos suelen acompañarse de ratios o gráficos con comentarios que pretenden hacer la información más comprensible para el usuario externo. Asimismo, en el caso de divulgar las Memorias o Informes de RS, la información contenida no suele ser ni oportuna ni comparable, ya que no se ofrecen datos de períodos temporales inferiores al año, ni se hace referencia, tampoco, a años anteriores, imposibilitando realizar comparaciones. Estos resultados evidencian que, contrariamente a lo indicado por Lukman y Glavič (2007), las universidades no están comunicando de manera completa sus prácticas y políticas socialmente sostenibles, dificultando así un proceso de benchmarking entre ellas. Además, son muy escasas las universidades que comunican información que previamente haya sido acreditada o auditada (tabla 3) lo que dificulta la fiabilidad de la misma.

En cuanto a la sección b), contexto de la información de RS divulgada, los valores relativos a b.1) usability alcanzan una media muy similar (de 3,3 sobre 5) en las universidades españolas, tanto públicas como privadas, con un coeficiente de variación muy bajo (inferior a 0,2). Como se observa en la tabla 3, el peso de la puntuación se concentra principalmente en los ítems relacionados con el diseño de las páginas webs, ya que las universidades han incluido instrumentos que facilitan la

navegabilidad, tales como herramientas de búsqueda e hipervínculos que ayudan al usuario a profundizar en la información recabada.

Ahora bien, es destacable la alta puntuación obtenida por todas las universidades en el apartado U5 (accesibilidad), aunque son muy pocas las universidades que tienen una sección específica para la información de RS. Ésta se divulga en un único idioma, lo que reduce el número de usuarios que pueden utilizarla y comprenderla y los formatos en los que se presenta dicha información no facilitan su manipulación, ya que las universidades utilizan formatos del tipo Htlm o PDF.

El apartado b.2, participación de los grupos de interés, es el que obtiene los valores con la media más baja (2,28). Los valores medios de las universidades coinciden y se concentran, principalmente, en los ítems que hacen referencia a noticias en la página web y a la utilización de tecnología web 2.0. Sin embargo, las universidades no fomentan la comunicación y participación con los grupos de interés a través de direcciones de emails diferentes a las del webmaster, ni tampoco incorporan un mailing list, ni utilizan foros o chats y/o encuestas online para fomentar la interacción con sus grupos de interés.

En general, los resultados en esta área se encuentran en línea con los obtenidos en trabajos previos como los de Magalhaës (2000), Pavičić, Alfirević y Mihanović (2009) o Benneworth y Jongbloed (2010), en los que se destaca la falta de orientación al mercado de las universidades en relación con los grupos de interés, así como el débil papel que éstos desempeñan en la gobernanza de estas instituciones, frente a otros que sostienen que las universidades están potenciando las relaciones con sus grupos de interés (Cohen, 2007; Gaete, 2009; Casani et al., 2010; Krazimierz, 2010).

Finalmente, el apartado b.3) privacidad y seguridad de las páginas webs es el que obtiene el valor medio más alto (3,59) de todos los aspectos analizados en la sección b) en todas las universidades. La puntuación más alta se concentra en los ítems que hacen referencia al desarrollo de aspectos de notificación de las políticas de privacidad, restricción de acceso a áreas de información personal y uso de cookies. Por el contrario, el

aspecto menos desarrollado es la utilización de la firma digital que podría permitir una mayor seguridad y los sistemas de recolección de datos.

TABLA 3. Estadística descriptive

a) CONTENIDO DE LA INFORMACION DE RS DIVULGADA EN LAS PÁGINAS WEBS O EN LOS INFORMES DE SOSTENIBILIDAD	PÚBLICAS				PRIVADAS				TOTAL	
	MEDIA	MEDIANA	DT	CV	MEDIA	MEDIANA	DT	CV	MEDIA	DT
a.1) Información general de RS	**1,69**	**1,50**	**1,54**	**0,91**	**0,57**	**0,00**	**0,98**	**1,72**	**1,30**	**1,46**
G1. Exposición de la visión y estrategia de la universidad en temas de RS	0,44	0,50	0,39	0,90	0,23	0,00	0,32	1,40	0,36	0,38
G2. Información sobre el perfil de los grupos de interés	0,13	0,00	0,24	1,94	0,02	0,00	0,10	5,10	0,09	0,21
G3. Divulgación centralizada o descentralizada de la información de RS por parte de las universidades	0,45	0,50	0,36	0,81	0,15	0,00	0,24	1,53	0,34	0,35
G4. Datos sobre los indicadores de performance	0,24	0,00	0,38	1,59	0,05	0,00	0,20	3,98	0,17	0,34
G5. Índice de contenidos o una tabla de localización de los distintos elementos a informar en materia de RS	0,44	0,00	0,50	1,15	0,12	0,00	0,33	2,82	0,32	0,47
a.2) Información específica de RS	**2,67**	**2,00**	**2,20**	**0,82**	**1,04**	**1,00**	**1,08**	**1,04**	**2,09**	**2,03**
S1. Energía	0,42	0,00	0,50	1,20	0,12	0,00	0,33	2,82	0,31	0,47
S2. Construcciones y terrenos	0,15	0,00	0,36	2,45	0,00	0,00	0,00		0,09	0,29
S3. Compras sostenibles	0,17	0,00	0,38	2,26	0,04	0,00	0,20	5,10	0,12	0,33
S4. Gestión de residuos y reciclaje	0,48	0,00	0,50	1,05	0,08	0,00	0,27	3,53	0,34	0,48
S5. Transporte	0,25	0,00	0,44	1,75	0,00	0,00	0,00		0,16	0,37
S6. Alimentos sostenibles y/o comercio justo	0,04	0,00	0,20	4,85	0,00	0,00	0,00		0,03	0,16
S7. Aspectos académicos	0,75	1,00	0,44	0,58	0,50	0,50	0,51	1,02	0,66	0,48
S8. Investigación	0,42	0,00	0,50	1,20	0,31	0,00	0,47	1,53	0,38	0,49
a.3) Características cualitativas de la información de RS	**1,20**	**0,50**	**1,50**	**1,26**	**0,38**	**0,00**	**0,96**	**2,50**	**0,91**	**1,39**
Q1. Integridad	0,25	0,00	0,44	1,75	0,08	0,00	0,27	3,53	0,19	0,39
Q2. Oportunidad	0,04	0,00	0,20	4,85	0,04	0,00	0,20	5,10	0,04	0,20
Q3. Comparabilidad	0,17	0,00	0,33	1,99	0,02	0,00	0,10	5,10	0,11	0,28
Q4. Comprensibilidad	0,28	0,00	0,45	1,59	0,08	0,00	0,23	3,02	0,21	0,40
Q5. Relevancia	0,44	0,50	0,43	0,99	0,17	0,00	0,34	1,99	0,34	0,42
Q6. Fiabilidad	0,02	0,00	0,14	6,93	0,00	0,00	0,00		0,01	0,12
PÁGINAS WEBS O EN LOS INFORMES DE SOSTENIBILIDAD	PÚBLICAS				PRIVADAS				TOTAL	
	MEDIA	MEDIANA	DT	CV	MEDIA	MEDIANA	DT	CV	MEDIA	DT
b.1) Usabilidad	**3,40**	**3,51**	**0,65**	**0,19**	**3,31**	**3,57**	**0,53**	**0,16**	**3,36**	**0,61**
U1. Lectura y análisis	0,22	0,13	0,19	0,87	0,11	0,07	0,10	0,86	0,18	0,17
U2. Búsqueda	0,64	0,50	0,29	0,45	0,58	0,50	0,27	0,47	0,61	0,28
U3. Características de los Link	1,00	1,00	0,00	0,00	1,00	1,00	0,00	0,00	1,00	0,00
U4. Estructura de la página web	0,54	1,00	0,50	0,93	0,62	1,00	0,50	0,81	0,57	0,50
U5. Características de accesibilidad	1,00	1,00	0,00	0,00	1,00	1,00	0,00	0,00	1,00	0,00
b.2) Participación grupos de interés	**2,53**	**2,50**	**0,78**	**0,31**	**1,82**	**1,50**	**0,71**	**0,39**	**2,28**	**0,83**
SK1. Características de interactividad	0,17	0,00	0,22	1,30	0,05	0,00	0,12	2,39	0,12	0,19
SK2. Foros/chat	0,40	0,50	0,34	0,86	0,21	0,00	0,32	1,52	0,33	0,34
SK3. Tecnología web 2.0	0,67	0,50	0,24	0,36	0,52	0,50	0,10	0,19	0,61	0,21
SK4. Encuestas online	0,47	0,50	0,28	0,60	0,38	0,50	0,29	0,76	0,44	0,29
SK5. Newsletter	0,83	1,00	0,24	0,29	0,65	0,50	0,24	0,36	0,77	0,25
b.3) Privacidad y seguridad	**3,92**	**4,00**	**0,92**	**0,23**	**3,00**	**3,00**	**1,10**	**0,37**	**3,59**	**1,07**
P1. Colección de datos	0,63	1,00	0,49	0,78	0,42	0,00	0,50	1,19	0,55	0,50
P2. Firma digital	0,52	1,00	0,50	0,97	0,15	0,00	0,37	2,39	0,39	0,49
P3. Notificación de políticas privadas	0,79	1,00	0,41	0,52	0,58	1,00	0,50	0,87	0,72	0,45
P4. Acceso a información privada	0,98	1,00	0,14	0,15	0,85	1,00	0,37	0,43	0,93	0,25
P5. Uso de cookies	1,00	1,00	0,00	0,00	1,00	1,00	0,00	0,00	1,00	0,00

Fuente: Elaboración propia

4.2. Resultados del contraste de hipótesis realizado

Los resultados obtenidos, tanto en el test paramétrico como no paramétrico, evidencian que existen diferencias significativas entre las universidades públicas y privadas tanto en el contenido como en el contexto en el que se divulga online la información de RS a excepción de los ítems que forman parte de la usabilidad de las páginas webs donde se divulga información socialmente responsable (Hipótesis 1, ver tabla 4). Este resultado podría indicar que las universidades podrían estar utilizando la divulgación online de información RS como un elemento diferenciador para obtener una ventaja competitiva.

TABLA 4. Contraste Hipótesis 1

			CONTENIDO			CONTEXTO		
			GSRI	SSRI	QSRI	USRI	SKSRI	PSRI
Test Paramétrico	Levene's Test	F				2,81	0,52	0,93
		Sig.				0,10	0,52	0,34
	T-test	t	-3,81	-4,28	-2,83	-0,60	-3,84	-3,83
		Sig. (2-tailed)	0,000	0,000	0,006	0,551	0,000	0,000
Test No Paramétrico	Statistic	U Mann-Whitney	352	348	395,5	556	308,5	339
		W Wilcoxon	703	699	746,5	907	659,5	690
	Sig. Asymptote (2-tailed)		0,001	0,001	0,005	0,439	0,000	0,001

Fuente: Elaboración propia

En la tabla 3 se observa que las universidades públicas alcanzan una mayor puntuación frente a las privadas. Este resultado es contrario al esperado a tenor de la literatura previa ya que las universidades privadas intentan aprovechar cualquier tipo de rasgo distintivo para posicionarse en una situación de ventaja competitiva aprovechando la puesta en práctica de programas socialmente responsables (Carlson, 2008).

Asimismo, los resultados indican diferencias significativas entre las universidades según sus niveles de calidad y reputación académica. Se observan diferencias entre las universidades que ocupan los mejores puestos según el ranking de Shanghái y el resto de universidades, principalmente en lo que al contexto de la información se refiere (Hipótesis

2, ver tabla 5). Así, en la tabla 6 comprobamos cómo las universidades que forman parte del ranking de Shanghái, a pesar de ser un número reducido de universidades, son aquéllas que están divulgando una mayor información de RS. Igualmente, el contexto en el que las universidades españolas incluidas en el ranking de Shanghái divulgan la información de RS favorece un mayor acceso de los grupos de interés en comparación con los rasgos del contexto que utilizan el resto de universidades españolas no indexadas.

TABLA 5. Contraste Hipótesis 2

			CONTENIDO			CONTEXTO		
			GSRI	SSRI	QSRI	USRI	SKSRI	PSRI
Test Paramétrico	Levene's Test	F	0,78			0,33	2,02	3,78
		Sig.	0,38			0,57	0,16	0,06
	T-test	t	1,81	1,83	1,09	2,07	2,26	1,62
		Sig. (2-tailed)	0,074	0,097	0,303	0,042	0,027	0,109
Test No Paramétrico	Statistic	U Mann-Whitney	202,5	198,5	250	197	182,5	226
		W Wilcoxon	2282,5	2278,5	2330	2277	2262,5	2306
	Sig. Asymptote (2-tailed)		0,054	0,048	0,230	0,051	0,028	0,120

Fuente: Elaboración propia

TABLA 6. Análisis descriptivo Hipótesis 2

a) CONTENIDO DE LA INFORMACIÓN DE RS DIVULGADA EN LAS PÁGINAS WEBS O EN LOS INFORMES DE SOSTENIBILIDAD	Ranking Shanghai			Resto universidades		
	MEDIA	DT	CV	MEDIA	DT	CV
a.1) Información general de RS	2,06	1,63	0,79	1,18	1,41	1,20
a.2) Información específica de RS	3,50	2,72	0,78	1,88	1,83	0,98
a.3) Características cualitativas de la información de RS	1,50	1,91	1,28	0,82	1,28	1,56
b) CONTEXTO DE LA INFORMACIÓN DE RS EN LAS PÁGINAS WEBS O EN LOS INFORMES DE SOSTENIBILIDAD	Ranking Shanghai			Resto universidades		
	MEDIA	DT	CV	MEDIA	DT	CV
b.1) Usabilidad	3,73	0,68	0,18	3,31	0,58	0,18
b.2) Participación grupos de interés	2,81	0,74	0,26	2,20	0,81	0,37
b.3) Privacidad y seguridad	4,10	0,74	0,18	3,52	1,10	0,31

Fuente: Elaboración propia

Todo esto podría indicar que la calidad o excelencia en docencia e investigación de la universidad podría implicar, a su vez, una mayor transparencia en la divulgación online de información de RS, adquiriendo importancia tanto el contenido como la forma de presentar dicha información, siendo éste un elemento diferenciador entre las universidades españolas. Este resultado confirma los resultados de investigaciones previas

en las que se señalaba que la información que suministran las universidades en sus páginas webs es fundamental en la toma de decisiones de los alumnos (Schimmel et al., 2010) y, concretamente, la información socialmente responsable (Casani et al., 2010).

Sin embargo, no solo es importante la calidad universitaria a la hora de seleccionar las mejores universidades, numerosos rankings mundiales, entre ellos el de webometrics, clasifican a las universidades en función de la visibilidad de las mismas en Internet. De hecho, tal y como pone de manifiesto Schimmel et al. (2010), es a través de Internet, y de las herramientas que ofrece este canal de comunicación, el medio utilizado por numerosos estudiantes a la hora de decidir la universidad elegida para su formación profesional.

En este contexto, el contraste de la hipótesis tercera (véase Tabla 7) refleja que, a excepción de la contrastación entre las universidades que se encuentra incluidas en los dos primeros (Q1-Q2) y últimos cuartiles (Q3-Q4), en el resto de comparaciones existen diferencias significativas entre las universidades conforme descendemos en el puesto que ocupan las universidades en el ranking de webometrics. Así pues, aquéllas que lideran el ranking de webometrics son aquellas universidades cuya transparencia en relación a la información de RS es mayor respecto a aquéllas otras que ocupan los peores puestos en dicho ranking, lo que indica que le otorgan una mayor relevancia a estos aspectos dentro de sus políticas de comunicación.

TABLA 7. Contraste Hipótesis 3

| | | | 1Q-2Q | | | | | | 1Q-3Q | | | | | | 1Q-4Q | | | | | |
| | | | CONTENIDO | | | CONTEXTO | | | CONTENIDO | | | CONTEXTO | | | CONTENIDO | | | CONTEXTO | | |
			GSRI	SSRI	QSRI	USRI	SKSRI	PSRI	GSRI	SSRI	QSRI	USRI	SKSRI	PSRI	GSRI	SSRI	QSRI	USRI	SKSRI	PSRI
Test Paramétrico	Levene's Test	F	1,63	0,063	0,114	0,443	0,178	0,859	0,013		0,256	2,586	0,269	0,619				1,86	0,071	0,185
		Sig.	0,21	0,803	0,737	0,51	0,676	0,36	0,91		0,616	0,117	0,607	0,437				0,181	0,791	0,67
	T-test	t	-0,734	0,146	-0,496	0,907	0,181	-1,407	1,659	3,203	0,866	1,297	4,002	1,771	3,302	3,704	2,063	1,469	3,398	2,721
		Sig. (2-tailed)	0,47	0,89	0,62	0,37	0,86	0,17	0,11	0,00	0,39	0,20	0,00	0,09	0,00	0,00	0,05	0,15	0,00	0,01
Test No Paramétrico	Statistic	U Mann-Whitney	142	155,5	143,5	132,5	156	127,5	104	78,5	129	127	61,5	116,5	76,5	71	103,5	119,5	72	90,5
		W Wilcoxon	313	326,5	314,5	303,5	327	298,5	294	268,5	319	317	251,5	306,5	266,5	261	293,5	309,5	262	280,5
	Sig. Asymptote (2-tailed)		0,52	0,84	0,55	0,35	0,85	0,24	0,04	0,00	0,17	0,18	0,00	0,08	0,00	0,00	0,02	0,12	0,00	0,01

| | | | 2Q-3Q | | | | | | 2Q-4Q | | | | | | 3Q-4Q | | | | | |
| | | | CONTENIDO | | | CONTEXTO | | | CONTENIDO | | | CONTEXTO | | | CONTENIDO | | | CONTEXTO | | |
			GSRI	SSRI	QSRI	USRI	SKSRI	PSRI	GSRI	SSRI	QSRI	USRI	SKSRI	PSRI	GSRI	SSRI	QSRI	USRI	SKSRI	PSRI
Test Paramétrico	Levene's Test	F	1,052		0,624	1,138	0,953					0,612	0,024	1,682		1,693	4,025	0,088	0,638	0,047
		Sig.	0,312		0,435	0,293	0,336					0,439	0,879	0,203		0,201	0,052	0,769	0,43	0,83
	T-test	t	2,206	2,915	1,333	0,345	3,536	3,449	3,636	3,37	2,5	0,546	3,048	4,329	1,095	0,413	1,093	0,228	-0,077	1,063
		Sig. (2-tailed)	0,03	0,01	0,19	0,73	0,00	0,00	0,00	0,00	0,02	0,59	0,00	0,00	0,28	0,68	0,28	0,82	0,94	0,30
Test No Paramétrico	Statistic	U Mann-Whitney	104	87,5	115	156	71,5	79,5	79,5	84	87,5	143,5	77	55	170	178	157,5	168,5	177	150,5
		W Wilcoxon	294	277,5	305	346	261,5	269,5	269,5	274	277,5	333,5	267	245	360	368	347,5	358,5	367	340,5
	Sig. Asymptote (2-tailed)		0,03	0,01	0,07	0,65	0,00	0,00	0,00	0,01	0,01	0,40	0,00	0,00	0,73	0,94	0,41	0,72	0,92	0,36

Fuente: Elaboración propia

5. Conclusiones y futuras líneas de investigación

Las Universidades están siendo cada vez más presionadas para que actúen en el entorno social en el que desarrollan su actividad y sirvan como motores de desarrollo de la comunidad en la que se desenvuelven (Gaete, 2009; Casani et al., 2010; Krazimierz, 2010) así como para que mejoren su rendición de cuentas, incorporando información de carácter no financiero en sus políticas de comunicación.

En este contexto, el desarrollo de las TICs, y particularmente Internet, podría utilizarse como un medio para canalizar la identificación de las expectativas y demandas de los diferentes grupos de interés, para el establecimiento de mecanismos de diálogo con los mismos, así como para mejorar la transparencia informativa. No obstante, los resultados de la investigación demuestran que las universidades españolas, lejos de utilizar las TICs para mejorar su rendición de cuentas, están desaprovechando sus posibilidades tanto para la divulgación online de información de RS como para favorecer la implicación e interacción de los grupos de interés en la gestión de los aspectos de RS universitaria.

Concretamente, las universidades españolas no están ofreciendo información de RS universitaria en sus páginas webs, ni divulgando Informes o Memorias de RS en internet, hecho que impide el efectivo cumplimiento de su deber de rendición de cuentas hacia los grupos de interés y el conocimiento de las actividades que, en este ámbito, están desarrollando las universidades.

La escasa información de RS que divulgan online las universidades está centrada fundamentalmente en los aspectos medioambientales al ser, quizás, aspectos con un mayor recorrido en las universidades (Ferrer-Balas et al., 2008; Hammod y Churchman, 2008). Sin embargo, por lo general, este tipo de información no es fácil de localizar en las páginas webs. Normalmente se encuentra dispersa e incluida en informes técnicos obviando el uso de Memorias de RS a pesar de su importancia.

Con respecto a la participación e interacción con los grupos de interés, nuestros resultados indican que, actualmente, las universidades no parecen estar muy concienciadas, al menos en lo que a aspectos de RS se refiere, lo que contrasta con lo señalado en la literatura previa donde se ha observado que las universidades están incrementando la influencia y participación con los grupos de interés (Gaete, 2009; Krazimierz, 2010, entre otros). Los resultados parecen indicar que las universidades no están mostrando interés en recoger, con el apoyo de las TICs, la opinión de los grupos de interés a la hora de diseñar y ejecutar sus políticas de RS.

En un contexto actual de reformas universitarias (RD 20/2011 y RD 14/2012), caracterizado por la alta competencia en la Educación Superior y las constantes reducciones de financiación, las universidades privadas son las que se podrían encontrarse en una situación más vulnerable ya que su principal fuente de financiación proviene de las tasas del alumnado. La utilización de las TICs por estas universidades para divulgar información de RS podría ser elemento diferenciador y de competitividad de las mismas respecto a las universidades de carácter público (Jones, 2001; Carlson, 2008). No obstante, nuestros resultados indican que su comportamiento en este sentido no es diferente respecto al mostrado por las universidades públicas. Así, y pese al bajo compromiso en la divulgación online de información RS por parte de las universidades españolas, son las universidades públicas españolas las que obtienen mayores niveles de divulgación (Contraste hipótesis 1).

El segundo contraste de hipótesis indica la existencia de diferencias significativas en el contenido genérico y específico entre las universidades de mayor prestigio mundial según el ranking de Shanghái y aquellas otras no recogidas en el mismo, aspecto éste que podría servir de elemento clave para la toma de decisiones de los estudiantes (Schimmel et al., 2010).

También parece que existe homogeneidad, tanto en el contenido de la información de RS divulgada online como en el contexto en el que lo hacen entre las

universidades con la calificación más alta, por una parte, y la más baja, por otra. Esto parece indicar que existen patrones informales de divulgación entre las universidades con similares políticas de comunicación destacando, como mejores prácticas, aquéllas que presentan unos niveles superiores en visibilidad en la web (Hipótesis tercera).

En conclusión, las universidades están divulgando online escasa información de RS quizás, como hemos señalado previamente, con propósitos de legitimidad e imagen, tal y como han puesto de manifiesto estudios previos (Deegan, 2002; Zimmerman y Zeitz, 2002; Deephouse y Carter, 2005) pero no con el objetivo final de satisfacer los requerimientos de los grupos de interés en el marco del cumplimiento de su deber de rendición de cuentas. Las universidades no están analizando las necesidades de los grupos de interés a pesar de la gran influencia que tienen en cualquier organización (Cohen, 2007; Casani et al., 2010), y la forma de comunicarse con ellos y presentarle la información está siendo insuficiente.

Por tanto, las universidades como agentes que deben jugar un papel esencial en la RS a través de la incorporación de principios de RS en todas sus facetas docentes e investigadoras, deberían mejorar en el aspecto de la divulgación online de información de RS universitaria como un elemento que podría servirle de diferenciación en un entorno de competencia. En este sentido, podría ser interesante que futuras investigaciones pusieran énfasis en aquellos aspectos claves o factores que favorecieran la divulgación online de información de RS, así como en el análisis de modelos para gestionar y canalizar de manera eficiente las necesidades de información de RS universitaria por parte de los grupos de interés, permitiendo que este aspecto pueda ser determinante en la elección y prestigio de las universidades.

Asimismo, sería necesario impulsar investigaciones que incidan en los aspectos éticos, axiológicos, pedagógicos e incluso sociopolíticos que podrían promover el comportamiento responsable de las universidades y su capacidad e interés en la

rendición de cuentas de este aspecto con los grupos de interés. Estas investigaciones podrían ayudar a la toma de decisiones de políticos en educación que favorezcan la formación y asunción de valores éticos de las propias universidades así como de los estudiantes a los que forman. De este modo, se propiciarían vías para el desarrollo de políticas universitarias de extensión cultural, de cooperación universitaria y de voluntariado social que permitieran optar por una sociedad más ética y solidaria (Casani et al., 2010).

6. Referencias bibliográficas

Aguillo I. (2009). Measuring the institution's footprint in the web. Library Hi Tech, 27 (4), 540.

Álamo Vera F.R y García Soto, M.G. (2007). El Proceso Estratégico en el Sector Público: Análisis en el Contexto de las Universidades Españolas. Investigaciones Europeas de Dirección y Economía de la Empresa, 13 (2), 113-129.

Arias, S. y Molina, E. (2008). Universidad y cooperación al desarrollo. La experiencia de las universidades de la ciudad de Madrid. Madrid: Catarata. ISBN 8483193787, 9788483193785

Aznar M.P., Martinez-Agut, M.P., Palacios, B., Piñero A. y Ull, M.A. (2011). Introducing sustainability into university curricula: an indicator and baseline survey of the views of university teachers at the University of Valencia. Environmental Education Research, 17 (2), 145–166.

Benneworth, P. y Jongbloed, V. (2010). Who matters to universities? A stakeholder perspective on humanities, arts and social sciences valorization. Higher Education, 59 (5), 567-588.

Borins, S. (2002). On the frontiers of electronic governance: a report on the United States and Canada. International Review of Administrative Science, 68 (2), 199-211.

Caba P., C.; López H., A.M. y Rodríguez B., M.P. (2005). Citizens' access to on-line governmental financial information: Practices in the European Union countries. Government Information Quarterly, 22 (2), 258–276.

Caba P., C.; Rodríguez B., M.P y López H., A.M. (2008). e-Government process and incentives for online public financial information. Online Information Review, 32 (3), 379.

Carlson, S. (2008). How green was my college. Chronicle of Higher Education, 54 (34), 4-5.

Casani, F.; Pérez-Esparrells, C. y Rodríguez, J. (2010). Nuevas Estrategias Económicas en la Universidad desde la Responsabilidad Social. Calidad en la Educación, 33, 255-273.

Chandler, K. y Hyatt, M. (2002). Customer-centered design: a new approach to Web usability. (Prentice Hall, New Jersey).

Cohen, D. (2007). Desafíos de la Responsabilidad Social Universitaria. Razón y Palabra, 12 (55).

Conferencia de Rectores de Universidades Españolas (CRUE) (2011). La universidad ante los retos de la sociedad. Cinco Dias [Madrid] 29 June 2011.

De la Calle, C.; García Ramos, J.M. y Giménez Armentia, P. (2007). La formación de la responsabilidad social en la Universidad. Revista de Educación de la Universidad Complutense de Madrid, 18 (2).

De la Cuesta González, M., De la Cruz Ayuso, C. y Rodríguez Fernández, J.M. (2010). Responsabilidad social universitaria. Editores: Netbiblo (España). ISBN: 978-84-9745-423-0

Deegan, C. (2002). The Legitimising Effect of Social and Environmental Disclosures. A Theoretical Foundation. Accounting, Auditing and Accountability Journal, 15 (3), 282–311.

Deephouse, D.L. y Carter, S.M. (2005). An Examination of Differences between Organizational Legitimacy and Organizational Reputation. Journal of Management Studies, 42 (2), 329–360.

European Commission. 2001. GREEN PAPER. Promoting a European framework for corporate social responsibility. Brussels, 18.7.2001.

Ferrer-Balas, D.; Adachi, J; Banas, S.; Davidson, CI; Hoshikoshi, A.; Mishra, A.; Motodoa, Y; Onga, M; Ostwald, M. (2008). An international comparative analysis of sustainability transformation across seven universities. International Journal of Sustainability in Higher Education, 9 (3), 295-316.

Financial Accounting Standards Board (FASB). (1980). Qualitative Characteristics of Accounting Information. Norwalk, Connecticut: Statement of Financial Accounting Concepts number 2, FASB.

Gaete, R.A. (2009). Stakeholder participation in the evaluation of socially responsible behavior of university management: prospects, obstacles and proposals. Paper presented at the XV AECA Congress. (Valladolid, España), 1-15.

Gaete Quezada, R. (2011). La responsabilidad social universitaria como desafío para la gestión estratégica de la Educación Superior: el caso de España. Revista de Educación, 355, 109-133.

Gallego, A.I., Rodríguez, D.L. y García S.I.M. (2011). Information disclosed online by Spanish universities: content and explanatory factors. Online Information Review, 35 (3), 360-385.

Gibbons, J.D. y Chakraborti, S. (2003). Nonparametric Statistical Inference, 4th Edition, Marcel Dekker, New York.

Global Reporting Initiative (GRI) (2005). 'Sector Supplement for Public Agencies', Global Reporting Initiative, Amsterdam. Retrieved June 1, 2011 from http://www.globalreporting.org/ReportingFramework/SectorSupplements/

Hammond, C. y Churchman, D. (2008). Sustaining academic life: A case for applying principles of social sustainability to the academic profession. International Journal of Sustainability in Higher Education, 9 (3), 235-245.

Ho, P., Tower, G. y Barako, D. (2008). Improving governance leads to improved corporate communication. Corporate Ownership & Control, 5, 26-33.

Holzer, M. y Kim, S.T. (2007). Digital Governance in Municipalities Worldwide, A Longitudinal Assessment of Municipal Websites Throughout the World. The E-Governance Institute. National Center for Public Performance.

Holzer, M. y Manoharan, A. (2007). Global Trends in Municipal E-Government: An Online Assessment of Worldwide Municipal Web Portals. (Marc Holzer in A.Agarwal & V.V. Ramana, Computer Society of India: India).

International Accounting Standards Board (IASB). (1989). Framework for the Preparation and Presentation of Financial Statements. London: International Accounting Standard Board, July.

Jones, K. (2001). Study on environmental reporting by companies. Sunderland, England: Center for Environmental Informatics.

Jones, K., Alabaster, T. y Walton, J. (1998). Virtual Environments for Environmental Reporting. Greener Management International, 21, 121–137.

Krazimierz, M. (2010). Redefining external stakeholders in Nordic Higher Education. Tertiary Education and Management, 16 (1), 45-60.

Larrán, M. y Giner, B. (2002). The use of the Internet for corporate reporting by Spanish companies. The International Journal of Digital Accounting Research, 2 (1), 53-82.

Lawrence, S. y Giles, C.L. (1999). Accessibility of information on the web. *Nature*, 8, 107-109.

Lehmann, E.L. y Romano, J.P. (2006) Testing statistical hypotheses. Springer New York 2005 (3rd edition), corr. 2nd printing 2006, XIV, 786 pages, ISBN: 0-387-98864-5

Leydesdorff, L. y Shin, J.C. (2011). How to evaluate universities in terms of their relative citation impacts: Fractional counting of citations and the normalization of differences among disciplines. Journal of the American Society for Information Science and Technology, 62 (6), 1146–1155.

Lozano, R. (2006). Incorporation and institutionalization of sustainable development into universities: Breaking through barriers to change. Journal of Cleaner Production, 14 (9/11), 787–96.

Lukman, R. y Glavič, P. (2007). What are the key elements of a sustainable university?. Clean Technologies and Environmental Policy, 9 (2), 103-114.

Magalhäes, A. (2000). Portuguese Higher Education and the Imaginary Friend: the stakeholders' role in institutional governance. European Journal of Education, 35 (4).

Martínez Marín, M. (2008). Aprendizaje servicio y responsabilidad social de las universidades. Educación universitaria. Instituto de Ciencias de Educación de la Universitat de Barcelona. Ediciones Octaedro, S.L. ISBN 978-84-9921-124-4

Mellé Hernández (2007). Responsabilidad Social en el Sector Público. *Ekonomiaz*, 65, 84-107.

Memoria de la Responsabilidad Social del Sistema Universitario Andaluz (2009). Foro de Consejos Sociales de las Universidades Públicas de Andalucía, ISSN: 978-84-692-3494-5.

Middleton, I., McConnell, M. y Davidson, G. (1999). Presenting a model for the structure and content of a university World Wide Web site. Journal of Information Science, 25 (3), 219-227.

Ministerio de Ciencia e Innovación (2009). Estrategia Universidad 2015. Universidades para el progreso, el bienestar y la competitividad. p.6.

Núñez Chicharro, M. y Alonso Carrillo, I. (2009). La responsabilidad social en el mapa estratégico de las universidades públicas. Pecunia, 9 (13), 157.

Pavičić J., Alfirević, N. y Mihanović, Z. (2009). Market orientation in managing relationships with multiple constituencies of Croatian higher education. Higher Education, 57 (2), 191–207.

Pérez Esparrells, C. (2004). La educación universitaria en España: El vínculo entre financiación y calidad. Revista de Educación, 335, 305-316.

Ramos Parra, C. (2010). Hacia una cultura de responsabilidad social universitaria. Centro de Investigación de Ciencias Administrativas y Gerenciales, 7 (2). ISSN: 1856-6189

Real Decreto Ley 20/2011, de 30 de diciembre, de medidas urgentes en materia presupuestaria, tributaria y financiera para la corrección del déficit público.

Real Decreto Ley 14/2012, de 20 de abril, de medidas urgentes de racionalización del gasto público en el ámbito educativo.

Rodríguez Bolívar, M.P. (2009). Evaluating Corporate Environmental Reporting on the Internet: The Utility and Resource Industries in Spain. Business and Society, 48 (2), 179-205.

Rodríguez Sáiz (1993). La financiación de la Enseñanza Superior en España. Perspectiva de las Universidades Privadas. Estudios Regionales, 36, 243-269.

Rohatgi, V.K. (1976). An Introduction to Probability Theory and Mathematical Statistics, Wiley, New York.

Schimmel, K., Motley, D., Racic, S., Marco, G. y Eschenfelder, M. (2010). The importance of university web pages in selecting a higher education institution. Research in Higher Education Journal, 9, 1-16.

Setó-Pamies, D., Domingo-Vernis, M. y Rabassa-Figueras, N. (2011). Corporate social responsibility in management education: Current status in Spanish universities. Journal of Management and Organization, 17 (5), 604–620.

Unceta, K. (2001). Universidad como ámbito para la solidaridad y la cooperación al desarrollo. En J. Sebastián (Coord.), La universidad como espacio para la cooperación iberoamericana (pp. 123-128). Valladolid: Secretariado de Publicaciones Universidad de Valladolid.

Unceta, K. (2007). La cooperación al desarrollo en las universidades españolas. Madrid: Agencia Española de Cooperación Internacional - Ministerio de Asuntos Exteriores y de Cooperación.

Universidad Construye País (2006). Hacia las sociedades del conocimiento. Informe Mundial". Observando la Responsabilidad Social Universitaria. Documento de Trabajo. Santiago de Chile.

Vallaeys, F. (2006). Brief Theoretical Framework of University Social Responsibility. Pontificia Universidad Católica de Perú. Retrieved December, 2011 from http://blog.pucp.edu.pe/item/4880/breve-marco-teorico-de-rsu

Vallaeys F. (2008). ¿Qué es la Responsabilidad Social Universitaria?. Pontificia Universidad Católica de Perú. Retrieved November 2012 from http://creasfile.uahurtado.cl/RSU.pdf

Wilks, Samuel S., Mathematical Statistics, John Wiley & Sons (1962).

Zimmerman, M.A. y Zeitz, G.J. (2002). Beyond Survival: Achieving New Venture Growth by Building Legitimacy. Academy of Management Review, 27 (3), 414–443.

CHAPTER 5: ONLINE DISCLOSURE OF INFORMATION ON SUSTAINABILITY AND SOCIAL RESPONSIBILITY: A COMPARATIVE STUDY OF UNIVERSITIES IN SPAIN AND THE USA

1. Introduction

The growing involvement of universities with their environment has made social commitment and sustainability one of the key themes of higher education in the 21st century. These issues have traditionally been linked to the business context, requiring companies to be profitable, also, from an ethical perspective, investing some of their profits in society and respecting the environment around them. However, the important role of the public sector, and even more so, that of the universities, has tended to be overlooked (Ball and Grubnic, 2007; Ball and Bebbington, 2008).

In recent years sustainable development and social responsibility (SR) have come to be considered as very significant aspects of the implementation of accountability in the field of public administration (Vidal and Kozak, 2008), which has become the guarantor of the fulfilment of socially responsible policies, not only in the private sphere but also within public organisations (Mellé, 2007).

Universities, as an integral part of the public sector, and as leaders of socio-economic changes, can play a prominent role in overcoming the social, economic and environmental challenges faced by society. Indeed, they are becoming increasingly aware of the negative and/or positive impact of their actions in their own environment (Vallaeys, 2006) and of the need to take a leading part in positive actions, as a model of ethical behaviour to society (Vallaeys, 2006).

In consequence, universities are expanding their scope of action and integrating the concept of sustainable development into the daily reality of campus life (Segalàs et al., 2009), promoting SR issues from within. To do so, SR principles are being incorporated into the design of both their educational and research activities, as well as into their goals, standpoints and corporate strategy (Lukman and Glavič, 2007). In view of the essential role played by universities in developing the transfer of knowledge (Stephens et al., 2008), together with their work in research and in continuing education, universities are increasingly adopting SR concepts and thus

creating a highly educated body of professionals with strong ethical standards, social values and concerns about the impact of business activities on society, the economy and the environment (Bampton and Maclagan, 2005).

The application of SR within higher education involves, as key issues, identifying the expectations of different stakeholders, establishing mechanisms for dialogue with them and improving information transparency, thus helping ensure the duty of accountability is fulfilled. Studies have highlighted the pressures to which universities have been subjected, for example in New Zealand (1985-1989) and the UK (1992-1994) (Banks et al., 1997) to reflect a greater and broader degree of accountability, especially in regard to the disclosure of aspects of university SR. Traditionally, such disclosure has exclusively concerned financial and budgetary information, while ignoring SR (Mellé, 2007).

In this context, meeting the expectations of diverse stakeholders in the universities (Gallego et al., 2011) would constitute, fundamentally, a legitimating instrument for universities, favouring stakeholders' acceptance and approval of activities within the universities' social environment (Neu et al., 1998; Deegan, 2002; Deephouse and Carter, 2005; Zimmerman and Zeitz, 2002).

The parallel development during recent years of new information and communication technologies (ICTs) could lead to greater accountability in universities and, thus, enhance their legitimacy. ICTs, and especially the Internet, could play a key role in promoting transparency (Meijer, 2009), by improving the communication process and enabling stakeholders' greater access to information (Borins, 2002). This being so, it would be interesting to discover whether universities, as models of ethical behaviour in society and as centres of knowledge and research into SR issues, are seizing the opportunities offered by ICTs, especially the Internet, as a means both of disclosing SR information and of interacting with their stakeholders.

Notwithstanding these considerations, research into the question of SR and sustainability in universities has been less intense than in the business world (Gaete, 2011), perhaps because studies have tended to focus more on the content and method of education provision than on analysing the ethics of university behaviour in this regard (Hill, 2004). In any case, universities should analyse and control the SR of their actions, seeking a balance between their strategy goals and their commitments to sustainable development, respect for human rights, equal opportunities and respect for the environment – whilst not neglecting to communicate such actions.

In view of the foregoing, the goal of this paper is to determine whether, in the framework of accountability, Spanish universities, compared to their US counterparts (considered as models in the fields of SR and sustainability), are using ICTs in their communication policies as a means of disseminating SR-related issues and of facilitating interaction with their stakeholders, and thus encouraging the participatory management of such questions.

With this objective in mind, the chapter is organised as follows. Section 2 describes the importance of sustainable development and SR initiatives in the universities, after which these initiatives are discussed with respect to Spanish and American universities, specifically. Subsequently, Section 4 describes the empirical research carried out, with details of the sample examined and the research methodology applied. A model is then proposed for the evaluation of the online disclosure of SR information. Section 5 discusses the main results obtained from this empirical study, and as the final element of this chapter, we present and discuss the main conclusions drawn.

2. Introducing sustainable development and social responsibility into universities: importance and initiatives taken

As noted above, concerning the not-for-profit public sector, which includes a large number of universities, relatively few studies have been made of sustainability

and SR. With respect to universities, research efforts have addressed the perceptions of students and the fundaments of these perceptions (Matten and Moon, 2004; Ibrahim et al., 2006; Christensen et al., 2007; Lämsä et al. , 2007, among others), or analysed the educational focus on sustainability and reform (Holdsworth et al., 2008; Buchan et al., 2007; Ciurana and Filho, 2006; Davis et al., 2003, among others) or examined specific universities where clear strategies aimed at SR have been developed, primarily regarding environmental issues (De Keizer, 2004; Serap and Eker, 2007; Ferrer-Balas et al., 2008, Hammond and Churchman, 2008, among others).

Nevertheless, there does appear to be a consensus that universities play a key role, as a result of the impact they can make by incorporating sustainability and SR concerns, both into the design of their education and research activities, and into their corporate mission, vision and strategy (Muijen, 2004). Indeed, the concept of sustainable development has been debated by scholars on numerous occasions (Cotton et al., 2007). It has been argued that higher education institutions cannot ignore these concepts, in defining their relationship with society, as it forms part of their own culture (Moore, 2005). This implies the need for a reorientation of the teaching, research work and resources managed by the university, which is obliged to contribute to social and cultural development and to promote socially responsible values.

These issues are not new; for over a decade, international institutions have argued that higher education organisations should take a leading part in developing solutions related to sustainable development (UNESCO, 1998). More recently, this same organization declared the Decade of Education for Sustainable Development (2005-2014), to promote sustainable education, incorporating sustainable development at all levels, in the view that universities have a vital role to play in economic growth and in creating a sustainable future (Ethical Corporation, 2006).

Since the 1990s, several international initiatives have sought to promote and coordinate work by universities around the world to include sustainability issues in higher education (Aznar et al., 2011). Outstanding among these are the Talloires Declaration (1990), the Halifax Declaration, 'Creating a common future: an action plan for universities' (1991), the Swansea Declaration (1993 – this lesser known declaration reflects a commitment by the universities of the Commonwealth to respond to the challenge of sustainability), the University Charter for Sustainable Development (1994), the Lüneburg Declaration (2001 – on higher education for sustainable development, and promoting University Agenda 21), the Declaration of the Decade of Education for Sustainable Development (2005–2014) and the Bonn Declaration (2009).

Furthermore, organisations such as the Association for the Advancement of Sustainability in Higher Education (AASHE), whose members include many universities in the USA and Canada, have introduced sustainability practices into their academic and management activities. Another initiative in this field is the creation of the network Global University Network for Innovation, which at its meeting in Barcelona (2008) addressed the issue of "Higher education in the world: new challenges and emerging roles for human and social development" (Aznar et al., 2011). Such associations typically bring together the rectors of universities to promote leadership and participation at the highest levels of the institution – for instance, in Germany (Adomssent and Michelsen, 2006) – or via other structures, such as the Higher Education Funding Council for England and its sustainable development strategy (Sterling and Scott, 2008).

As a result of such initiatives, the question of sustainable development in education institutions has provoked debate in many countries, including Australia (Sherren, 2006; Sibbel, 2009), Scandinavia (Axelsson et al., 2008), the USA (Davies et al., 2003) and the UK (Lozano, 2006). A common conclusion arising from this is the need for a commitment to research and education on issues related to sustainability and SR, to help resolve the problems facing society.

In this respect, studies have revealed the increasing presence of education for sustainability in university curricula (Christensen et al., 2007; Cornelius et al., 2007; Navarro, 2008; Setó-Pamies et al., 2011; Corney and Reid, 2007). As observed by Orr (2010), education for sustainability is thriving due to a growing awareness and commitment among teachers and students. The teaching of ethics and sustainability is vital to make students understand the importance of these values and to determine how they should be applied in the world of business, with an understanding of the powerful effects that business decisions may have and their potential harm to society (Giacalone, 2008).

Finally, from the standpoint of university management, Wu et al. (2010) found significant worldwide differences in the application of sustainability and social responsibility concepts. An indication of the importance placed on addressing questions of SR and sustainability in higher education, from the point of view of research, is that prestigious journals like The Journal of Management Education have published special issues on the search for sustainability in the field of education (Starik et al., 2010).

These considerations suggest that now is a propitious time to highlight the need to incorporate sustainable development issues in university institutions, in the three contexts traditionally associated with them: teaching, research and management.

3. Sustainable development and social responsibility in Spanish and United States universities

Under pressure to incorporate SR criteria into all their actions, universities have responded by including these issues in teaching plans, expanding research programmes and adopting sustainability criteria, with considerable impact on daily campus life (McNamara, 2008). A good example of the implementation of socially responsible actions and policies is provided by Anglo-Saxon universities, particularly in the USA, which have a long and continuing tradition of "community service" (Decter, 2009).

This university commitment to sustainable development is manifested in different ways. Some have adhered to sustainable development principles promulgated by international bodies, such as the United Nations Global Compact – Principles for Responsible Management Education (2007). Furthermore, universities have been active in bodies such as the Association for the Advancement of Sustainability in Higher Education, which publishes a weekly list of sustainability initiatives and the achievements of higher education institutions in the USA and Canada. The American College & University Presidents' Climate Commitment addresses global warming (McNamara, 2008), while the Sustainability Education & Economic Development Center is the first national resource and networking centre dedicated to providing support to colleges and universities wishing to create high-quality "green" curricula. The Sustainable Endowments Institute has promoted, among other initiatives, the College Sustainability Report Card (2007). At an individual level, conferences have been held on the role of higher education in achieving sustainable development, on problems arising in contemporary education and on strategies for change, thus contributing to making the university a model of socially responsible behaviour (Calder and Clugston, 2003).

In Spain, although interest in sustainability and SR issues has been more recent, the Conference of Rectors of Spanish Universities (CRUE) has set up a Working Group on Environmental Quality and Sustainable Development, which has issued a set of guidelines to incorporate sustainability into the curriculum. This, in turn, has led to the creation of the CADEP Commission (on environmental quality, sustainable development and risk prevention). This Commission also compiles university experiences and the progress made in the area of environmental management and sustainability, promoting cooperation among universities in these areas (Aznar et al., 2011).

In addition, the Spanish government, in collaboration with regional administrations, has developed its University Strategy 2015, which includes the goal that every Spanish university should establish a SR project, to be approved by its

Board of Governors and Social Council and made known to the entire university community. Other aims of this Strategy are to enhance the public service aspect of higher education, to expand the social dimension of the university and to coordinate the knowledge generated within the university sector to promote progress, prosperity and competitiveness (Ministerio de Ciencia e Innovación, 2009).

In North America, meanwhile, there has been a proliferation of courses with curricula including social, environmental and/or economic aspects (Romero and Silveri, 2006; Clark et al., 2011), which share the goal of teaching environmental sustainability (Grecho, 2010). In addition, restructuring courses have been presented, together with programmes focusing on the long-term use and maintenance of natural resources (Corcoran and Wals, 2004), and examination, from the social standpoint, of equality and non discrimination (Rosen and Mehan, 2003).

In the field of research, while US universities have long addressed topics such as the incorporation of sustainability, institutional culture and governance, leadership and management (McNamara, 2008), in Spain, only now are research groups being created and projects developed to harmonise and regulate the development of social responsibility reports by universities. One such initiative is the proposal made by the Social Council Forum of the public universities of Andalusia, in which we, the authors of this chapter, are participating (Memoria de la Responsabilidad Social del Sistema Universitario Andaluz, 2009).

With respect to university management, numerous initiatives have been taken by Spanish universities, including the University of Zaragoza, which developed its "Responsible Universities" project for a SR model to improve university quality, and the University of Valladolid with its project "Working for social responsibility in the University of Valladolid" (Gaete, 2011). Furthermore, offices, headquarters and projects have been created to address the question of sustainability; these include the Office for Cooperation and Solidarity (Autonoma University of Madrid), the Euro-

American Campus for Social Responsibility (Francisco de Vitoria University), the Environment Office (Madrid European University), the Global Access Project (University of Jaén) and the Environmental Volunteer Programme (University of Salamanca).

However, although in recent years Spanish universities have incorporated SR issues and promoted them in their strategies and actions, the outreach aspect of these actions does not seem to have improved substantially (Al-Khatar and Naser, 2003). In this context, in view of the pressure perceived from stakeholders for responsible action, the universities need to better communicate the socially responsible actions they undertake, and thus enhance their own transparency and accountability (Meijer, 2009). Accordingly, they could take advantage of the opportunities provided by new ICTs, and specifically the Internet and university websites, since it has been shown that the information a university provides on its website is a significant factor in the decisions taken by students when considering their options for further education (Schimmel et al., 2010), and the aspect of information on sustainability is considered particularly important (Gordon et al., 2002).

Thus, from the standpoint of information transparency and accountability, as fundamental aspects of SR, both Spanish and US universities are increasingly preparing and publishing SR reports or documents.

Therefore it would be interesting to determine whether universities, in order to communicate this information, are making use of ICTs as a means of disclosure. Although some studies have examined universities' use, for example, of websites or web 2.0 (Clapper and Burke, 2005; Eijkman, 2009), little is known about the disclosure of SR information within universities. It would also be interesting to know whether, with respect to the provision of information on sustainability and SR, there are significant differences between Spanish universities, with less experience in this field, and their US counterparts, which have a long track record.

4. Empirical study of Spanish and United States universities

This study focuses on Spanish universities because of the growing interest in sustainability and SR among these institutions, as shown by the implementation of numerous projects and initiatives in this respect, both in teaching and research and in the management of the university. To identify current information disclosure practices regarding sustainability and SR, and the mechanisms available for interaction with stakeholders, we examined the entire set of Spanish universities, according to data published by CRUE and Universia (Portal for universities in Spain - www.universia.es-), in all, 74 universities (48 public and 26 private).

In parallel, we carried out a search to identify the universities that, internationally, and to the greatest extent, are disseminating SR information on the Internet, in order to compare best practices with those implemented in Spain.

The first step was to examine the universities that, in international terms, most often incorporate aspects of SR in their websites, SR reports and/or statements or in their annual report (which is traditionally employed as a channel of communication and source of accountability) (Deegan and Rankin 1997; Vuontisjärvi, 2006). Using generalist Internet search engines such as Yahoo, Google and Terra, we searched for the following key terms: sustainability report, environmental report, environment, ecology, water, recycling, green building, biodiversity, not for profit, in association with the term university. The results obtained showed that US universities report most information on SR issues via the Internet. For our study, the US universities were selected taking into account the Academic Ranking of World Universities (ARWU), commonly known as the Shanghai ranking. This uses an index to classify world universities according to their academic quality, and has been used in numerous studies as the principal means of categorising universities by quality and excellence (Fadeeva and Mochizuki, 2010; Leydesdorff and Shin, 2011).

To obtain a meaningful sample, we selected all the US universities in the top 500 of the Shanghai ranking. This resulted in a final sample size of 154 US universities, of which 105 were public and 49 private.

In order to analyse the extent to which the universities in the sample publish SR information online, and taking into account the very few previous studies of this question, we created an assessment model based on a series of indexes of the main aspects to be considered, including both the content and the form and context of publication.

As a preliminary step, we examined several studies analysing the publication of information on the Internet (Deegan and Gordon, 1996; Elvins, 2002; Marston and Polei, 2004; Caba et al., 2005; Caba et al. 2008; Pettersen and Solstad, 2007; Rodríguez, 2009; Gallego et al., 2011), together with others that focused on visibility (Middleton et al., 1999), accessibility (Lawrence and Giles, 1999), user-friendliness (Badre, 2002; Dustin et al., 2002; Chandler and Hyatt, 2003), and privacy and informational content (Holzer and Manoharan, 2007; Holzer and Kim, 2007). The specific analysis of this previous literature led us to structure our research into two sections, and eventually to the creation of six indexes.

The first section includes, in a general manner, the structure of the SR report and the informational content on SR disclosed by the universities in the sample. In order to study the SR informational content, we followed GRI guidelines, and also analysed the SR reports published by different universities, together with a set of features related to information obtained from other sources, such as economic-financial information. In consequence, three different sections are distinguished: general SR information (GSRI), specific SR information (SSRI) and the qualitative characteristics of SR information (QCSRI) (see Table 1).

The second section of our study refers to the context of SR information, and is divided into three sections, taking into account the characteristics of the usability, interaction, privacy and security of websites. Firstly, we analyse the usability of the

website (USRI) i.e. the ease with which users can access webpages to find specific information. Then, to obtain information about stakeholders and their expectations and to establish mechanisms for interaction, we determine which mechanisms favour stakeholder participation (SKSRI) in the universities. Finally, we analyse characteristics related to privacy and safety on webpages (PSRI) with particular interest in the capacity for personalisation that can be included in the publication of SR information (see Table 2).

In assigning a value to each of the questions included in our proposal for assessment of the publication of SR information by universities, and taking into account the methods adopted in previous studies (Cooke, 1989; Roberts, 1991; West, 2000; CYPRG 2010; Larrán and Giner, 2002; Caba et al., 2005), we opted for a binary value system (0/1) depending on the absence or presence of each aspect on the webpage or the Sustainability/Social Responsibility Report. In order to reduce subjectivity in the evaluation when there are no specific rules for assigning the value of each of the aspects analysed (Jones et al., 1998), the same value was awarded to each unit when the aspect in question was defined by various items (Marston and Shrives, 1991; Purushothaman et al., 2000; Ho et al., 2008) (see Tables 1 and 2 for the score assigned to each item).

The necessary data were obtained between October and December 2011 by visiting the websites of all the Spanish and US universities in the sample and conducting a comprehensive review of each one. To ensure objectivity, this process was carried out separately by each of the three authors, who later met to discuss the results and to reach a consensus. When significant variations arose, the corresponding websites were jointly re-examined.

Table 1. Content of SR Reporting

GENERAL SR INFORMATION		$GSRI= \sum\limits_{i=1}^{m} g_i$
Concept	**Items**	**Score**
G1. Statement of vision and strategy of the university on issues about social responsibility	a) If main SR commitments are disclosed. b) If the webpage or Sustainability Report includes a declaration on SR from the governing body.	0/0.5 based on the absence-presence of each item
G2. Information about profile of stakeholders	a) If the university webpage or the SR/SustainabilityReport identify the stakeholders. b) If there is specific information about the informational needs of each group of stakeholders.	0/0.5 based on the absence-presence of each item
G3. Centralized or decantralized disclosure of SR information by universities	a) If the disclosure of SR information is developed in a centralized way on the university webpage. b) If this disclosure is developed through dependent centres at said university.	0/0.5 based on the absence-presence of each item
G4. Data on performance indicators	a) economic indicators. b) social indicators. c) environmental indicators.	0/0.33 based on the absence- presence of each item
G5. Index of contents or a table to locate different elements of information about SR	Provides the reader with an index or a table to locate different SR elements.	0/1 based on the absence-presence of that item
SPECIFIC SR INFORMATION		$SSRI= \sum\limits_{i=1}^{m} g_i$
Concept	**Items**	**Score**
S1. Energy	Information is disclosed about the installation of systems that save electricity such as movement sensors, incandescent lightbulbs or other alternative sources of energy.	0/1 based on the absence/presence of this item
S2. Buildings and grounds	Information is disclosed about criteria for construction, renovation and rehabilitation of existing buidlings in line with "green criteria".	0/1 based on the absence/presence of this item
S3. Purchasing management	Information is disclosed about the need to prioritize the purchase of reusable, ecological materials that require a minimum of packaging.	0/1 based on the absence/presence of this item
S4. Waste management and recycling	Information is disclosed about questions related to the promotion of the recycling of office material and solid waste providing recipients for articles such as paper, printer cartridges and batteries.	0/1 based on the absence/presence of this item
S5. Transportation	Information is disclosed about the creation of incentives for the university community to use public transport or alternative means of transport such as bicycles and bus.	0/1 based on the absence/presence of this item
S6. Food	Information is disclosed about fair trade and sustainable food through the provision of ecological products in campus cafés and shops.	0/1 based on the absence/presence of this item
S7. Academic	Information is disclosed about courses, seminars and conferences related to SR.	0/1 based on the absence/presence of this item
S8. Research	Information is disclosed about University research centres linked to SR.	0/1 based on the absence/presence of this item
QUALITATIVE CHARACTERISTICS OF SR INFORMATION		$QSRI= \sum\limits_{i=1}^{m} g_i$
Concept	**Items**	**Score**
Q1. Completeness	It is possible to check and/or download the Report online.	0/1 based on the absence-presence of that item
Q2. Timeliness	It offers SR information more frequently than on a yearly basis (monthly, termly, etc).	0/1 based on the absence-presence of that item
Q3. Comparability	a) It is possible to compare information from two or more years. b) It offers comparative summaries on sustainable information provided by the university.	0/0.5 based on the absence-presence of each item
Q4. Understandability	a) It offers ratios and graphics to help to clarify the SR information included in the Reports. b) It inclncludes comments on the SR information provided.	0/0.5 based on the absence-presence of each item
Q5. Relevance	a) It provides technical SR reports made by the University b) It presents SR information in and ordered and classified manner.	0/0.5 based on the absence-presence of each item
Q6. Reliability	The information has been accredited.	0/1 based on the absence-presence of that item

Source: Own elaboration based on the GRI guidelines, adaptations about SR Reports published by universities, on the SR Reports published by universities and on the recommendations of FASB, 1980;

IASB, 1989

TABLE 2. Context in which SR Reporting takes place

USABILITY		$USRI = \sum_{i=1}^{m} g_i$
Concept	**Items**	**Score**
	a) A specific section on the universities' websites for disclosing sustainability information exists. b) Electronic formats used to process the sustainability reporting: - htlm - pdf doc - xml o xbrl - xls	0/0.33 based on the absence- presence of each item. REgarding the type of format (item b), the score of 0.33 is split in the following way: - htlm: 0.066 - pdf or doc: 0.066 - xml or xbrl: 0.099
U1. Reading and scanning	c) Sustainability reporting is disclosed in different languages	- xls: 0.099
U2. Search	a) A basic search tool is included in the university website. b) An advanced search tool is included in the university website.	0/0.5 based on the absence-presence of each item
U3. Link characteristics	A system of hyperlinks for the information offered is provided.	0/1 based on the absence-presence of that item
U4.Structure of the web page	A web map showing the contents is available	0/1 based on the absence-presence of that item
U5. Characteristics of accesibility	All information provided on the website is freeware and it can be downloaded	0/1 based on the absence-presence of that item

STAKEHOLDER PARTICIPATION		$SKSRI = \sum_{i=1}^{m} g_i$
Concept	**Items**	**Score**
SK1. Characteristics of interactivity	a) A different e-mail address to the webmaster's is provided to request information or explanations. b) Personal contacts with responsible persons of the university for the information provided are supplied on the website c) The website has a mailing list to update information to those information users that apply this service	0/0.33 based on the absence-presence of each item
SK2. Forums/chats	a) Forums with general contents b) Forums related to SR or sustainability	0.5 if the online forum/chat used allows discussion of general subjects and 1 if there is a specific forum/chat used for SR subjects
SK3. Web 2.0 technology	a) Web 2.0 technology about the University in general b) Web 2.0 technology about aspects of SR or sustainability	0.5 if the use of Web 2.0 technology is aimed at general university subjects and 1 is the Web 2.0 technology is used for
SK4. Online surveys	a) Surveys not specific to SR b) Surveys specific to SR	0.5 of the university uses online surveys of a general nature and 1 if the university uses surveys about SR
SK5. Newsletter	a) General news b) Specific news about SR or sustainability	0.5 if the news disclosed by the university is of a general nature and 1 if it is SR news

PRIVACY AND SECURITY		$PSRI = \sum_{i=1}^{m} g_i$
Concept	**Items**	**Score**
P1. Data collection	The university collects specific data from the user	0/1 based on the absence-presence of that item
P2. Digital signature	A digital signature can be used	0/1 based on the absence-presence of that item
P3. Notificación de privacity policy	If there is notification of a privacy policy	0/1 based on the absence-presence of that item
P4. Access to private info	If there is restricted information	0/1 based on the absence-presence of that item
P5. Use of cookies	Use of techniques such as cookies that collect information on user access or behaviour on the webpage	0/1 based on the absence-presence of that item

Source: Own elaboration based on CYPRG lines 2010 and previous literature (Fang, 2002; Holzer and Manoharan, 2007; Holzer and Kim, 2007)

5. Analysis of the results

Table 3, Section a) Content of SR information disclosed, in Spanish and US universities, reflects very low values for subsection a.1) General SR content. This indicates that, overall, there is a low commitment by the universities in the sample to publish SR information (mean values, 1.30 and 1.57, respectively, for a maximum of 5). Although there are no major differences between the scores for Spanish and US universities, the behaviour pattern among the latter is more homogeneous (coefficient of variation, 0.56 vs. 1.13 for the Spanish universities) (Table 3). Of the items in this section, those least often disclosed concern the stakeholders' profiles and the performance indicators for the different dimensions of SR. In contrast to the results obtained by Gaete (2011), nearly 40% of Spanish universities mention sustainability and SR values in their mission or strategic vision.

Examination of the data shown in sub-section a.2) Specific SR content, shows that US universities score more highly than Spanish ones with respect to the information content disclosed, reaching 50% of the value obtained in the proposed model (4.18 out of 8) (Table 3). This indicates a greater willingness among American universities to publish this type of information.

The items most commonly featuring among the SR-specific information published relate to energy, waste management and recycling and to academic aspects of SR, while those least reported concern sustainable food production, fair trade and the purchase of sustainable-sourced food. Nevertheless, there is no very evident pattern of behaviour among American universities, with each one publishing, with greater or lesser emphasis, some issues rather than others. These results are in line with previous research (see, among others, Ferrer-Balas et al., 2008; Hammond and Churchman, 2008) and reflect the continuing importance of the environmental dimension in the notion of SR in the university. On the other hand, the corresponding values for Spanish universities are very low; here, the aspects of sustainability and of SR that are published on websites are mainly in terms of teaching and research issues.

The scores for the Qualitative characteristics of SR information (sub-section a.3), are the lowest of all those concerning SR information content (0.96 in US universities and 0.91 in the Spanish ones, out of 6), which reflects the scant importance granted by universities to the presence of these qualitative features (Table 3). Behaviour patterns in this regard varied considerably among universities, both in Spain and in the USA.

TABLE 3. Descriptive Statistics

a) CONTENT OF THE SR INFORMATION DISCLOSED ON THE WEBPAGES OR ON SUSTAINABILITY REPORTS	USA				SPAIN			
	MEAN	MEDIAN	SD	CV	MEAN	MEDIAN	SD	CV
a.1) General SR content	**1,572**	**1,830**	**0,892**	**0,567**	**1,296**	**1,000**	**1,463**	**1,129**
G1. Expression of the vision and strategy of the university in SR subjects	0,451	0,500	0,337	0,747	0,365	0,500	0,382	1,047
G2. Information on the profile of stakeholders	0,006	0,000	0,057	8,746	0,088	0,000	0,209	2,376
G3. Centralized or decentralized disclosure of SR information by Universities	0,489	0,500	0,289	0,591	0,345	0,500	0,350	1,017
G4. Data on performance indicators	0,066	0,000	0,166	2,500	0,174	0,000	0,342	1,967
G5. Index of contents or a table to locate different elements of SR information	0,558	1,000	0,498	0,892	0,324	0,000	0,471	1,453
a.2) Specific SR content	**4,175**	**5,000**	**2,508**	**0,601**	**2,095**	**1,000**	**2,028**	**0,968**
S1. Energy	0,656	1,000	0,477	0,727	0,311	0,000	0,466	1,499
S2. Buildings and grounds	0,455	0,000	0,500	1,099	0,095	0,000	0,295	3,115
S3. Purchasing management	0,344	0,000	0,477	1,385	0,122	0,000	0,329	2,706
S4. Waste management and recycling	0,747	1,000	0,436	0,584	0,338	0,000	0,476	1,410
S5. Transportation	0,539	1,000	0,500	0,928	0,162	0,000	0,371	2,289
S6. Food	0,325	0,000	0,470	1,447	0,027	0,000	0,163	6,041
S7. Academic	0,636	1,000	0,483	0,758	0,662	1,000	0,476	0,719
S8. Research	0,487	0,000	0,501	1,030	0,378	0,000	0,488	1,290
a.3) Qualitative characteristics of SR information	**0,961**	**0,500**	**1,204**	**1,253**	**0,912**	**0,000**	**1,388**	**1,522**
Q1. Completeness	0,045	0,000	0,209	4,598	0,189	0,000	0,394	2,084
Q2. Timeliness	0,032	0,000	0,178	5,477	0,041	0,000	0,199	4,898
Q3. Comparability	0,114	0,000	0,305	2,687	0,115	0,000	0,281	2,448
Q4. Understandability	0,273	0,000	0,468	1,717	0,209	0,000	0,397	1,895
Q5. Relevance	0,490	0,500	0,433	0,884	0,345	0,000	0,421	1,223
Q6. Reliability	0,006	0,000	0,081	12,410	0,014	0,000	0,116	8,602
b) CONTEXT OF THE SR INFORMATION ON THE WEBPAGES	USA				SPAIN			
	MEAN	MEDIAN	SD	CV	MEAN	MEDIAN	SD	CV
b.1) Usability	**3,465**	**3,566**	**0,611**	**0,176**	**3,364**	**3,566**	**0,609**	**0,181**
U1. Reading and scanning	0,215	0,132	0,289	1,344	0,182	0,132	0,171	0,941
U2. Search	0,711	0,500	0,248	0,348	0,615	0,500	0,281	0,457
U3. Link characteristics	0,994	1,000	0,081	0,081	1,000	1,000	0,000	0,000
U4.Structure of the web page	0,578	1,000	0,496	0,857	0,568	1,000	0,499	0,879
U5. Characteristics of accesibility	0,968	1,000	0,178	0,184	1,000	1,000	0,000	0,000
b.2) Stakeholders participation	**2,476**	**2,500**	**0,760**	**0,307**	**2,280**	**2,165**	**0,827**	**0,363**
SK1. Characteristics of interactivity	0,294	0,330	0,260	0,885	0,125	0,000	0,195	1,559
SK2. Forums or chats	0,302	0,500	0,252	0,834	0,331	0,500	0,344	1,039
SK3. Uses 2.0 Web technology (facebook, twitter...)	0,714	0,500	0,255	0,357	0,615	0,500	0,212	0,344
SK4. If there are online surveys on university matters	0,328	0,500	0,315	0,961	0,439	0,500	0,286	0,651
SK5. If there is a university newsletter	0,838	1,000	0,235	0,280	0,770	1,000	0,251	0,326
b.3) Privacy and security	**3,558**	**4,000**	**1,010**	**0,284**	**3,595**	**4,000**	**1,072**	**0,298**
P1. Data collection	0,545	1,000	0,500	0,916	0,554	1,000	0,500	0,903
P2. If a digital signature can be used	0,383	0,000	0,488	1,273	0,392	0,000	0,492	1,254
P3. If there is a notification of privacy policy	0,721	1,000	0,450	0,624	0,716	1,000	0,454	0,634
P4. Access to private info	0,909	1,000	0,288	0,317	0,932	1,000	0,253	0,271
P5. Use of cookies	1,000	1,000	0,000	0,000	1,000	1,000	0,000	0,000

Source: Own elaboration

However, it should be noted that very few of the universities analysed publish SR reports on their websites, which is why the aspects of SR that

are communicated are mainly in the form of technical summaries, often accompanied by ratios or graphs with comments intended to make the information more understandable to the external user. Moreover, when SR reports are published online, the information presented is in many cases neither timely nor comparable, with no data being available for periods of less than a year. Nor is reference made to previous years, and so comparisons are impossible.

These results show, therefore, that on the contrary to the intentions of Lukman and Glavič (2007), universities are not communicating their socially sustainable policies and practices by means of sustainability or SR reports, which makes it very difficult to apply benchmarking processes. In addition, very few universities in our sample publish information that has previously been certified, accredited or audited (Table 3).

In Section b), Context of the SR information on the web pages, the values for sub-section b.1) Usability, are very similar (3.3 out of 5) among the universities of Spain and the USA, with a very low coefficient of variation (below 0.2). Table 3 shows that the mean values for all the universities are very similar, with the majority of the scores concerning items related to the design of websites, as the universities often include tools to facilitate site navigation, such as search tools and hyperlinks. To some extent, these tools compensate for the absence of a site map showing its overall structure.

A notable result is the high score recorded for all universities in sub-section U5 (characteristics of accessibility), demonstrating that the SR information presented on the web is accessible, being free of charge and available for downloading. However, very few universities have a specific section for SR information. It is normally presented in just one language, which reduces the number of potential users, and the formats in which the information is provided do not facilitate use, as the universities have opted to use HTML or PDF.

Sub-section b.2, Stakeholders' participation, presents the lowest mean values, although they are slightly higher in the US universities (2.48) than in the Spanish ones (2.28). These mean values are mainly

concentrated in the scores assigned to items referring to news on the website and the use of web 2.0 technology. However, the universities do not encourage communication and participation with stakeholders in other ways, such as using email addresses other than that of the webmaster, which would help the user request SR-specific information or additional information to that included in the web page, and even to update it via the incorporation of a mailing list. Other participation-friendly tools that could be included, but are not, are those making use of forums, chats or online surveys.

In general, the results in this area are in line with those obtained in previous research, such as Magalhäes (2000), Pavičić et al. (2009) and Benneworth and Jongbloed (2010), which highlight the lack of market orientation among universities in relation to their stakeholders and the weak role played by the latter in the governance of these institutions. However, our results conflict with those of other studies which have argued that universities are strengthening relationships with their stakeholders, adapting to their expectations and expanding their influence and participation in university management (Al-Khatar and Naser, 2003; Jongbloed et al., 2008; Castelo and Lima, 2008; Gaete, 2009; Krazimierz, 2010, among others).

Sub-section b.3) Privacy and security, presents the highest mean value (3.5), in both countries, of all the issues included in section b) Context of the SR information. The highest scores correspond to items referring to the notification of privacy policies, the restriction of access to areas of personal information and the use of cookies. By contrast, the least developed aspect is the use of digital signatures, for greater security, and of data collection systems.

6. Discussion and conclusions

Society today demands greater involvement by universities in their social environment (Valleys, 2006; Jongbloed et al., 2008) and presses them to improve their accountability by incorporating non-financial information into their public communications, to show how this demand is being met.

These pressures have led to growing interest among universities around the world in implementing SR criteria in their own governance and in their teaching and research activities, and also in expanding the quantity and quality of information disclosed, by incorporating data on SR within their institutions.

The development of new technologies, and particularly that of the Internet, could be used as a means of determining the expectations and demands of stakeholders, of establishing mechanisms for dialogue with them, and of improving information transparency, thus contributing to universities' fulfilment of their duty of accountability. However, an overview of the results of our empirical research shows that both Spanish and US universities, far from using new technologies to better perform their duty of accountability, are neglecting opportunities to disclose SR information and to facilitate stakeholders' involvement and interaction in managing aspects of SR in the university.

Although previous studies have argued that universities are becoming key players in promoting socially responsible policies (Lukman and Glavič, 2007), our results indicate that Spanish universities show little commitment in terms of the online disclosure of SR information, offering scant information in this respect on their websites, and presenting very few SR reports online. Similar conclusions were drawn from our scrutiny of the results for the US universities; although these have a longer track record in the field of SR, the data obtained regarding disclosure on their websites are not so different from those of universities which entered this area much more recently. In short, there is little involvement in terms of the general content of SR and sustainability being published by the university community as a whole.

This situation prevents the fulfilment of their duty of accountability, in this respect, to stakeholders. Moreover, it hampers our knowledge of the activities being undertaken in this field by universities, and thus the possibility of applying benchmarking procedures aimed at facilitating improvements and greater competitiveness among them.

In addition to the above considerations, within the SR information published by Spanish universities, greater weight is given to aspects of sustainability and of SR in teaching and research fields, possibly due to the encouragement given by the Spanish government in this respect, as evidenced by the stated objectives of its University Strategy 2015, which stress these aspects. The US universities, on the other hand, disclose a greater amount of environmental information, reflecting their longstanding interest in this area (Ferrer-Balas et al., 2008; Hammond and Churchman, 2008).

However, in both Spain and the USA, this type of information is not easy to find on university websites. It is usually scattered and in the form of technical reports, with little presence of sustainability summaries or SR reports, despite the emphasis laid on the need for such reports (Al-Khatar and Naser, 2003). However, there is growing interest among Spanish universities in the preparation and publication of such reports, which could provide universities with means of communication and accountability with respect to their environment. Another option, of increasing importance in the private sector (Eccles and Krzus, 2010), is that of integrating all financial and nonfinancial information into a single report, thus preventing the dispersion of information. Unfortunately, in both Spanish and US universities, the information published, whether in technical abstracts or in sustainability or SR reports, is usually outdated, making it difficult to compare over time, and impeding their understanding by the use of other instruments.

Moreover, although universities could make use of the advantages provided by ICTs to improve their interaction with stakeholders, and participation by the latter, our results indicate that there is little current awareness of this possibility, at least concerning SR; this contrasts with the findings of other studies, which have reported that universities are enhancing stakeholders' influence and participation (Al-Khatar and Naser, 2003; Jongbloed et al., 2008; Castelo and Lima 2008; Gaete, 2009; Krazimierz, 2010, among others). The results of our study suggest that universities are not fully committed to their environment, failing to show interest in using new technologies to determine the views of stakeholders

when designing and implementing policies with respect to SR. In fact, university actions in the field of SR seem to cater more to considerations of legitimacy and image than to the needs and demands of the community in which are present (Neu et al., 1998; Deegan, 2002; Deephouse and Carter, 2005; Zimmerman and Zeitz, 2002).

In conclusion, these universities, both Spanish and American, report little information online regarding SR, and their ultimate goal does not seem to be that of satisfying stakeholders' requirements and fulfilling their duty of accountability. In fact, universities do not currently perform any in-depth analysis of stakeholders' demands, despite their great influence in any organization (Johnson et al., 2006), and furthermore their means of communicating with stakeholders and of presenting information remain insufficient.

Accordingly, universities – as agents called upon to play an essential role in SR through the incorporation of these principles into all facets of their teaching and research – need to considerably improve their disclosure of information concerning SR in the university, among other reasons, as a means of differentiating themselves within a competitive environment. It might be interesting for future research to place particular emphasis on the key issues or factors that favour online SR information disclosure and on analysing models to manage and efficiently channel university stakeholders' SR information needs, thus enabling this question to play a decisive part in students' choice of university and in its prestige.

7. References

AASHE (Association for the Advancement of Sustainability in Higher Education). http:// www.aashe.org/. Retrieved December, 2011.

Adomssent, M. and Michelsen, G. (2006). German academia heading for sustainability? Reflexions on policy and practice in teaching, research and institutional innovations. Environmental Education Research, 12, (1), 85–99.

Al-Khatar, K. and Naser, K. (2003). User's Perceptions of Corporate Social Responsibility and Accountability: Evidence from an Emerging Economy. Managerial Auditing Journal, 18 (6/7), 538.

Axelsson, H., Sonesson, K. and Wickenberg, P. (2008). Why and how do universities work for sustainability in higher education (HE)?. International Journal of Sustainability in Higher Education, 9 (4), 469–78.

Aznar Minguet, M. P., Martinez-Agut, B.P. and Piñero A. and Ull, M.A. (2011). Introducing sustainability into university curricula: an indicator and baseline survey of the views of university teachers at the University of Valencia. Environmental Education Research, 17 (2), 145–166.

Badre, A. (2002). Shaping Web Usability: Interaction Design in Context. (Addison-Wesley Publishers B.V., Boston).

Ball, A. and Grubnic, S. (2007). Sustainability Accounting and Accountability in the Public Sector, In Sustainability Accounting and Accontability (Unerman, J., J. Bebbington, y B. O'Dwyer, Routledge, London), 243-265.

Ball, A. and Bebbington, J. (2008). Editorial: Accounting and Reporting for Sustainable Development in Public Service Organizations. Public Money and Management, 28 (6), 323-326.

Bampton, R. and Maclagan, P. (2005). Why teach ethics to accounting students? A response to the sceptics. Business Ethics, 14 (3), 290.

Banks W., Fisher J. and Nelson M. (1997). University Accountability in England, Wales, and Northern Ireland: 1992-1994. Journal of International Accounting Auditing and Taxation, 6 (2), 211.

Benneworth, P. and Jongbloed, V. (2010). Who matters to universities? A stakeholder perspective on humanities, arts and social sciences valorization. Higher Education, 59 (5), 567-588.

Bonn Declaration (2009). UNESCO World Conference on Education for Sustainable Development. Retrieved December, 2011 from www.esd-world-conference-2009.org

Borins, S. (2002). On the frontiers of electronic governance: a report on the United States and Canada. International Review of Administrative Science, 68 (2), 199-211.

Buchan, G.D., Spellerberg, I.F. and Blum, W.E.H. (2007). Education for Sustainability. Developing a Postgraduate-level Subject with an International Perspective. International Journal of Sustainability in Higher Education, 8 (1), 4-15.

Caba, P.C., Rodríguez B.M.P and López H.A.M. (2008). e-Government process and incentives for online public financial information. Online Information Review, 32 (3), 379.

Caba, P.C., López, H.A.M. and Rodríguez B.M.P. (2005). Citizens' access to on-line governmental financial information: Practices in the European Union countries. Government Information Quarterly, 22 (2), 258–276.

Calder, W. and Clugston, R.M. (2003). Progress Toward Sustainability in Higher Education' Environmental Law Institute. Washington, DC. Reprinted with permission from ELR, http://www.eli.org, 1-800-433-5120.

Castelo, B.M. and Lima, R.L. (2008). Factors Influencing Social Responsibility Disclosure by Portuguese Companies. Journal of Business Ethics, 83 (4), 685–701.

Chandler, K. and Hyatt, M. (2002). Customer-centered design: a new approach to Web usability. (Prentice Hall, New Jersey).

Christensen, L.J., Peirce, E, Hartman, L.P., Hoffman, W.H. and Carrier, J. (2007). Ethics, CSR, and sustainability education in the Financial Times top 50 global business schools: Baseline data and future research directions. Journal of Business Ethics, 73, 347–368.

Ciurana, G.A.M. and Filho, W.L. (2006). Education for Sustainability in University Studies. Experiences from a Project Involving European and Latin American Universities. International Journal of Sustainability in Higher Education, 7 (1), 81-93.

Clapper, D. L. and Burke, D.D. (2005). .EDU Dilema: the web accessibility challenge facing Public and Private University. Journal of Strategic E – Commerce, 3, (1/2) Entrepreneurship, 71.

Clark, S. G., Rutherford, M. B., Auer, M. R., Cherney, D. N., Wallace, R. L., Mattson, D. J., Clark, D. A., Foote, L., Krogman, N., Wilshusen, P. and Steelman, T. (2011). College and University Environmental Programs as a Policy Problem (Part 2): Strategies for Improvement. Environmental Management, 47 (5), 716.

Cooke, T.E. (1989). Voluntary Disclosure by Swedish Companies. Journal of International Financial Management and Accounting, 1, 171-195.

Corcoran, P.B. and Wals, A.E.J. (2004). Higher Education and the Challenge of Sustainability: Problematics, Promises, and Practice. Kluwer Academic Publishers, Norwell, MA.

Cornelius, N., Wallace, J., and Tassabehji, R. (2007). An analysis of corporate social responsibility, corporate identity and ethics teaching in business schools. Journal of Business Ethics, 76, 117–135.

Corney, G. and Reid, A. 2007. Student teachers' learning about subject matter and pedagogy in education for sustainable development. Environmental Education Research, 13 (1), 33–54.

Cotton, D.R.E., Warren, M.F., Maiboroda, O. and Bailey, I. (2007). Sustainable development, higher education and pedagogy: A study of lecturers' beliefs and attitudes. Environmental Education Research, 13 (5), 579–97.

Cyberspace Policy Research Group. (2010). Web Attribute Evaluation System (WAES). Retrieved December, 2011 from http://www.cyprg.arizona.edu/waes.htm

Davies, S., Edmister, J., Sullivan, K. and West, C. (2003). Educating sustainable societies for the twenty-first century. International Journal of Sustainability in Higher Education, 4 (2), 169–79.

Davis, S.A, Edmister, T.H., Sullivan, K. and West, C.K. (2003). Educating Sustainable Societies for the Twenty-first Century. International Journal of Sustainability in Higher Education, 4 (2), 169-179.

De Keizer, B. (2004). Corporate Social Responsibility at the University of Amsterdam (paper presented at the University Industry Forum, Bonn).

Decter, M.H. (2009). Comparative review of UK-USA industry-university relationships. Education & Training, 51 (8/9), 624-634.

Deegan, C. (2002). The Legitimising Effect of Social and Environmental Disclosures. A Theoretical Foundation. Accounting, Auditing and Accountability Journal, 15 (3), 282–311.

Deegan, C. and Gordon, B. (1996). A study of the environmental disclosure practices of Australian corporations. Accounting and Business Research, 26 (3), 187-199.

Deegan, C. and Rankin, V. (1997). The materiality of environmental information to users of annual reports. Accounting, Auditing and Accountability Journal, 10 (4), 562.

Deephouse, D.L. and Carter, S.M. (2005). An Examination of Differences between Organizational Legitimacy and Organizational Reputation. Journal of Management Studies, 42 (2), 329–360.

Dustin, E., Rasca, J. and McDiarmid, D. (2002). Quality web systems: performance, security and usability. (Addison-Wesley Publishers B.V., Boston).

Eccles, R.G. and Krzus, M.P. (2010) One Report: Integrated Reporting for a Sustainable Strategy. Wiley; 1 edition (March 8, 2010), 256 pages. ISBN-10: 0470587512.

Eijkman, H. (2009). Using Web 2.0 to decolonize transcultural learning zones in higher education. Campus-Wide Information Systems, 26 (3), 240-255.

Elvins, L. (2002). Best practices for online reporting in corporate responsibility. Ethical Corporation Magazine. Retrieved December, 2011, from http://www.greenbiz.com/home

Ethical Corporation. (2006). Corporate responsibility and education. Retrieved December, 2011 from http://www.ethicalcorp.com

Fadeeva, Z. and Mochizuki, Y. (2010). Higher education for today and tomorrow: university appraisal for diversity, innovation and change towards sustainable development. Sustainability Science, 5 (2), 249.

Fang, Z. (2002). E-government in the Digital Era: Concept, Practice, and Development. International Journal of the Computer. The Internet and Management, 10 (2), 1-22.

Ferrer-Balas, D., Adachi, J., Banas, S., Davidson, C.I., Hoshikoshi, A., Mishra, A., Motodoa, Y., Onga, M. and Ostwald, M. (2008). An international comparative analysis of sustainability transformation across seven universities. International Journal of Sustainability in Higher Education, 9 (3), 295-316.

Financial Accounting Standards Board (FASB). (1980). Qualitative Characteristics of Accounting Information. Norwalk, Connecticut: Statement of Financial Accounting Concepts number 2, FASB.

Gaete Quezada, R. (2011). La responsabilidad social universitaria como desafío para la gestión estratégica de la Educación Superior: el caso de España. Revista de Educación, 355, 109-133.

Gaete, R.A. (2009). Stakeholder participation in the evaluation of socially responsible behavior of university management: prospects, obstacles and proposals. Paper presented at the XV AECA Congress. (Valladolid, España), 1-15.

Gallego Álvarez, I., Rodríguez Domínguez, L. and García Sánchez, I.M. (2011). Information disclosed online by Spanish universities: content and explanatory factors. Online Information Review, 35 (3), 360-385.

Giacalone, R. A. (2008). Taking a red pill to disempower unethical students: Creating ethical sentinels in business schools. Academy of Management Learning and Education, 6 (4), 534–542.

Gordon, T., Fischer, M., Malone, D. and Tower, G. (2002). A comparative empirical examination of extent of disclosure by private and public colleges and universities in the United States. Journal of Accounting and Public Policy, 21 (3), 235.

Grecho, A.S. (2010). Determining Criteria and Indicators for Success in Higher Education Programs Focused on Environmental Sustainability. (Under the direction of Gary B. Blank.) 23-jun-2010.

Global Reporting Initiative (GRI) 2000, 'Sustainability Reporting Guidelines'. Retrieved June 1, 2011 from http://www.sustainableproducts.com/download/gri.pdf

Global Reporting Initiative (GRI) 2002, 'Sustainability Reporting Guidelines'. Retrieved June 1, 2011 from http://www.uneptie.org/scp/gri/pdf/gri_2002_guidelines.pdf

Global Reporting Initiative (GRI) 2005, 'Sector Supplement for Public Agencies', Global Reporting Initiative, Amsterdam. Retrieved June 1, 2011 from http://www.globalreporting.org/ReportingFramework/SectorSupplements/

Global Reporting Initiative (GRI). (2006). G3 Sustainability Reporting Guidelines. Global Reporting Initiative. Retrieved June 1, 2011 from http://www.globalreporting.org/ReportingFramework/G3Guidelines/

GUNI (Global University Network for Innovation) (2008). La Educación Superior en el mundo 3. Educación Superior: Nuevos Retos y Roles Emergentes para el Desarrollo Humano y Social [Higher education in the

world 3. Higher education: New challenges and emerging roles for human and social development]. Madrid: Ed. Mundi-prensa.

Halifax Declaration (1991). Creating a common future: an action plan for universities. Retrieved December, 2011 from www.unesco.org/iau/sd/sd_declarations.html.

Hammond, C. and Churchman, D. (2008). Sustaining academic life: A case for applying principles of social sustainability to the academic profession. International Journal of Sustainability in Higher Education, 9 (3), 235-245.

Hill, R. (2004). The socially responsible university: Talking the talk while walking the walk in the college of business. Journal of Academic Ethics, 2 (1), 89-100.

Ho, P., Tower, G. and Barako, D. (2008). Improving governance leads to improved corporate communication. Corporate Ownership & Control, 5, 26-33.

Holdsworth, S., Wyborn, C., Bekessy, S. and Thomas, E.I. (2008). Professional Development for Education for Sustainability. How advanced are Australian Universities?. International Journal of Sustainability in Higher Education, 9 (2), 131-146.

Holzer, M. and Kim, S.T. (2007). Digital Governance in Municipalities Worldwide, A Longitudinal Assessment of Municipal Websites Throughout the World. The E-Governance Institute. National Center for Public Performance.

Holzer, M. and Manoharan, A. (2007). Global Trends in Municipal E-Government: An Online Assessment of Worldwide Municipal Web Portals. (Marc Holzer in A.Agarwal & V.V. Ramana, Computer Society of India: India).

Ibrahim, N.A, Angelidis, J.P. and Howard, D.P. (2006). Corporate Social Responsibility: A Comparative Analysys of Perceptions of Practicing Accountants and Accounting Students. Journal of Business Ethics, 66, 157-167.

International Accounting Standards Board (IASB). (1989). Framework for the Preparation and Presentation of Financial Statements. London: International Accounting Standard Board, July.

Johnson, G., Scholes, K. and Whittington. (2006). Exploring Corporate Strategy: Enhanced Media Edition: Text and Cases (Enhanced Media Text & Case).

Jones, K., Alabaster, T. and Walton, J. (1998). Virtual Environments for Environmental Reporting. Greener Management International, 21, 121–137.

Jongbloed, B., Enders, J. and Salerno, C. (2008). Higher Education and its Communities: Interconnections, Interdependencias and a research agenda. Higher Education, 56, 303-324.

Krazimierz, M. (2010). Redefining external stakeholders in Nordic Higher Education. Tertiary Education and Management, 16 (1), 45-60.

Lämsä, A., Vehkaperä, M., Puttonen, T. and Personen, H. (2007). Effects of business education on women and men students' attitudes on corporate responsibility in society. Journal of Business Ethics, 82, 45-58.

Larrán, M. and Giner, B. (2002). The use of the Internet for corporate reporting by Spanish companies. The International Journal of Digital Accounting Research, 2 (1), 53-82.

Lawrence, S. and Giles, C.L. (1999). Accessibility of information on the web. Nature, 8, 107-109.

Leydesdorff, L. and Jung C.S. (2011). How to evaluate universities in terms of their relative citation impacts: Fractional counting of citations and the normalization of differences among disciplines. Journal of the American Society for Information Science and Technology, 62 (6), 1146–1155.

Lozano, R. (2006). Incorporation and institutionalization of sustainable development into universities: Breaking through barriers to change. Journal of Cleaner Production, 14 (9/11), 787–96.

Lukman, R. and Glavič, P. (2007). What are the key elements of a sustainable university?. Clean Technologies and Environmental Policy, 9 (2), 103-114.

Lüneburg Declaration on Higher Education for Sustainable Development (2001). Retrieved December, 2011 from http://portal.unesco.org/education/en/files/37585/11038209883Lunebu rgDeclaration.pdf/LuneburgDeclaration.pdf

Magalhäes, A. (2000). Portuguese Higher Education and the Imaginary Friend: the Stakeholders' Role in Institutional Governance. European Journal of Education, 35 (4), 439-448.

Marston, C. and Polei, A. (2004). Corporate reporting on the Internet by German companies. International Journal of Accounting Information Systems, 5 (3), 285-311.

Marston, C.L. and Shrives, P.J. (1991). The use of disclosure indices in accounting research: a review article. British Accounting Review, 23, 195-210.

Matten, D. and Moon, J. (2004). Corporate social responsibility education in Europe. Journal of Business Ethics, 54, 323-337.

Ministerio de Ciencia e Innovación (2009). Estrategia Universidad 2015. Universidades para el progreso, el bienestar y la competitividad. p.6.

McNamara, K.H. (2008). Fostering sustainability in higher education: a mixed-methods study of transformative leadership and change strategies. Submitted to the Ph.D. in Leadership & Change Program of Antioch University.

Meijer, A. (2009). Understanding modern transparency. International Review of Administrative, 75, 255.

Mellé Hernández (2007). Responsabilidad Social en el Sector Público. Ekonomiaz, 65, 84-107.

Memoria de la Responsabilidad Social del Sistema Universitario Andaluz (2009). Foro de Consejos Sociales de las Universidades Públicas de Andalucía, ISSN: 978-84-692-3494-5.

Middleton, I., McConnell, M. and Davidson, G. (1999). Presenting a model for the structure and content of a university World Wide Web site. Journal of Information Science, 25 (3), 219-227.

Moore, J. (2005). Is higher education ready for transformative learning? A question explored in the study of sustainability. Journal of Transformative Education, 3 (1), 76–91.

Muijen, H. (2004). Corporate Social Responsibility Starts at University. Journal of Business Ethics, 53 (1/2), 235–246.

Navarro, P. (2008). The MBA core curricula of top ranked US business schools: A study in failure? Academy of Management Learning and Education, 7 (1), 108–123.

Neu, D., Warsame, H. and Pedwell, K. (1998). Managing Public Impressions: Environmental Disclosures in Annual Reports. Accounting, Organizations and Society, 23 (3), 265–282.

Orr, D. (2010). Para qué sirve ahora la educación superior [Unresolved questions in environmental education]. In La situación del mundo 2010. Cambio cultural: del consumismo hacia la sostenibilidad [State of the World 2010: Transforming cultures from consumerism to sustainability], ed. L. Starke and L. Mastny, 75–82. Washington, DC: The World Watch Institute.

Pavičić J., Alfirević, N. and Mihanović, Z. (2009). Market orientation in managing relationships with multiple constituencies of Croatian higher education. Higher Education, 57 (2), 191–207.

Pettersen, I.J. and Solstad, E. (2007). The Role of Accounting Information in a Reforming Area: a Study of Higher Education Institutions. Financial Accountability & Management, 23 (2), 133-154.

Purushothaman, M., Tower, G., Hancock, P. and Taplin, R. (2000). Determinants of Corporate Social Reporting Practices of Listed Singapore companies. Pacific Accounting Review, 12 (2), 101-133.

Roberts, C. (1991). Environmental disclosures: A note on reporting practices in mainland Europe. Accounting, Auditing and Accountability, 4 (3), 62–71.

Rodríguez Bolívar, M.P. (2009). Evaluating Corporate Environmental Reporting on the Internet: The Utility and Resource Industries in Spain. Business and Society, 48 (2), 179-205.

Romero, A. and Silveri, P. (2006). Not all are created equal: an analysis of the environmental programs/departments in U.S. academic institutions from 1900 until May 2005. Journal of Integrative Biology, 1 (1), 1–15.

Rosen, L. and Mehan, H. (2003). Reconstructing Equality on New Political Ground: The Politics of Representation in the Charter School Debate at the University of California, San Diego. American Educational Research Journal, 40 (3), 655-682.

Schimmel, K., Motley, D., Racic, S., Marco, G. and Eschenfelder, M. (2010). The importance of university web pages in selecting a higher education institution. Research in Higher Education Journal, 9, 1-16.

Segalàs, J., Ferrer-Balas, D., Svanström, M., Lundqvist, U. and Mulder, K.F. (2009). What has to be learnt for sustainability? A comparison of bachelor engineering education competences at three European universities. Sustainability Science, 4 (1), 17.

Serap, A.M.G. and 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.

Setó-Pamies, D., Domingo-Vernis, M. and Rabassa-Figueras, N. (2011). Corporate social responsibility in management education: Current status in Spanish universities. Journal of Management and Organization, 17 (5), 604–620.

Sherren, K. (2006). Core issues: Reflections on sustainability in Australian university coursework programs. International Journal of Sustainability in Higher Education, 7 (4), 400–13.

Sibbel, A. (2009). Pathways towards sustainability through higher education. International Journal of Sustainability in Higher Education, 10 (1), 68–82.

Starik, M., Rands, G., Marcus, A.A. and Clark, T.S. (2010). From the guest editors: In search of sustainability in management education. Academy of Management Learning and Education, 9 (3), 377–383.

Stephens, J.C., Hernandez, M.E., Román, M., Graham, A.C. and Scholz, R.W. (2008). Higher education as a change agent for sustainability in different cultures and contexts. International Journal of Sustainability in Higher Education, 9 (3), 317-338.

Sterling, S. and Scott, W. (2008). Higher education and ESD in England: A critical commentary on recent initiatives. Environmental Education Research, 14 (4), 386–98.

Swansea Declaration (1993). Conclusion of the Association of Commonwealth Universities' Fifteenth Quinquennial Conference. Retrieved December, 2011 from www.iisd.org/educate/declarat/swansea.htm.

Talloires Declaration (1990). Association of University Leaders for a Sustainable Future. Retrieved December, 2011 from www.unesco.org/iau/sd/sd_declarations.html.

UNESCO (United Nations Educational, Scientific and Cultural Organization) (1998). La educación superior y el desarrollo humano sostenible. La educación superior en el siglo XXI. Visión y acción [Preparing for sustainable future: Higher education and sustainable human development]. World Conference on Higher Education, August, in Paris. ED-98/CONF.2002/7.2.

United Nations Decade of Education for Sustainable Development (2005-2014). Retrieved December, 2011 from http://unesdoc.unesco.org/images/0014/001486/148654e.pdf

United Nations Global Compact. (2007). Principles for responsible management education. Retrieved December, 2011, from http://www.unglobalcompact.org/docs/news_events/8.1/PRME.pdf

University charter for sustainable development (1994). Retrieved December, 2011 from http://www.iisd.org/educate/declarat/coper.htm.

Vallaeys, F. (2006). Brief Theoretical Framework of University Social Responsibility. Pontificia Universidad Católica de Perú. Retrieved December, 2011 from http://blog.pucp.edu.pe/item/4880/breve-marco-teorico-de-rsu

Vidal, N.G. and Kozak, R.A. (2008). Corporate Responsibility Practices in the Forestry Sector: Definitions and the forestry sector. The Journal of Corporate Citizenship, 31, 59.

Vuontisjärvi, T. (2006). Corporate Social Reporting in the European Context and Human Resource Disclosures: An Analysis of Finnish Companies. Journal of Business Ethics, 69 (4), 331.

West, D. M. (2000). Assessing E-Government: The internet, democracy, and service delivery by state and federal governments. Retrieved December, 2011 from http://www.insidepolitics.org/egovtreport00.html.

Wu, Y. J., Huang, S., Kuo, L., and Wu, W. (2010). Management education for sustainability: A web-based content analysis. Academy of Management Learning and Education, 9 (3), 520–531.

Zimmerman, M.A. and Zeitz, G.J. (2002). Beyond Survival: Achieving New Venture Growth by Building Legitimacy. Academy of Management Review, 27 (3), 414–443.

CHAPTER 6: FACTORS INFLUENCING THE CONTENT OF CORPORATE SOCIAL RESPONSIBILITY DISCLOSURES ON USA UNIVERSITIES' WEBSITES

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1. Introduction

For some time there has been growing awareness and concern regarding corporate social responsibility (CSR). It has become a leading issue in political agendas and in society's calls for information (Da Silva Monteiro and Aibar-Guzmán, 2010).

Whilst over the last decades academic and professional interest in the application of Corporate Social Responsibility in the sphere of business has grown significantly, in public administrations the situation is significantly different, since only recently has there been any concern about Social Responsibility in the public sector (Ball and Grubnic, 2007; Ball and Bebbington, 2008). Universities are one area of the public sector which, due to the social service and function that they fulfil, should be considered part of social responsibility in all of their spheres of action such as the following inter-linked elements: Education, Research; Campus operations, Community outreach and Assessment and reporting (Lozano, 2006a; Lozano et al., 2011).

In this regard, over the last few years, there has been a certain consensus that universities, as an integral element of the public sector, should play a fundamental role in CSR, incorporating its principles both in their functions and in their mission, vision and corporate strategy (Muijen, 2004; Lukman and Glavič, 2007; Lozano and Peattie, 2011), thus advancing the principles of sustainable development (Lukman and Glavič, 2007).

In fact, universities are now becoming more active in the field of CSR, (Serap and Eker, 2007; Hammond and Churchman, 2008). Nevertheless, they do not appear to be granting the same degree of importance to the dissemination of these activities. Thus, although previous studies have highlighted the pressures in this respect imposed on universities in different countries, such as New Zealand from 1985 to 1989 and the United Kingdom from 1992 to 1994 (Banks et al., 1997), the provision of more detailed and wider-ranging information on accountability, especially the disclosure of university CSR issues, has traditionally been limited to the area of financial information (Mellé, 2007).

In recent years, one of the channels most commonly used for information dissemination has been the Internet (Coupland, 2005; Branco and Rodrigues, 2006; Capriotti and Moreno, 2007; Guimarães-Costa and Pina e Cunha, 2008), a medium that enables much more information to be revealed than is possible with traditional methods (Aerts et al., 2008).

Although CSR and sustainable disclosure is voluntary and intended to communicate the objectives and achievements in this sense of an organization to society (Lozano and Huisingh, 2011), by informing stakeholders of their socially responsible actions universities would expect to improve their transparency and accountability (Meijer, 2009). In order to do so, they could take advantage of the advantages provided by new ICTs, making use particularly of the Internet and university websites. Among other advantages, it offers unlimited capacity, global outreach, flexibility, versatility, timeliness and speed (Craven and Marston, 1999; Oyelere et al., 2003; Xiao et al., 2004).

Many studies have analysed the information disclosed via the Internet and the factors that determine this disclosure, especially regarding that of financial information (Craven and Marston, 1999; Jaggi and Low, 2000; Oyelere et al., 2003). In addition, although to a lesser extent, some studies have examined the disclosure of CSR-related issues (Reverte, 2009). However, most such studies have focused on the business world, with little empirical research being addressed on the question of CSR information disclosure in the public sector, and even less so in the specific field of universities (Pineno, 2011).

Therefore, the aim of this paper is to analyse how main characteristics of universities – the size, internationality, affiliation, private/public status, age and position of a university in the Shanghai ranking, among other aspects – can influence the online disclosure practices of CSR information, and specifically of CSR information.

The research is focused in USA universities because these universities have long been distinguished by their commitment to community (Decter, 2009) and in developing CSR policies (Calder and Clugston, 2003). Also,

they are making the greatest efforts worldwide to disclose online CSR information (Garde et al., 2013).

In this context, section 2 describes the importance and the role played by universities in the development of social responsibility, specifically in USA universities. The section 3 explains the determinant factors of CSR and specific CSR information disclosure. Section 4 of the paper describes the methods used to test the hypotheses and the selection of the sample. Section 5 of the paper provides an analysis of the data and the main discussions of our study, and finally, section 6 of the paper contains the main conclusions drawn and the main implications for future research.

2. CSR in universities and USA university context

Higher education is a primary system of knowledge creation in society (Parker, 2010) and is designed to enable people to acquire and generate knowledge and to reflect on the consequences and effects of the decisions of their behavior in the present generation and future (Barth et al., 2007). In this sense, the term sustainability in higher education is used to describe a positive movement towards environmental accountability and social and environmental responsibility (Nicolaides, 2006).

In fact, for more than a decade, international institutions such as UNESCO have argued that higher education organizations must take a leadership role in developing solutions to sustainable development (UNESCO, 1998). Later, this same organization declared the Decade of Education for Sustainable Development (2005-2014) to promote sustainable education, incorporating sustainable development at all levels, in the view that universities have a vital role to play in economic growth and in creating a sustainable future.

Thus, there is a general consensus of the important role that education plays in the processes of change (Mochizuki and Fadeeva, 2010) with education for sustainable ethical response to global change (Ferrer-Balas et al. 2004). It is therefore necessary to change agents, professionals, including teachers, who can address the challenges of sustainability and to enable students to participate in social change processes (Mochizuki and

Fadeeva, 2010) acquiring a set of skills in the future can implement to solve problems of social, economic and environmental and, as argues UNESCO (2005), "*not what should be taught, but what should be learned, what abilities for acting, which concepts and problem-solving strategies people should have acquired as a result of the learning process*" (Mochizuki and Fadeeva, 2010).

In this respect, several universities have begun the debate about the content of the Sustainable Development concept and the ways in which to integrate it into their university policy, organization and activities (Van Ween, 2000). Studies have revealed the increasing presence of education for sustainability in university curricula (Lozano, 2010; Setó-Pamies et al., 2011). The teaching of ethics and sustainability is vital to make students understand the importance of these values and to determine how they should be applied in the world of business, with an understanding of the powerful effects that business decisions may have and their potential harm to society (Giacalone, 2008; Svanström et al., 2012). In relation to research, universities must encourage research into social responsibility as a useful tool for more sustainable social change supported by university management and its social projection (Stephens et al., 2008).

Universities have been at the forefront in creating and breaking paradigms (Lozano, 2006a) and, in this sense, they must integrate social responsibility in their strategic planning, through the setting of objectives and the development of long term strategies in questions related to social responsibility (Muijen, 2004) which must then be translated into specific actions (Valleys, 2006; Mulder, 2010), such as the following inter-linked elements: Education, Research; Campus operations; Community outreach, Assessment and reporting (Lozano, 2006a; Lozano et al., 2011). All of which will allow them to occupy a predominant role as models of ethical behavior for society as a whole (Valleys, 2006; Lozano, 2006a, Lozano et al., 2011).

A good example of CSR policies in practice can be found at English-speaking universities and, specifically, at USA universities, which have long been distinguished by their commitment to "service to the community"

(Decter, 2009). The USA has the second largest number of higher education institutions in the world and the highest number of students in higher education (UNESCO, 2005).

The USA´s universities have shown an outstanding commitment and pioneering spirit in developing CSR policies (Calder and Clugston, 2003) and in including them in their management and in their main academic and research functions (Calder and Clugston, 2003).They are strongly committed to CSR, in terms of both the scale and impact of their actions in society, and their tradition and social influence. Thus, universities are taking CSR actions both to establish the legitimacy of their operations (Huang and Wang 2012) and to better attract students, fees and subsidies (Carlson, 2008). Nonetheless, in order to obtain or maintain this legitimacy, they must not only take actions but also inform society at large about these actions (Cormier et al., 2004). It has been shown that one of the main strategies applied by organizations to gain legitimacy for their actions has been to align the perception of their actions with what is expected by their stakeholders, by means of information disclosure (Daub, 2007).

Universities would expect to improve their legitimacy by informing stakeholders of their socially responsible actions (Meijer, 2009) through Internet. Besides, previous studies have shown that the information posted on university websites has a major influence on students' choice of university (Schimmel et al. 2010), and in this decision particular importance is given to information regarding sustainability (Gordon et al. 2002).

In order to disclose information, the organizations have used annual report, which is traditionally employed as a channel of communication and source of accountability (Vuontisjärvi, 2006). However, the information disclosed has been exclusively based on financial and budgetary questions.

Increasing demands from stakeholders for a more transparent and more accountable information (Borkowski et al., 2010), including aspects of CSR, has resulted in increased the use of the Sustainability Report or CSR report as effective communication mechanisms and such as tools that enable effective benchmarking processes between universities (Lozano, 2011). Besides, in this regard, there are initiatives in the universities

context that allow this benchmarking between sustainability information, since authors like Lozano (2006b) have developed tools that allow this process from the information provided in the Sustainability Reports (Graphical Assessment of Sustainability in Universities, for example).

Despite the efforts of universities in terms of integration and publication of CSR reports, currently, there is no standard format for these reports. Nevertheless, you can see common practices regarding the disclosure of the aspects that make up the triple bottom line, that is, information such as social, economic and environmental development of the universities. In addition, due to the peculiarities of the universities, there is information related CSR own field of education and research, which allows us to speak of a fourth area of information dissemination as also highlights authors as Lozano (2006b).

However, most such studies have focused on the business world, with little empirical research being addressed on the question of CSR information disclosure in the public sector, and even less so in the specific field of universities (Pineno, 2011). In view of the considerations about the universities as models of socially responsible behavior in society and centers of knowledge par excellence, we consider important to study how certain variables influence the online disclosure practices of CSR information by USA universities (– the size, internationality, affiliation, private/public status, age and position of a university in the Shanghai ranking, among other aspects –).

3. Determinant factors of disclosure

The disclosure of CSR information has been justified in various theories, among which the most popular are the legitimacy theory and the stakeholder theory (Gray et al., 1995; Milne, 2002; O'Dwyer, 2003).

The legitimacy theory has been widely developed in the field of social accounting research, especially from the perspective of the disclosure of CSR information. Numerous studies have shown that the voluntary disclosure of such information has been used as a strategy to acquire legitimacy (see, for example, Deegan and Rankin, 1996; Deegan et al.,

2002; Cho and Patten, 2007) and/or to protect an organisation's reputation and identity (Hooghiemstra, 2000).

The stakeholder theory, perhaps the most widely accepted of all, has been approached from different perspectives (McWilliams and Siegel, 2001), but opinions differ on its applicability and relevance to the field of CSR, although both empirical and theoretical attempts in this respect have been made (Doh and Guay, 2006). For this reason, Adrem (1999) and Cormier et al. (2005), among others, argue that information disclosure by organisations is a complex phenomenon that cannot be explained by the application of any single theory.

Both theories -the legitimacy theory and the stakeholder theory- have analysed the existence of some incentives that could explain CSR disclosure in organisations. In this regard, previous research has shown that the disclosure of CSR information is influenced by many factors, including the organisation's size, industry, age, profitability, culture and nationality (Gray et al., 1995; Hackston and Milne, 1996; Adams et al., 1998; Haniffa and Cooke, 2005; Jenkins and Yakovleva, 2006).

In this paper, and with respect to universities, we focus on their size, internationality, affiliation, public versus private status, age and position in the Shanghai ranking. These specific variables were studied because they are the main ones adopted in previous studies of information disclosure in general (Caba et al., 2005; Castelo and Lima, 2008; Reverte, 2009) and of that by universities in particular (Gordon et al., 2002; Gallego et al., 2011a).

3.1. Size

Organisations are subjected to numerous pressures to disclose CSR information (Da Silva Monteiro and Aibar-Guzmán, 2010). Moreover, the variable *size* has frequently been used to explain the extent to which corporations are pressured to disclose information (Cooke, 1989; Gray et al. 1995; Adams et al. 1998; Neu et al. 1998; Adrem, 1999; Castelo and Lima, 2008; Tagesson et al., 2009). From an empirical standpoint, several studies have found a positive relationship between organisation size and the

disclosure of CSR (for example, Adams et al., 1998; Craven and Marston, 1999; Purushothaman et al., 2000; Archel, 2003; Oyelere et al., 2003; Reverte, 2009; Da Silva Monteiro and Aibar-Guzmán, 2010).

Such disclosure is sometimes costly and so it is larger organisations that tend to disclose most information (Da Silva Monteiro and Aibar-Guzmán, 2010). Furthermore, it is the larger organisations which exercise most power in society, are most visible and, therefore, are most exposed to public scrutiny, with their performance being analysed by broad groups of stakeholders (Hackston and Milne, 1996; Knox et al., 2006; Reverte, 2009). In consequence, according to the theory of legitimacy, these organisations publish the largest volume of information in order to improve their image and reputation.

This positive relationship has also been observed in the university sector, by studies such as those by Gordon et al. (2002) and Gallego et al. (2011a), who found that university size has a positive influence on the amount of information disclosed. In view of these considerations, we propose the following hypothesis:

H1. There is a positive relationship between a university´s size and the CSR information disclosed on its website

To measure the size of an organisation, many studies have used total assets, sales or market capitalisation to measure firm size. However, as Gordon et al. (2002) observed, market capitalisation is not a measurable value for universities. An appropriate alternative measure of size could be the number of students (Gallego et al., 2011a) -see Table 1-.

3.2. Internationality

In view of the stakeholder theory, it might be assumed that organisations operating in foreign markets would have a larger number of stakeholders and that the latter, being more heterogeneous, would require organisations to address their diverse needs, as influenced by their respective cultures and customs (Castelo and Lima, 2008; Reverte, 2009).

As a result, the variable *internationality* is widely used in studies of the determinants of information disclosure in the private sector (see, for example, Castelo and Lima, 2008; Reverte, 2009).

Changes in society, together with increasing competition, have spurred universities to offer educational services beyond their physical premises (Gumport and Sporn, 1999). Thus, the Commission on International Education of the American Council on Education (1995) stated that universities must become institutions without borders; similarly, the Erasmus, Camett and Tempus programmes in Europe promote student mobility in the continent (Gallego et al., 2011a). Because universities exist in a world of relentless competition and must struggle to gain a competitive advantage in order to achieve a better position and greater financial resources (Ivy, 2001; Opoku et al., 2009), the disclosure of CSR information could improve their image and contribute to attract more students. It has been shown that the provision of information by universities on their websites is an essential element in students' decisions on where to study (Schimmel et al., 2010), thus highlighting the need for universities to disclose aspects of their performance with respect to CSR (Gordon et al. 2002).

Accordingly, the CSR information provided on university websites could be a further element taken into account by foreign students in deciding where to study. Therefore, the following hypothesis is proposed:

H2: There is a positive relationship between the degree of internationality of a university and the level of CSR information disclosure on its website

In line with the procedure adopted in previous studies, the variable *internationality* was measured by the number of foreign students at each university (Gallego et al., 2011a) -see Table 1-.

3.3. University affiliation

In the private sector, the delegation of functions and tasks to various departments has produced specialisation, with each one being headed by professionally qualified management experts. Therefore, when reports from

different areas are prepared and published, the process is supported by the heads of each section of the organisation and their joint efforts enable a comprehensive overview of the business. Previous research suggests that organisations with CSR-related departments are more likely to disclose information in this respect (Kastenholz et al., 2004).

The university comprises a body of schools and faculties offering many different degrees. Extrapolating the idea of a business focus in this area, we believe that universities that have faculties associated with CSR will possess qualified personnel who may intervene in decisions and in planning actions that refer to CSR; equally, such personnel may provide a more complete understanding and facilitate the dissemination of CSR information. Accordingly, the following hypothesis is proposed -see Table 1:

H3: Universities with faculties related to the field of CSR will disclose more CSR information than those in which no such faculties are present.

3.4. Private vs. Public universities

The university system in many countries, and especially in the USA, is characterised by the coexistence of public and private universities (Gordon et al., 2002). Although these have many features in common, they are fundamentally different in terms of their funding. Thus, whilst private universities largely depend on the tuition fees paid by students and on private donations (Gordon et al., 2002), public universities are mainly funded by the State.

In the USA, falling student numbers in recent years, and the consequent reduction in state funding (Gordon et al., 2002), has led to increased competition to attract students. In this respect, private universities are at a disadvantage since the tuition fees paid by students are their main source of funding (Gordon et al., 2002), which explains their strong sense of marketing and their need to act according to business criteria. Consequently, these universities must invest resources and effort to distinguish themselves from public universities, not only concerning the quality of the education provided and of the research carried out, but also in

other essential questions such as the promotion of ethical behaviour and the application of the principles of social responsibility. According to previous research in the private sphere (Jones, 2001), this could enhance their reputation and public image, enabling them to gain a competitive advantage and thus become an attractive option for more students.

Therefore, apart from universities' teaching and research quality, which is an essential element in their reputation (Serap and Eker, 2007), socially responsible behaviour by universities and how this behaviour is reflected through informational transparency could produce a competitive advantage in the higher education market, which in turn could provide universities with greater legitimacy in their relationship with stakeholders. The use of new information technology, and specifically, the Internet, has proved to be a very important tool in this process (Schimmel et al., 2010; Gordon et al., 2002).

For this reason, it is expected that private universities, in view of the strong competition they face to obtain financial resources and of the competitive advantage that might be gained from the disclosure of CSR information, will present higher levels of disclosure of this information on their official websites. Therefore, the following hypothesis is proposed -see Table 1-:

H4: Private universities disclose a larger volume of CSR information than do public universities

3.5. Age

The variable *age* has been considered as an influential factor in the dissemination of information (Gallego et al., 2011a). Logically, older organizations will have had more time and gained more experience in the development of all types of policies and their subsequent disclosure. Moreover, these policies will have been made public for longer.

In universities, too, as noted by Banks et al. (1997) and Gallego et al. (2011a), the degree of disclosure of CSR appears to depend on their age, and it has been established that older universities disclose more information than newer ones (Murias et al., 2008). This is not surprising, since older

universities have had longer to develop information of all kinds and to disclose it to their different stakeholders. Therefore, the following hypothesis is proposed:

H5: Older universities disclose more CSR information on their websites than younger universities

3.6. Shanghai ranking

Prior research indicates that the best-placed universities in this ranking report a greater amount of CSR information (Rodríguez et al., 2011). Thus, the disclosure of CSR information as an element by which universities can be differentiated could mean that the universities which are highest ranked for their quality of education and research are in fact those most committed to the online disclosure of CSR information. According to McNamara (2008), the world's most prestigious universities are expected to be at the forefront of great movements for social change –see Table 1-. In consequence, the following hypothesis is proposed:

H6: The universities offering highest prestige and academic quality are the strongest proponents of the online disclosure of CSR information.

4. Metholology

4.1. Sample

In order to analyse the best practice, our sample has been focused on USA universities. Many reasons have led us to conduct our research on USA universities.

Firstly, we consider USA universities because they have shown an outstanding commitment and pioneering spirit in developing CSR policies (Calder and Clugston, 2003) and in including them in their management and in their main academic and research functions (Calder and Clugston, 2003).They are strongly committed to CSR, in terms of both the scale and impact of their actions in society, and their tradition and social influence.

In addition, the American university system has traditionally been characterized by the coexistence of public and private universities, which show a great difference in their way of funding (Gordon et al. 2002). It could make to expect them to behave differently in the field of information transparency in terms of online disclosure of CSR in universities. In fact, the drive for an environmentally compliant campus engages many of a university's stakeholders, but none more so than students and those contemplating enrolment. This not only immerses students in one governance stream within the university, it provides a marketing opportunity to the university in its recruitment process (Niland, 2012). Therefore, private universities could be more prone to disclose CSR information in order to obtain a competitive advantage in the higher education market, which in turn could provide greater legitimacy in relationships with stakeholders and attract a greater number of students.

Also, the Association of University Leaders for a Sustainable Future (ULSF) is the Secretariat for signatories of the Talloires Declaration (1990), which has been signed by over 400 college and university presidents and chancellors worldwide. ULSF supports sustainability as a critical focus of teaching, research, operations and outreach in higher education through publications, research, and assessment. In this regard, the USA universities and colleges are clearly those with a greater number of higher institutions all around the world that have websites devoted to campus sustainability programs, projects and committees at institutions of higher education –see http://www.ulsf.org/resources_campus_sites.htm-. Therefore, it is expected that USA universities to disclose a greater volume of CSR information on their websites, because they have designed websites devoted to CSR concerns.

In fact, in order to identify those universities making the greatest effort to disclose CSR information on the Internet, we conducted an online search for the universities that most frequently address CSR questions on their websites and/or publish annual CSR reports. Using general search engines such as Yahoo, Google and Terra, we fed in key concepts such as *sustainability report, CSR reporting, environmental report, environment, ecology, water, recycling, green building, biodiversity* and *non-profit*,

together with the term *university*. In order to obtain a broad range of articles, the search was conducted in five main languages: Spanish, Portuguese, French, English and German. Despite the existence of other universities also publish CSR reports, USA universities are the most active on the Internet in terms of disclosing CSR related information according to the information obtained from the above search engines and CSR reports.

We stress that the selection of universities in our paper has limitations because it only considers the universities that implement CSR actions and disclose such policies via the Internet. Therefore, the present study does not address universities that, while committed to CSR, do not disclose their commitment or, even if they do, if other means are used, such as printed materials (posters, brochures, magazines, etc.). Nevertheless, despite these limitations, we believe the sample is appropriate for the goals of this study, i.e., to analyse the factors influencing information transparency regarding CSR issues disclosed online.

Secondly, the selection of 105 USA universities in our sample was made taking into account the Academic Ranking of World Universities (ARWU), more commonly known as the Shanghai ranking. Although this ranking has been questioned and its methodological limitations highlighted (Billaut et al., 2010), the ARWU is generally agreed to be acceptable in terms of objectivity and comprehensiveness (Buela-Casal et al., 2007). The ARWU publishes an index of world universities based on their academic quality and overall excellence and this has been used in numerous previous studies (Leydesdorff and Shin, 2011). Furthermore, it is one of the instruments most widely employed in research studies for measuring institutional quality (Docampo, 2011).

Therefore, in order to obtain a significant sample, we selected all of the USA universities that figured in the first 500 universities in the Shanghai ranking. Thus, we obtained a sample comprising 154 USA universities, of which 105 were public (68.18%) and 49 were private (31.82%).

4.2. Empirical models

In this section we discuss the influence of the factors described above in the disclosure of CSR raising two models (see table 1). The models were checked empirically through multiple linear regressions, estimated by OLS.

A first model analyzes the influencing factors (size, internationality, affiliation, private status, age and Shanghai ranking) in the general disclosure CSR (GSRD) and specific disclosure of CSR (TSRD) referring to such information as set up economic, environmental, social, and from the point of view of education.

In order to study this content, we analysed a set of items associated with general and specific aspects of the CSR information disclosed online by the universities and it was necessary to obtain a numerical indicator of CSR information disclosure. Subsequently, two disclosure indexes were created to reflect the amount of general CSR information disclosed (GSRD) and specific CSR information disclosed (TSRD). Online Specific CSR Disclosure (TSRD), with the sum of the items belong to economic, environmental, social and education information Online Disclosure (TSRD = Σ ESRD + Σ NSRD + Σ SSRD + Σ DSRD).

MODEL1: The approach adopted in the empirical analysis is summarised by the following general form of the models:

$$GSRD = \alpha_0 + \beta_1 \, Size_i + \beta_2 \, Internationality_i + \beta_3 \, Affiliation_i + \quad (1)$$
$$\beta_4 \, UniPriv_i + \beta_5 \, Age_i + \beta_6 \, ShanghaiRank_i + \varepsilon_i$$

$$TSRD = \alpha_0 + \beta_1 \, Size_i + \beta_2 \, Internationality_i + \beta_3 \, Affiliation_i + \quad (2)$$
$$\beta_4 \, UniPriv_i + \beta_5 \, Age_i + \beta_6 \, ShanghaiRank_i + \varepsilon_i$$

However, that generically not statistically significant, does not mean it cannot be from an individual standpoint as universities may feel more inclined to disclose certain CSR information. Therefore, we raised our second model analyzing the influence of such independent variables (size, internationality, affiliation, private status, age and Shanghai ranking) in the generic and specific content individually dependent variables being the following: General Information Online Disclosure (GSRD), Economic

information Online Disclosure (ESRD), Environmental Information Online Disclosure (NSRD), Social information Online Disclosure (SSRD) and Educational information Online Disclosure (DSRD).

TABLE 1. Main variables

MODEL 1		
Variable	**Definition**	**Hypothesis**
GSRD	General CSR Online Disclosure	Dependent variable
TSRD	Specific Information Online Disclosure	Dependent variable
Size	University size, measured through the number of students	H1
Internationality	Number of foreign students	H2
Affiliation	Dummy variable which takes the value 1 if the university has some faculty regarding CSR , and 0 otherwise	H3
UniPriv	Dummy variable which takes the value 1 if the university is private, and 0 otherwise	H4
Age	Number of years since the foundation year	H5
ShanghaiRank	Position of the university in the Shanghai ranking	H6
MODEL 2		
Variable	**Definition**	**Hypothesis**
GSRD	General CSR Online Disclosure	Dependent variable
ESRD	Economic Information Online Disclosure	Dependent variable
NSRD	Environmental Information Online Disclosure	Dependent variable
SSRD	Social Information Online Disclosure	Dependent variable
DSRD	Educationall Information Online Disclosure	Dependent variable
Size	University size, measured through the number of students	H1
Internationality	Number of foreign students	H2
Affiliation	Dummy variable which takes the value 1 if the university has some faculty regarding CSR , and 0 otherwise	H3
UniPriv	Dummy variable which takes the value 1 if the university is private, and 0 otherwise	H4
Age	Number of years since the foundation year	H5
ShanghaiRank	Position of the university in the Shanghai ranking	H6

Source: Own elaboration

MODEL 2: The approach adopted in the empirical analysis is summarised by the following general form of the models:

$$GSRD = \alpha_0 + \beta_1\, Size_i + \beta_2\, Internationality_i + \beta_3\, Affiliation_i + \beta_4\, UniPriv_i + \beta_5\, Age_i + \beta_6\, ShanghaiRank_i + \varepsilon_i \quad (3)$$

$$ESRD = \alpha_0 + \beta_1\, Size_i + \beta_2\, Internationality_i + \beta_3\, Affiliation_i + \beta_4\, UniPriv_i + \beta_5\, Age_i + \beta_6\, ShanghaiRank_i + \varepsilon_i \quad (4)$$

$$NSRD = \alpha_0 + \beta_1\, Size_i + \beta_2\, Internationality_i + \beta_3\, Affiliation_i + \beta_4\, UniPriv_i + \beta_5\, Age_i + \beta_6\, ShanghaiRank_i + \varepsilon_i \quad (5)$$

$$SSRD = \alpha_0 + \beta_1\, Size_i + \beta_2\, Internationality_i + \beta_3\, Affiliation_i + \beta_4\, UniPriv_i + \beta_5\, Age_i + \beta_6\, ShanghaiRank_i + \varepsilon_i \quad (6)$$

$$DSRD = \alpha_0 + \beta_1\, Size_i + \beta_2\, Internationality_i + \beta_3\, Affiliation_i + \beta_4 \quad (7)$$
$$UniPriv_i + \beta_5\, Age_i + \beta_6\, ShanghaiRank_i + \varepsilon_i$$

in which the variables are defined as in Table 1.

The dependent variables were obtained from the analysis of items in the disclosure index for the websites (see tables 2 y 3). In the field of standardization and evaluation of sustainability reports or CSR yet no standard model of CSR disclosure although many efforts are being made, for example, those made by the University Leaders for sustainable Future (ULSF). The GRI guidelines have not been developed for universities (Cole, 2003) but it could offer one of the best ways to assess and disclose sustainability reports (Lozano, 2006b; Lozano, 2011; Lozano and Huisingh, 2011). Nonetheless, as argued Lozano (2006b), such guidelines should be amended and supplemented to include characteristics and competencies of university and that they can be useful for university staff. Thus, based on these arguments and the research work of Lozano (2006b), we have designed an online evaluation model of CSR information disclosed by the universities that can be seen in Table 2 and 3. The items shown in Tables 2 and 3 have followed the recommendations in their work (Lozano 2006b) and have been adapted according to the previous search of the websites of the universities. With this proposal, we want to join our efforts and contribute to the existing literature on sustainability reporting in universities.

Thus, the information of the dependent variables was obtained after a detailed analysis of CSR reports of sample universities, since they are considered an effective mechanism of control and communication of information (Lukman and Glavič, 2007; Lozano , 2011). We also report the information they are providing universities on their websites, in the financial reports and annual reports.

Regarding the score assigned to each of the questions included in our proposal for the assessment of CSR information disclosure, and taking into account previous approaches (Cooke, 1989; Larran and Giner, 2002; Caba et al., 2005), we opted for a binary dichotomous scoring system (0/1), reflecting the absence or presence of each item on the website or in the

sustainability/CSR report. This method was adopted in order to reduce the degree of subjectivity, in a scoring system for which there are no explicit, predefined rules (Jones et al., 1998). Thus, the same value is awarded to each item when the aspect being analysed is described by various items (Purushothaman et al., 2000; Ho et al., 2008) -see Table 2 y 3 to observe the score for each item-.

From June 2012 to February 2013, we visited the websites of the selected universities in order to obtain the information necessary for this study. To ensure objectivity, the process was carried out separately by each of the three authors, who subsequently discussed the results and reached a consensus. If there were any significant discrepancies, the websites were examined again by all three authors.

Regarding the independent variables, Table 1 shows the explanatory variables proposed to test the research hypotheses. The data needed to create these variables were obtained from each university's website.

TABLE 2. Online disclosure of general CSR information

GENERAL CSR Online Disclosure		$GSRD= \sum_{i=1}^{m} g_i /5$
Concept	**Items**	**Score**
1. Statement of vision and strategy of the university on issues about social responsibility	a) If main CSR commitments are disclosed.	0/0.5 based on the absence-presence of this item
	b) If the webpage or Sustainability Report includes a declaration on CSR from the governing body.	0/0.5 based on the absence-presence of this item
2. Information about profile of stakeholders	a) If the university webpage or the CSR/SustainabilityReport identify the stakeholders.	0/0.5 based on the absence-presence of this item
	b) If there is specific information about the informational needs of each group of stakeholders.	0/0.5 based on the absence-presence of this item
3. Centralized or decantralized disclosure of CSR information by universities	a) If the disclosure of CSR information is developed in a centralized way on the university webpage.	0/0.5 based on the absence-presence of this item
	b) If this disclosure is developed through dependent centres at said university.	0/0.5 based on the absence-presence of this item
4. Data on performance indicators	a) economic indicators.	0/0.33 based on the absence- presence of this item
	b) social indicators.	0/0.33 based on the absence- presence of this item
	c) environmental indicators.	0/0.33 based on the absence- presence of this item
5. Index of contents or a table to locate different elements of information about CSR	Provides the reader with an index or a table to locate different CSR elements.	0/1 based on the absence-presence of of this item

Source: Own elaboration

TABLE 3. Online disclosure of specific CSR information

SPECIFIC CSR Online Disclosure		TSRD = ∑ ESRD + ∑ NSRD + ∑ SSRD + ∑ DSRD
Economic Information Online Disclosure		$ESRD = \sum_{i=1}^{m} g_i / 5$
Concept	**Items**	**Score**
1. Customer (Students)	Information is disclosed about Student Income (Student aid and tution)	0/1 based on the absence/presence of this item
2. Suppliers	Information is disclosed about Payments to suppliers	0/1 based on the absence/presence of this item
3. Employees	Information is disclosed about Employee benefits expense (Salaries, wages, and employee benefits)	0/1 based on the absence/presence of this item
4. Providers of capital	Information is disclosed about Sponsored, non for profit, auxiliary enterprises, Private gifts, grants, and contracts	0/1 based on the absence/presence of this item
5. Public sector	Information is disclosed about State appropriations (federal government)	0/1 based on the absence/presence of this item
Environmental Information Online Disclosure		$NSRD = \sum_{i=1}^{m} g_i / 6$
Concept	**Items**	**Score**
1. Energy	Information is disclosed about the installation of systems that save electricity such as movement sensors, incandescent lightbulbs or other alternative sources of energy.	0/1 based on the absence/presence of this item
2. Buildings and grounds	Information is disclosed about criteria for construction, renovation and rehabilitation of existing buidlings in line with "green criteria".	0/1 based on the absence/presence of this item
3. Purchasing management	Information is disclosed about the need to prioritize the purchase of reusable, ecological materials that require a minimum of packaging.	0/1 based on the absence/presence of this item
4. Waste management and recycling	Information is disclosed about questions related to the promotion of the recycling of office material and solid waste providing recipients for articles such as paper, printer cartridges and batteries.	0/1 based on the absence/presence of this item
5. Transportation	Information is disclosed about the creation of incentives for the university community to use public transport or alternative means of transport such as bicycles and bus.	0/1 based on the absence/presence of this item
6. Food	Information is disclosed about fair trade and sustainable food through the provision of ecological products in campus cafés and shops.	0/1 based on the absence/presence of this item
Social Information Online Disclosure		$SSRD = \sum_{i=1}^{m} g_i / 11$
Concept	**Items**	**Score**
1. Summer programs	Information is disclosed about a specific section about Continuing Education with summer programs	0/1 based on the absence/presence of this item
2. Employment	Information is disclosed about the opportunity to search jobs in the University or outside	0/1 based on the absence/presence of this item
3. Campus services / Student life	Information is disclosed about the specific section regarding club-organizations, sport and recreation, student affairs, housing and dining; student organizations and activities; shopping and others.	0/1 based on the absence/presence of this item
4. Campus safety	Information is disclosed about the specific section about safety services	0/1 based on the absence/presence of this item
5. Health services	Information is disclosed about the specific section about health services	0/1 based on the absence/presence of this item
6. Scholarship	Information is disclosed about the Scholarship	0/1 based on the absence/presence of this item
7. Equal opportunity	Information is disclosed about The Office of Equal Opportunity where the value of diversity is recognized and where equal opportunity is afforded for all.	0/1 based on the absence/presence of this item
8. Diversity and equity	Information is disclosed about diversity and equity services for students	0/1 based on the absence/presence of this item
9. Disability resorces	Information is disclosed about disability resorces	0/1 based on the absence/presence of this item
10. Statement of integrity	Information is disclosed about statement of integrity	
11. Code of conduct	Information is disclosed about code of conduct	0/1 based on the absence/presence of this item
Educational Information Online Disclosure		$DSRD = \sum_{i=1}^{m} g_i / 3$
Concept	**Items**	**Score**
1. Academic	Information is disclosed about courses, seminars and conferences related to CSR.	0/1 based on the absence/presence of this item
2. Research	Information is disclosed about University research centres linked to CSR.	0/1 based on the absence/presence of this item
3. Service	Information is disclosed about Volunteer services	0/1 based on the absence/presence of this item

Source: Own elaboration

5. Results and discussions

5.1. Descriptive results

The table 4 shows the descriptive statistics of the dependent variables reporting the mean, median, standard deviation (SD), frequency and percentage. We can observe the data for the general and specific content of the CSR/sustainability reports information provided on the university websites (table 4). Regarding the general CSR information, the low values obtained by the universities in our sample reveal that disclosure of this type of information is not a priority aspect of their online communication policies.

Of the items included in this section in accordance with the GRI recommendations, those which are least often disclosed refer to stakeholders' profiles and the performance indicators of the different dimensions of CSR (mean values of 0.01 and 0.07, respectively). In fact, very few universities reveal this type of information on their websites (frequencies of 0.65% and 6.64%). The top rated items (vision in CSR themes, centralised/decentralised information and table of contents) are provided by nearly 50% of the universities.

With respect to the items related to specific CSR, we observe that universities are more committed to the dissemination of this information on their websites or annual reports. Higher values are obtained by the online disclosure of information of an economic and social nature (70.65% and 70.37% respectively). The economic information disclosed reached similar values because such information is published, usually in the financial reports. Meanwhile, social type information, also with very high values of each one of the items that are included in this section, has been scattered on the websites of the universities or in annual reports. Almost all items reach values close to 80% except those that reference equal opportunity (47.40%), statement of integrity (14.29%) and code of conduct (57.14%) (see table 4).

With respect environmental information, we found that the universities examined do currently disclose this type of information, but

209

achieve only just over 50% of the total score possible according to the model proposed -Table 4-. The items most commonly disclosed refer to energy, waste management and recycling, while those least often published refer to sustainable food/fair trade or to the purchase of sustainable food.

With respect to the information contained in CSR education (64.72%), the disclosure of voluntary service is the most valued item (81.82%), and the least, which refers to the dissemination of research topics with CSR (63.63%) (see table 4).

Finally note that our research has focused on the items that currently universities are reporting on the Internet in the four designated areas (economic, environmental, social and educational information). The content analysis of these aspects has obtained high values and it shows that universities are following a more or less homogeneous patterns. The use of guidelines to disclose online CSR information could be good for benchmarking analysis because, as Schneider et al. (2011) indicate, the standardisation of reporting through use of guidelines will ultimately increase transparency and should result in greater results over time. Therefore, it seems necessary to design homogenous patterns in universities to disclose this kind of information in order to improve information transparency on this matter in universities

TABLE 4. Descriptive Statistics dependent variables

GENERAL CSR ONLINE DISCLOSURE	Mean	Mediam	SD	Frecuency	Percentage
GENERAL CSR ONLINE DISCLOSURE (GSRD)	**0.31**	**0.37**	**0.18**	**48.41**	**31.43%**
1. Expression of the vision and strategy of the university in CSR subjects	0.45	0.5	0.34	69.5	45.13%
2. Information on the profile of stakeholders	0.01	0.00	0.06	1	0.65%
3. Centralized or decentralized disclosure of SR information by Universities	0.49	0.5	0.29	75.3	48.90%
4. Data on performance indicators	0.07	0	0.17	10.23	6.64%
5. Index of contents or a table to locate different elements of CSR information	0.56	1	0.5	86	55.84%
SPECIFIC CSR ONLINE DISCLOSURE	**Mean**	**Mediam**	**SD**	**Frecuency**	**Percentage**
ECONOMIC INFORMATION ONLINE DISCLOSURE (ESRD)	**0.71**	**1**	**0,42**	**108.8**	**70.65%**
1. Customer (Students)	0.74	1	0.44	114	74.03%
2. Suppliers	0.56	1	0.5	86	55.84%
3. Employees	0.73	1	0.44	113	73.38%
4. Providers of capital	0.75	1	0.43	116	75.32%
5. Public sector	0.75	1	0.44	115	74.68%
ENVIRONMENTAL INFORMATION ONLINE DISCLOSURE (NSRD)	**0.51**	**0.5**	**0.33**	**78.67**	**51.08%**
1. Energy	0.66	1	0.48	101	65.58%
2. Buildings and grounds	0.45	1	0.55	70	45.45%
3. Purchasing management	0.34	1	0.48	53	34.42%
4. Waste management and recycling	0.75	1	0.44	115	75.68%
5. Transportation	0.54	1	0.50	83	53.90%
6. Food	0.32	1	0.47	50	32.47%
SOCIAL INFORMATION ONLINE DISCLOSURE (SSRD)	**0.7**	**0.73**	**0.19**	**108.36**	**70.37%**
1. Summer programs	0.71	1	0.46	109	70.78%
2. Employment	0.85	1	0.36	131	85.06%
3. Campus services / Student life	0.92	1	0.27	141	91.56%
4. Campus safety	0.71	1	0.45	110	71.43%
5. Health services	0.81	1	0.39	125	81.17%
6. Scholarship	0.81	1	0.4	124	80.52%
7. Equal opportunity	0.47	0	0.5	73	47.40%
8. Diversity and equity	0.89	1	0.31	137	88.96%
9. Disability resorces	0.86	1	0.35	132	85.71%
10. Statement of integrity	0.14	0	0.35	22	14.29%
11. Code of conduct	0.57	1	0.5	88	57.14%
EDUCATIONAL INFORMATION ONLINE DISCLOSURE (DSRD)	**0.65**	**0.67**	**0.31**	**99.67**	**64.72%**
1. Academic	0.64	1	0.48	98	63.64%
2. Research	0.49	0	0.5	75	48.70%
3. Service	0.82	1	0.39	126	81.82%

Source: Own elaboration

5.2. Test of the models proposed

On the other hand, we consider the influence of certain factors on the university website disclosure of general and specific CSR information. Table 5 shows the details of the variables analysed.

**TABLE 5. Descriptive statistics independent variables**

	Minimum	Maximun	Mean	SD
Size	184.00	72812.00	23708.22	15485.10
Internationality	2.00	7281.00	1731.69	1498.81
Affiliation	0.00	1.00	0.38	0.49
UniPriv	0.00	1.00	0.32	0.47
Age	38.00	376.00	139.08	59.61
ShanghaiRank	1.00	154.00	77.50	44.60

Source: Own elaboration

Previously, several assumptions were analyzed to be tested using a statistical regression analysis. As for the autocorrelation in the residuals from the regression, the values of the Durbin-Watson test are very close to 2 (– 1.814 GSRD – 1.533 TSRD – 1.511 ESRD – 1.905 NSRD – 1.001 SSRD – 1.865 DSRD –), which indicates the absence autocorrelation in the residuals of the regressions because residues are independent (Verbeek, 2004). Besides, the figure of the typified predicted values *versus* typified residuals shows random features, which discard heteroscedasticity and non-linearity problems. Consequently, it indicates that we can accept the hypotheses of linearity and equality of variances (see Fig. 1). None of the variance inflation factors (VIFs) – not reported – exceeded the critical value of 10 and thus multicollinearity is not a serious problem in this study. Therefore, once we have verified that it meets the assumptions that guarantee the validity of the model, we chose to use OLS given its simplicity and ability to test the hypotheses.

According to our results, the average size of USA universities, measured by the number of students, is 23,708, of whom 1,731 are from abroad. 38% of the universities have CSR-related faculties or schools, and on average each university is 139 years old, although some variables, such as size and internationality, present a high degree of variability.

FIGURE 1. Typified predicted values versus typified residuals
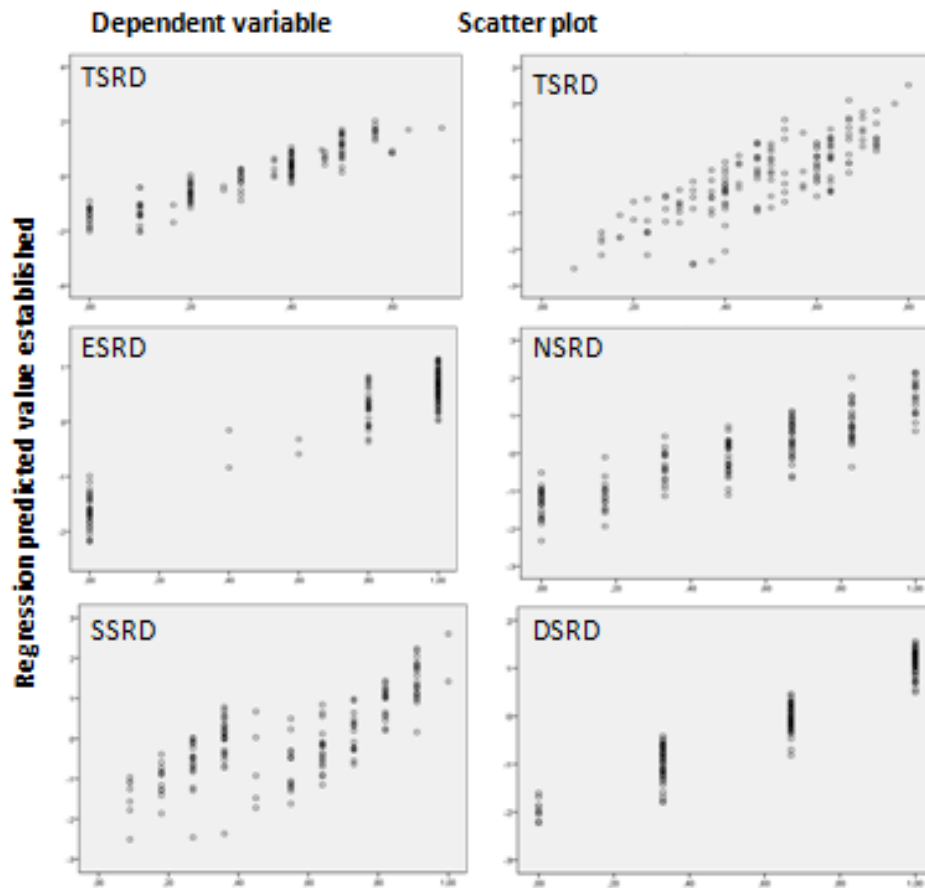
Regarding the data obtained in our Model 1, table 6 shows the degree of correlation of the variables. There is a high correlation between the dependent variable *General CSR Online Disclosure* (GSRD) with the *Shanghai ranking* (0.215), and between the dependent variable *Specific Information Online Disclosure* (TSRD) and the variables *size* (0.310), *internationality* (0.404) and *Shanghai ranking* (0.537). From this we conclude that these universities publish more general CSR information when they have a better Shanghai ranking, and more specific CSR information when they are larger (in terms of registered students), when there are more foreign students and when they have a better Shanghai ranking.

TABLE 6. MODEL 1. Correlation matrix

	GSRD	TSRD	Size	Internationality	Affiliation	UniPriv	Age	Shanghai Rank
GSRD	1							
TSRD	.498 (*)	1						
Size	.191(*)	.310 (**)	1					
Internationality	.205(*)	.404(**)	.658(**)	1				
Affiliation	.128	-.56	.193(*)	-.013	1			
UniPriv	.132	-.24	-.363(**)	.047	-.301(**)	1		
Age	.151	.173 (*)	.025	.221(**)	.035	.284(**)	1	
ShanghaiRank	.215(**)	.537(**)	.193(*)	.480(**)	-.314(**)	.203(*)	.236(**)	1

Note: * Significant at 0.05; ** Significant at 0.01

Source: Own elaboration

According to the results of the empirical analysis of model 1 -see Table 7-, the models that analysed the explanatory factors of the disclosure of general and specific CSR information reflected a low explanatory power (14% and 34% respectively) with a confidence level of 99% ($p < 0.001$). These results suggest that future studies should examine other variables that may have a greater influence on the online disclosure of CSR and specific CSR information by universities.

TABLE 7. MODEL 1. Factors underlying the online disclosure of CSR information.

	GSRD	TSRD
Variable	**Standardised coefficients**	**Standardised coefficients**
Size	.238	.119
	(1.976**)	(1.135)
Internationality	-.071	.080
	(-.576)	(.745)
Affiliation	.217	.49
	(2.515**)	(.654)
UniPriv	.233	-.087
	(2.459**)	(-1.051)
Age	.036	.059
	(.436)	(.807)
ShanghaiRank	.214	.495
	(2.263**)	(5.985***)
F	4.022***	12.907***
R²	.141	.345

Source: Own elaboration. Note: * Significant at 0.1; ** Significant at 0.05; ***Significant at 0.01

Analysis of the factors that influence in our model 1, namely in the the general CSR disclosure showed the following: four of the proposed independent variables – *size, affiliation, private status* and *Shanghai*

ranking – are statistically significant at 95% significance (p <0.05). All these variables are positively related with the dependent variable GSRD (β = 0.238, 0.217, 0.233 and 0.214 respectively).

With respect to the factors that influence the disclosure of specific CSR information (TSRD), the situation is very different because only the variable Shanghai ranking was statistically significant at 99% (p <0.01). After statistical analysis, it is clear that the rest of the variables studied, despite being influential in the dissemination of general aspects of CSR, are not for all specific CSR information disclosed by the universities.

Nonetheless, such factors can affect the disclosure of the specific aspects that are specific information. Under this premise, we analyze the second proposed data model. The data obtained in our Model 2 –see table 8- indicate that there is a high correlation between the dependent variable *General CSR Online Disclosure* (GSRD) with the *Shanghai ranking* (0.215); between the dependent variable *Environmental Information Online Disclosure* (NSRD) and the variables *size* (0.339), *internationality* (0.306) and *Shanghai ranking* (0.324); between the dependent variable *Social Information Online Disclosure* (SSRD) and the variables Internationality (0.301), affiliation (-0.274) and *Shanghai ranking (0.660) and* between the dependent variable *Educational Information Online Disclosure* (SSRD) and the variable size (0.223).

According to the results of the empirical analysis of our model 2 -see Table 9-, the models that analysed the explanatory factors of the disclosure of general and specific CSR information reflected a low explanatory power (14% General information, 7.6% Economic information, 21.4% Environmental information and 8.4% Educational information), except for Social information (46.5%), with a confidence level of 99% (p <0.001) for the General, environmental and social information and with a confidence level of 95% (p <0.05) and 99% (p<0.1) for educational and economic information respectively. These results suggest that future studies should examine other variables that may have a greater influence on the online disclosure of CSR and specific information by universities.

Analysis of the factors that influence in our model 2, in particular in the general CSR disclosure showed the same results discussed above, that is, statistically significant variables were the *size, affiliation, private status* and *Shanghai ranking.* As environmental information (NSRD), the results obtained are the same as those for the previous model except that the public-private status of the university is not a significant variable in this case. Thus, the variables *size, affiliation* and *Shanghai ranking* have a positive influence on the online environmental information disclosed by the universities in our sample (β = 0.347, 0.162 and 0.317, respectively) at 95% significance.

The other dependent variables have been influenced by a lower number of factors. For online economic information disclosed (ESRD), the Shanghai ranking variable only had a significant influence although negative at 90% (β = -0084) and in the case of educational information online disclosure (DSRD), affiliation single variable has obtained a significant percentage equal to the previous one (90%, β = 0.168). Finally, the online social information disclosed (SSRD) has been influenced by two independent variables, negatively by the private university status (β = -0168) and positively by the Shanghai ranking (β = 0.663).

TABLE 8. MODEL 2. Correlation matrix

	GSRI	ESRD	NSRD	SSRD	DSRD	Size	Internationality	Affiliation	UniPriv	Age	Shanghai Rank
GSRD	1										
ESRD	.155	1									
NSRD	.689(**)	.96	1								
SSRD	.141	.118	.193(*)	1							
DSRD	.430(**)	.164(*)	.449(**)	.159(*)	1						
Size	.191(*)	.164(*)	.339(**)	.117	.223(**)	1					
Internationality	.205(*)	.187(*)	.306(**)	.301(**)	.186(*)	.658(**)	1				
Affiliation	.128	.084	.091	-.274(**)	.149	.193(*)	-.013	1			
UniPriv	.132	-.081	.020	.019	-.47	-.363(**)	.047	-.301(**)	1		
Age	.151	.171(*)	.117	.073	.083	.025	.221(**)	.035	.284(**)	1	
ShanghaiRank	.215(**)	.021	.324(**)	.660(**)	.136	.193(*)	.480(**)	-.314(**)	.203(*)	.236(**)	1

Source: Own elaboration. Note: * Significant at 0.05; ** Significant at 0.01

TABLE 9. MODEL 2. Factors underlying the online disclosure of CSR information

	GSRD	ESRD	NSRD	SSRD	DSRD
Variable	Standardised coefficients	Standardised coefficients	Standardised coefficients	Standardised coefficients	Standardised coefficients
Size	.238 (1.976**)	.006 (.045)	.347 (3.006)**	-.091 (-.955)	.178 (1.431)
Internationality	-.071 (-.576)	.189 (1.485)	-.080 (-.682)	.059 (.610)	-.007 (-.055)
Affiliation	.217 (2.515**)	.018 (.201)	.162 (1.96)**	-.097 (-1.424)	.168 (.060)*
UniPriv	.233 (2.459**)	-.117 (-1.187)	.132 (1.456)	-.168 (-2.248)**	.031 (.315)
Age	.036 (.436)	.181 (2.094)**	.008 (.096)	-.043 (-.659)	.031 (.361)
ShanghaiRank	.214 (2.263**)	-.084 (-.853)	.317 (3.499)**	.663 (8.869)	.144 (1.476)
F	4.022***	2.021*	6.667***	21.309***	2.261**
R^2	.141	.076	.214	.465	.084

Source: Own elaboration. Note: * Significant at 0.1; ** Significant at 0.05; ***Significant at 0.0

5.3. Hypothesis testing

As Model 1 gives little information about the factors affecting disclosure of CSR information, we will focus and discuss on the results obtained in our second model in order to test the hypotheses proposed in section 3 of this paper.

According to the results of our study, the size of the organization shows a positive influence on CSR information online disclosure. This result is similar to that widely studied in the business world (Craven and Marston, 1999; Purushothaman et al., 2000; Archel, 2003; Oyelere et al., 2003; Reverte, 2009; Da Silva Monteiro and Aibar-Guzmán, 2010) and to a lesser extent with respect to universities (Gordon et al., 2002; Gallego et al., 2011a). Therefore, results seem to indicate that larger universities address a wider audience and hence should strive to project a good image, through a high level of information disclosure. This would facilitate the process of acquiring new students, in the present competitive context. The Internet, thus, has come to be of fundamental importance, by allowing universities to promote themselves internationally (Gallego et al., 2011a).

The positive influence on information disclosure of the university's affiliation and of its private status is coherent with our model. In the first case, *affiliation* (it has been significant in the case of general information, environmental information and educational information), we believe that the presence of CSR-qualified personnel will make the university more involved in social, environmental, economic and educational issues, and that this, in turn, will promote the disclosure of information in this respect.

Moreover, and in contrast to other studies in which the *public/private status* of the university was not found to be a significant variable (Gallego et al., 2011a), in our model, it was significant in terms of the general and social CSR information. Nonetheless, whereas it had a positive influence on the dependent variable GSRD, it has showed a negative sign as to the online social information disclosure by universities. This result may indicate that, in the current competitive world situation, and according to the theory of legitimacy, CSR disclosure would be an intangible asset of some interest

218

to universities, especially private ones, which in financial terms depend primarily on students' tuition fees (Gordon et al., 2002). However, social information disclosures seem to be less relevant in this concern.

Another independent variable, *age*, is also positively related but the effect is not statistically significant in our sample of universities, for the model analysed. Although this variable has previously been found to be influential in models of information disclosure (Murias et al., 2008; Gallego et al., 2011a), it appears that in the particular case of universities and in line with the results obtained by previous studies, such as Gallego et al. (2011a), it is statistically non-significant.

The variable *internationality* has an inverse influence in most of the information disclosed. However, this influence is not statistically significant for the disclosure of either general CSR information or that related to specifically CSR issues, which contradicts other studies that have reported its effect to be both positive and significant (Gallego et al., 2011a). Accordingly, although the disclosure of CSR information could serve to improve a university's image and thus attract a greater number of students, it seems that universities are adopting online communication policies without taking into account the information needs of potential students abroad.

Finally, the variable *Shanghai ranking* has a positive and statistically significant relation with the disclosure of all information except for online educational and economic information disclosures. In this regard, *Shangai Ranking* is not associated with these variables. Thus, in general, we find that the universities in the highest positions according to the Shanghai ranking differ significantly and positively regarding the CSR information provided from universities that occupy low ranking positions.

Therefore, the overall results obtained in our second model, for our sample data, support hypotheses H1, H3, H4 and H6, suggesting there are positive relations between the size, affiliation and private status of universities in terms of the online disclosure of general CSR information by universities. Furthermore, our results support H1, H3 and H6 in relation to

the online disclosure of environmental information; H6 to the online disclosure of economic information; H4 and H6 to the online disclosure of social information and H3 to the online disclosure of educational information. The signs obtained from the hypotheses accepted are consistent with those expected according to the theoretical studies.

In summary, our results show, on the one hand, the very limited disclosure of CSR information by USA universities, and on the other, the importance of certain variables on the online disclosure of general and specific CSR information, thus confirming, in some respects, the results obtained by prior research in other countries, such as the UK (Banks et al., 1997).

6. Conclusions

Universities are increasingly pressured to improve the transparency and accountability of their actions, and the disclosure of social responsibility information is required by their stakeholders.

In recent decades, the development of new technologies, particularly the Internet, has created a channel that can be used to transmit stakeholders' expectations and demands, to establish mechanisms for dialogue and to improve information transparency, thus contributing to universities' compliance with their duty of accountability to stakeholders. The results of our empirical research show that the USA universities are taking advantage of the potential of Internet for online CSR information disclosure, although it is more focused on the online disclosure of specific CSR information, especially on economic, social and educational information; the volume of such information disclosed online is high. This fact both favours the effective fulfilment of their duty of accountability to stakeholders regarding the provision of this type of information as our knowledge of the activities being undertaken in this field by universities, thus favoring the development of benchmarking procedures that would help universities improve and enhance their competitiveness.

Nevertheless, while further efforts are still required in the disclosure of social and educational information, the environmental and economic

aspects of this question are currently being communicated via university reports or on their websites; perhaps due to longer-standing traditions in this respect.

The main objective of this paper is to analyse the main characteristics of universities that influence on the online disclosure practices of CSR information. Our results show that factors such as the university's size, affiliation, private status and the position in shanghai ranking have a positive influence on its disclosure of General CSR information. This finding confirms that the larger the university and the more schools and faculties it contains, especially when these are specialised in CSR-related issues, the higher the level of online disclosure of such information. These results confirm the previously obtained in previous works and that more students can be greater disclosure level university. Perhaps this is because the information provided on the websites of the universities has become a major source of university selection by students.

Moreover, given the differing natures of private and public universities it was to be expected, and this was confirmed in our study, that they would present different patterns of behaviour regarding information transparency in terms of their social responsibility. Thus, some studies have argued that organisations, by acting under criteria of social responsibility, can acquire a position of competitive advantage and obtain better financial results; by maintaining good relations with stakeholders, and meeting their expectations in this respect, such organisations can increase their intangible assets, resources and capabilities, and thus improve their competitiveness. In addition, prior research has indicated that in the current Global Financial Crisis scenario, in which universities' funding is decreasing –both at public and private universities-, this issue becomes relevant to attract a greater number of students to the universities. In this regard, in our study, referring to the disclosure of social information and regardless of prior research which seems to indicate that private universities could be more prone to disclose CSR reporting, we think public universities are the most committed to these aspects, although this feature is not influential with

respect to the online disclosure of environmental information in the field of CSR.

Our results confirm those obtained by previous studies focusing on universities in other countries, and on other types of information disclosed. This seems to suggest, as in the case of the private sector, that information disclosure strategies are determined in similar ways, regardless of the country in which the organisation is based, thus providing a clear example of the convergence of markets in an increasingly globalised world.

It should be emphasised that in this study the models proposed did not obtain high explanatory values, which leads us to believe that other variables exercise a significant influence on the online disclosure of general and specific CSR information in universities. Such variables need to be identified and addressed in subsequent research. Besides, it would be interesting to study the influence of these variables in other contexts and countries to observe the similitude and differences in this regard.

We highlight the absence of a model of CSR disclosure that standardize and facilitate benchmarking information although there are some efforts made in this field of research. Therefore, the selected items in our research have been the result of a preliminary analysis of research on it and on information that is currently being disclosed by universities on their websites, with the aim of highlighting the best practices on online CSR information in universities. Therefore, future research could propose other models of disclosure analysis that seek to analyze these items and others deemed appropriate. In fact, the standardisation of reporting through use of guidelines will ultimately increase transparency and should result in greater results over time (Schneider et al., 2011).

Another main remaining question raised by our research could be to analyze if the online disclosure of SR information by universities, could help to improve managerial commitment to CSR in corporations through education and training of future managers, and through the creation of social movements and SR discourses within student organizations since student organizations have been demonstrated to be vulnerable to the

discourse of sustainability reporting. Accordingly, a line of interest for future study would be to analyze the models required to manage and properly channel the university SR information provided to stakeholders. This question may be decisive both in students' choice of university and in shaping the prestige of these institutions.

7. References

Adams, C., Hill, W.Y. and Roberts, C. (1998). Corporate social reporting practices in Western Europe: Legitimating corporate behaviour? British Accounting Review, 30 (1), 1–21.

Adrem A.H. (1999). Essays on disclosure practices in Sweden – Causes and effects. Lund University Press: Lund.

Aerts, W., Cormier, D. and Magnan, M. (2008). Corporate environmental disclosure, financial markets and the media: an international perspective. Ecological Economics, 64 (3), 643–659.

American Council on Education (1995). Educating Americans for a world in flux: ten ground rules for internationalizing higher education, American Council on Education, Washington, DC.

Ball, A., Bebbington, J. (2008). Accounting and reporting for sustainable development in public service organisations. Public Management Review, 28, 323-326.

Ball, A. and Grubnic, S. (2007). Sustainability accounting and accountability in the public sector. In: Unerman, J., Bebbington, J., O'Dwyer, B. (Eds.), Sustainability Accounting and Accountability. Routledge, New York, NY, 243-265.

Banks, W., Fisher, J. and Nelson, M. (1997). University accountability in England, Wales and Northern Ireland: 1992-1994. Journal of International Accounting, Auditing and Taxation, 6 (2), 211-227.

Barth, M., Godemann, J., Rieckmann, M., Stoltenberg, U. (2007). Developing key competencies for sustainable development in higher

education. International Journal of Sustainability in Higher Education, 8 (4), 416 – 430.

Billaut, J.C., Bouyssou D., and Vincke, P. (2010). Should you believe in the Shanghai ranking?. Scientometrics, 84 (1), 237-263.

Borkowski, S.C., Welsh, M.J. and Wentzel, K. (2010). Johnson & Johnson: A Model for Sustainability Reporting. Strategic Finance, 29–37.

Branco, M. and Rodrigues, L. (2006). Communication of corporate social responsibility by Portuguese banks: A legitimacy theory perspective. Corporate communications: An International Journal, 11 (3), 232–248.

Buela-Casal, G., Gutiérrez-Martínez, O., Bermúdez-Sánchez, M. and Vadillo-Muñoz, O. (2007). Comparative study of international academic rankings of universities. Scientometrics, 71, 349–365.

Caba, C., López, A. and Rodríguez, M.P. (2005). Citizens' access to on-line governmental financial information: Practices in the European Union countries. Government Information Quarterly, 22 (2), 258–276.

Calder, W. and Clugston, R.M. (2003). Progress Toward Sustainability in Higher Education' Environmental Law Institute. Washington, DC. Reprinted with permission from ELR, http://www.eli.org, 1-800-433-5120

Capriotti, P. and Moreno, A. (2007). Corporate citizenship and public relations: The importance and interactivity of social responsibility issues on corporate websites. Public Relations Review, 33 (1), 84–91.

Carlson, S. (2008). How green was my college. Chronicle of Higher Education, 54 (34), 4-5.

Castelo, B.M. and Lima, R.L. (2008). Factors Influencing Social Responsibility Disclosure by Portuguese Companies. Journal of Business Ethics, 83 (4), 685–701.

Cho, D.H. and Patten, D.M. (2007). The role of environmental disclosures as a tool of legitimacy: a research note. Accounting, Organizations and Society, 32 (7-8), 639-647.

Cole, L. (2003). Assessing sustainability on Canadian university campuses: development of a campus sustainability assessment framework. Unpublished Master thesis, Royal Roads University, Victoria.

Cooke, T.E. (1989). Voluntary corporate disclosure by Swedish companies. Journal of International Financial Management and Accounting, 1 (2), 171–195.

Cormier, D., Gordon, I. and Magnan, M. (2004). Corporate environmental disclosure: Contrasting management's perceptions with reality. Journal of Business Ethics, 49, 143–65.

Cormier, D., Magnan, M. and Van Velthoven, B. (2005). Environmental disclosure quality in large German companies: economic incentives, public pressures or institutional conditions?. European Accounting Review, 14 (1), 3–39.

Coupland, C. (2005). Corporate social and environmental responsibility in web-based reports: currency in the banking sector? Critical Perspectives on Accounting, 17 (7), 865–881.

Craven, B.M. and Marston, C.L. (1999). Financial reporting on the Internet by leading UK companies. The European Accounting Review, 8 (2), 321–333.

Da Silva Monteiro, S.M. and Aibar-Guzmán, B. (2010). Determinants of environmental disclosure in the annual reports of large companies operating in Portugal. Corporate Social Responsibility and Environmental Management, 17, 185–204.

Daub, C.H. (2007). Assessing the quality of sustainability reporting: an alternative methodological approach. Journal of Cleaner Production, 15 (1), 75-85.

Decter, Moira H. (2009). Comparative review of UK-USA industry-university relationships. Education and Training, 51 (8/9), 624-634.

Deegan, C. and Rankin, M. (1996). Do Australian companies report environmental news objectively? An analysis of environmental disclosures by firms prosecuted successfully by the Environmental Protection Authority. Accounting, Auditing & Accountability Journal, 9 (2), 50-67.

Deegan, C., Rankin, M. and Tobin, J. (2002). An examination of the corporate social and environmental disclosures of BHP from 1983-1997: a test of legitimacy theory. Accounting, Auditing & Accountability Journal, 15 (3), 312-343.

Docampo, D. (2008). International rankings and quality of the university systems. Revista de Educacion, (Special Issue), 149-176.

Doh, J.P. and Guay, T.R. (2006). Corporate social responsibility, public policy, and NGO activism in Europe and the United States: an institutional-stakeholder perspective. Journal of Management Studies, 43 (1), 47-73.

Ferrer-Balas, D., Bruno, J., de Mingo, M. and Sans, R. (2004). Advances in education transformation towards sustainable development at the technical university of Catalonia, Barcelona. International Journal of Sustainability in Higher Education, 5 (3), 251-66.

Gallego Álvarez, I., Rodríguez Domínguez, L. and García Sánchez, I.M. (2011ª). Information disclosed online by Spanish universities: content and explanatory factors. Online Information Review, 35 (3), 360-385.

Gallego Álvarez, I., Rodríguez Domínguez, L. and García Sánchez, I.M., (2011b). Study of some explanatory factors in the opportunities arising from climate change. Journal of Cleaner Production, 39, 60-72.

Garde Sánchez, R., Rodríguez Bolívar, M.P. and López-Hernández, A.M. (2013). Online disclosure of university social responsibility: a comparative study of public and private US universities. Environmental Education Research, Online first, 1-38.

Giacalone, R. A. (2008). Taking a red pill to disempower unethical students: Creating ethical sentinels in business schools. Academy of Management Learning and Education, 6 (4), 534–542.

Gordon, T., Fischer, M., Malone, D. and Tower, G. (2002). A comparative empirical examination of extent of disclosure by private and public colleges and universities in the United States. Journal of Accounting and Public Policy, 21 (3), 235-275.

Gray, R., Kouhy, R. and Lavers, S. (1995). Corporate social and environmental reporting: A review of the literature and a longitudinal study of UK disclosure. Accounting, Auditing & Accountability Journal, 8 (2), 47–77.

Guimarães-Costa, N. and Pina e Cunha, M. (2008). The atrium effect of website openness on the communication of corporate social responsibility. Corporate Social Responsibility and Environmental Management, 15 (1), 4–51.

Gumport, P.J. and Sporn, B. (1999). Institutional adaptation: demands for management reform and university administration, in Smart, J.C. and Tierney, W.G. (Eds), Higher Education: Handbook of Theory and Research, Vol. XIV, Agathon Press, New York, NY, 103-145.

Hackston, D. and Milne, M. (1996). Some determinants of social and environmental disclosures in New Zealand companies. Accounting, Auditing & Accountability Journal, 9 (1), 77–108.

Hammond, C. and Churchman, D. (2008). Sustaining academic life: A case for apllying principles of social sustainability to the academic profession. International Journal of Sustainability in Higher Education, 9 (3), 235-245.

Haniffa, R.M. and Cooke, T.E. (2005). The impact of culture and governance on corporate social reporting. Journal of Accounting and Public Policy, 24 (5), 391–430.

Ho, P., Tower, G. and Barako, D. (2008). Improving governance leads to improved corporate communication. Corporate Ownership and Control, 5, 26-33.

Hooghiemstra, R. (2000). Corporate communication and impression management: new perspectives why companies engage in corporate social reporting. Journal of Business Ethics, 27 (1/2), 55–68.

Huang, S.K. and Wang, Y.L. (2012). A comparative study of sustainability management education in China and the USA. Environmental Education Research, 1–17.

Ivy, J. (2001). Higher education institution image: a correspondence analysis approach, International Journal of Educational Management, 15 (6), 276-282.

Jaggi, B. and Low, P.Y. (2000). Impact of culture, market forces, and legal system on financial disclosures. The International Journal of Accounting, 35 (4), 495–519.

Jenkins, H. and Yakovleva, N. (2006). Corporate social responsibility in the mining industry: Exploring trends in social and environmental disclosure. Journal of Cleaner Production, 14 (3–4), 271–284.

Jones, K. (2001). Study on environmental reporting by companies. Sunderland, England: Center for Environmental Informatics.

Jones, K., Alabaster, T. and Walton, J., (1998). Virtual Environments for Environmental Reporting. Greener Management International, 21, 121–137.

Kastenholz, E, Galín Ladero, M.M. and Valero Amaro, V. (2004). La Responsabilidad Social En Las Entidades Financieras: Un Estudio

Exploratorio De La Situación En Portugal. International Review on Public and Nonprofit Marketing, 1 (2), 89-100.

Knox, S., Maklan, S. and French, P. (2006). Corporate social responsibility: exploring stakeholder relationships and programme reporting across leading FTSE companies. Journal of Business Ethics, 61 (1), 7–28.

Larrán, M. and Giner, B. (2002). The use of the Internet for corporate reporting by Spanish companies. The International Journal of Digital Accounting Research, 2 (1), 53-82.

Leydesdorff, L. and C.S. Jung C. (2011). How to evaluate universities in terms of their relative citation impacts: Fractional counting of citations and the normalization of differences among disciplines. Journal of the American Society for Information Science and Technology, 62 (6), 1146–1155.

Lozano, R. (2006a). Incorporation and institutionalization of SD into universities: breaking through barriers to change. Journal of Cleaner Production, 14 (9-11), 787-796.

Lozano, R. (2006b). A tool for a Graphical Assessment of Sustainability in Universities (GASU). Journal of Cleaner Production, 14, 963–972.

Lozano, R. (2010). Diffusion of sustainable development in universities' curricula: an empirical example from Cardiff University. Journal of Cleaner Production, 18 (7), 637–644.

Lozano, R. (2011). State of Sustainability Reporting in Universities. International Journal of Sustainability in Higher Education, 12, 67–78.

Lozano, R. and Huisingh, D. (2011). Inter-linking issues and dimensions in sustainability reporting, Journal of Cleaner Production, 19 (2/3), 99-107.

Lozano, R., Lukman, R., Lozano, F.J., Huisingh, D. and Lambrechts, W. (2011). Declarations for sustainability in higher education: becoming

better leaders, through addressing the university system. Journal of Cleaner Production, in press, 1-10.

Lozano, R. and Peattie, K. (2011). Assessing Cardiff University's Curricula Contribution to Sustainable Development Using the STAUNCH(RTM) System. Journal of Education for Sustainable Development, 5 (1), 115-128.

Lukman, R. and Glavič, P. (2007). What are the key elements of a sustainable university?. Clean Technologies and Environmental Policy, 9 (2), 103-114.

McNamara, K.H. (2008). Fostering sustainability in higher education: a mixed-methods study of transformative leadership and change strategies. Submitted to the Ph.D. in Leadership & Change Program of Antioch University.

McWilliams, A. and Siegel, D. (2001). Corporate social responsibility: a theory of the firm perspective. The Academy of Management Review, 26 (1), 117–127.

Meijer, A. (2009). Understanding Modern Transparency. International Review of Administrative, 75, 255.

Mellé Hernández, E. (2007). Social Responsibility in the Public Sector. Ekonomiaz, 65, 84-107.

Milne, M.J. (2002). Positive accounting theory, political costs and social disclosure analyses: a critical look. Critical Perspectives on Accounting, 13 (3), 369–395.

Mochizuki, Y. and Fadeeva, Z. (2010). Competences for sustainable development and sustainability Significance and challenges for ESD. International Journal of Sustainability in Higher Education, 11 (4), 391-403

Muijen, H. (2004). Corporate Social Responsibility Starts at University. Journal of Business Ethics, 53 (1/2), 235–246.

Mulder, K.F. (2010). Don't preach. Practice! Value laden statements in academic sustainability education. International Journal of Sustainability in Higher Education, 11 (1), 74-85.

Murias, P., de Miguel, J.C. and Rodríguez, D. (2008). A composite indicator for university quality assessment: the case of Spanish higher education system?. Social Indicator Research, 89 (1), 129-146.

Neu, D., Warsame, H. and Pedwell, K. (1998). Managing public impressions: environmental disclosures in annual reports. Accounting, Organizations and Society, 23 (3), 265–282.

Nichols, M.R. (2010). The Institutionalization of Sustainability at Universities: Effects on Student Collective Action. Ph. Doctoral Thesis, Canada: Chapel Hill.

Nicolaides, A. (2006). The implementation of environmental management towards sustainable universities and education for sustainable development as an ethical imperative. International Journal of Sustainability in Higher Education, 7 (4), 414–424.

Niland, J. (2012). Globalization, Universities and Sustainability Effects, in Weber, L. E. and Duderstadt (eds), Global Sustainability and the Responsibilities of Universities, Glion Colloquium Series nº7, Economica Ltd, France, 247-263.

O'Dwyer, B. (2003). The ponderous evolution of corporate environmental reporting in Ireland. Recent evidence from publicly listed companies. Corporate Social Responsibility and Environmental Management, 10 (2), 91–100.

Opoku, R., Caruana, A., Pitt, L. and Berthon, P. (2009). Online communication of brand personality: a study of MBA programs of top business schools. Journal of General Management, 35 (1), 47-64.

Oyelere, P., Laswad, F. and Fisher, R. (2003). Determinants of internet financial reporting by New Zealand companies. Journal of International Financial Management and Accounting, 14 (1), 26-63.

Parker, J. (2010). Competencies for interdisciplinarity in higher education. International Journal of Sustainability in Higher Education, 11 (4), 325 – 338.

Pineno, C.J. (2011). Sustainability reporting by universities: a separate category within the balanced scorecard based on key drivers through a mapping strategy. Journal of Strategic Innovation and Sustainability, 7 (2), 122-134.

Purushothaman, M., Tower, G., Hancock, R. and Taplin, R. (2000). Determinants of corporate social reporting practices of listed Singapore companies. Pacific Accounting Review, 12 (2), 101–133.

Reverte, C. (2009). Determinants of corporate social responsibility disclosure ratings by Spanish listed firms. Journal of Business Ethics, 88 (2), 351–366.

Rodríguez Bolívar, M.P., Garde Sánchez, R. and López Hernández, A.M. (2011). Sustainability reporting at the university. An empirical research on online disclosure on corporate social responsibility in leading universities. Proceedings to the 13th Biennial CIGAR Conference, Ghent (Belgium).

Schimmel, K., Motley, D., Racic, S., Marco, G. and Eschenfelder, M. (2010). The importance of university web pages in selecting a higher education institution. Research in Higher Education Journal, 9, 1-16.

Schneider, J., Campbell, D., Vargo, C. and Hall, R. (2011). An Analysis of Reported Sustainability-Related Efforts in the Petroleum Refining Industry. The Journal of Corporate Citizenship, 44, 69–84.

Serap, A.M.G. and 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.

Setó-Pamies, D., Domingo-Vernis, M. and Rabassa-Figueras, N. (2011). Corporate social responsibility in management education: Current

status in Spanish universities. Journal of Management and Organization, 17 (5), 604–620.

Stephens, J.C., Hernandez, M.E., Román, M., Graham, A.C. and Scholz, R.W. (2008). Higher education as a change agent for sustainability in different cultures and contexts. International Journal of Sustainability in Higher Education, 9 (3), 317–338.

Svanström, M., Palme, U., Knutson Wedel, M., Carlson, O., Nyström, T. and Edén, M. (2012). Embedding of ESD in engineering education: Experiences from Chalmers University of Technolog. International Journal of Sustainability in Higher Education, 13 (3), 279-292.

Tagesson, T., Blank, V., Broberg, P. and Collin, S.O. (2009). What explains the extent and content of social and environmental disclosures on corporate websites: a study of social and environmental reporting in Swedish listed corporations. Corporate Social Responsibility and Environmental Management, 16 (6), 352–364

UNESCO (United Nations Educational, Scientific and Cultural Organization) (1998). WORLD DECLARATION ON HIGHER EDUCATION FOR THE TWENTY-FIRST CENTURY: VISION AND ACTION [Preparing for sustainable future: Higher education and sustainable human development]. World Conference on Higher Education, August, in Paris. ED-98/CONF.2002/7.2.

UNESCO (2005). UN decade of education for sustainable development 2005–2014. International implementation scheme. Draft (Paris, UNESCO).

University Leaders for sustainable Future (ULSF). http://www.ulsf.org/

Vallaeys, F. (2006). Brief theoretical framework of university social responsibility. Pontificia Universidad Católica de Perú. Retrieved 2012 from http://blog.pucp.edu.pe/item/4880/breve-marco-teorico-de-rsu

Van Weenen, H. (2000). Towards a vision of a sustainable university. International Journal of Sustainability in Higher Education, 1 (1), 20-34.

Verbeek, M. (2004). A Gide to Modern Eonometrics. John Wiley & Sons, Chichester.

Vuontisjärvi, T. (2006). Corporate Social Reporting in the European Context and Human Resource Disclosures: An Analysis of Finnish Companies. Journal of Business Ethics, 69 (4), 331-354.

Xiao, J.Z., Yang, H. and Chow, C.W. (2004). The determinants and characteristics of voluntary Internet-based disclosures by listed Chinese companies. Journal of Accounting and Public Policy, 23 (3), 191–225.

CHAPTER 7: CONCLUSIONS AND FUTURE RESEARCH

1. Conclusions and future research

1.1. Conclusions and future research

The main conclusions of this research study can be summarised as follows:

1. Our results show that universities in English-speaking countries are currently paying most attention to CSR disclosure, although they still assign very little importance to the online disclosure of these questions, according to the proposed evaluation model. This finding is in contrast to the observations of previous studies, such as that conducted by Lukman and Glavić (2007), who argue that universities are among the main agents in promoting social responsibility policies.

2. In general, universities do not facilitate the search for information about CSR on their websites, insofar as there is no uniformity in how this information is disclosed. Indeed, it tends to be widely dispersed on university websites and is sometimes included in technical reports or in the annual report, which hampers the use of specific reports on sustainability or social responsibility, which in turn hinders the benchmarking process. A set of common guidelines is needed to overcome this heterogeneity and to ensure that the information disclosed is useful for the different users.

In fact, although universities could take advantage of the benefits offered by ICT to promote the participation of stakeholders in the management of the institution, they do not seem to realize that these stakeholders require more complete information about the diverse aspects of CSR (Al-Khatar and Naser, 2003). This conclusion contrasts with the results obtained in other studies, according to which universities are developing tools to improve their relationships with their stakeholders, adapting themselves to the latter's expectations and increasing their influence and participation in university management (Al-Khatar and Naser, 2003; Jongbloed et al., 2008; Castelo and Lima, 2008; Gaete, 2009; Krazimierz, 2010).

The interpretation of our results indicates that universities are providing information about CSR in terms of responding to certain basic requirements, possibly using this information as a means of legitimising their performance and enhancing their image. Nevertheless, this disclosure is not considered a tool for accountability, nor is it viewed as necessary in order to meet the demands of the stakeholders in the organisation. Our evidence suggests that universities are not seeking to analyse and meet the needs of stakeholders, despite the great influence they exert on any organisation (Johnson et al., 2006). This is an important finding, and one that in our opinion requires further analysis, to take into consideration stakeholders interested in universities' management and strategies and in supervising their activities.

3. The highest ranked universities in English-speaking countries in the proposed model do not occupy the highest places in the Webometric ranking, which measures online information disclosure. In fact, the universities at the top of the Webometric scale are those which, in general, provide least information about CSR. This leads us to conclude that, at present, this type of information is not taken into account as relevant in terms of the parameters that measure information disclosure. Accordingly, we believe universities should reconsider their efforts in this area and establish specific targets to improve their performance.

4. Among the universities in English-speaking countries, those in the USA are at the forefront, according to the results obtained by our model. However, their levels of disclosure of CSR-related issues are still low, which suggests that they need to raise their degree of commitment in this respect. If this were done, it could provide them with a competitive advantage with respect to other universities that fail to adopt such a strategy.

These US universities are quite homogeneous in their patterns of information disclosure, regardless of their public or private nature. Therefore, we conclude that the disclosure of CSR information is not considered to be a differentiating factor placing them in an advantageous competitive position. However, the actual volume of CSR information

disclosure does act as a differentiating element, insofar as it is the universities considered to present the highest quality in teaching and research that provide the greatest amount of CSR information. The higher-quality public universities present information disclosure models that differ from those of lower-ranked institutions, in both content and context. However, the private universities vary only as regards the content of the CSR information disclosed. In consequence, we conclude that there is a certain degree of homogeneity in the information disclosed, and that this facilitates its comparison.

5. On the other hand, Spanish universities, far from using ICT to improve their accountability, are failing to exploit the possibilities provided for the online disclosure of CSR information, and of facilitating the involvement and interaction of stakeholders in the management of these questions. Our results also suggest that Spanish universities do not currently show any interest in making use of ICT to determine the views of stakeholders regarding the design and implementation of CSR policies.

In Spain, public universities produce higher levels of CSR information disclosure, despite the fact that such disclosure by private universities could differentiate them and enhance their competitiveness with respect to the public institutions.

As in the English-speaking world, CSR information disclosure does act as a differentiating element; it is the higher-quality universities, in terms of teaching and research, that disclose most CSR information, and this is an aspect that might constitute a key factor for students in their choice of university (Schimmel et al., 2010).

There is considerable homogeneity between the highest and lowest-ranking universities, as regards the content of the CSR information disclosed online and the context in which this is done. This suggests the existence of informal patterns of disclosure among universities with similar policies on communication, with those presenting higher levels of online visibility reflecting best practice in the field, and being imitated by the others.

6. Our analysis of US and Spanish universities shows the latter to be less committed in terms of the online disclosure of CSR information and reports, which have scant presence on their websites. The results were also poor for the US universities, despite their longer history in the field of CSR. Thus, the data for information disclosure on their websites do not differ greatly from those of other universities that have addressed these areas more recently.

7. With respect to the factors that influence universities' disclosure of CSR information, our results show that factors such as the university's size, affiliation, private status and Shanghai ranking all have a positive impact in this respect. This finding confirms that the older the university, and the more schools and faculties it has, especially when they are specialised in areas related to CSR, the greater the online disclosure of CSR information. These results confirm those obtained in previous studies (Gordon et al., 2002; Gallego et al., 2011).

Moreover, given the different types of university – private versus public – it was to be expected, and this was confirmed in practice, that they would present different patterns of behaviour with respect to the transparency of information disclosure related to social responsibility. Thus, some studies have argued that organisations, acting under criteria of social responsibility, may acquire a competitive advantage and better results (Gordon et al., 2002). By maintaining good relations with stakeholders, and meeting their expectations in this regard, such organisations can enhance their intangible assets, resources and capabilities, and improve their competitiveness (Castelo and Lima, 2008). Previous research has also indicated that in the current global financial crisis, in which university funding is declining, in both public and private universities, this issue is considered very relevant in terms of attracting more students to the universities. Our study suggests that public universities are more committed than private ones to these issues.

In conclusion, widespread interest in extending universities' social commitment and the need to raise the profile of CSR criteria, in teaching

and research and also in terms of corporate strategy, underpin the research conducted in this thesis, which seeks to contribute to our understanding of social responsibility in universities and to provide useful data for university administrators who wish to enhance the social commitment of their institutions.

In the view that the disclosure of information on social responsibility is a fundamental part of a university's duties and a key aspect of CSR, the contribution of this study resides not only in terms of the model proposed to facilitate the evaluation of the degree of online disclosure on social responsibility in universities, but also in its promotion of comparative evaluations to help organisations improve these practices and better fulfil their duty of accountability, thus enhancing their legitimacy and better meeting stakeholders' expectations.

The results obtained from this line of research could provoke a continuing debate on the issue, as CSR is playing an ever more important role in public administration in general and in universities in particular. UNESCO has observed that universities have a specific mission to contribute to sustainable development and to the general improvement of society. In view of the scant importance assigned by universities to the disclosure of CSR information on their websites, we believe this issue calls for special attention, above all if universities wish CSR to be considered a strategic, differentiating factor.

In terms of **future lines of investigation**, it should be emphasised that our study was the outcome of a preliminary analysis of the social responsibility information being published by universities online, i.e., via the internet, the aim of which was to highlight best practices in this area. However, although work has been done in this regard, we reiterate the absence of any CSR disclosure model that would standardise and facilitate this task. The standardised presentation of reports would increase transparency and facilitate accountability, thus enhancing results over time (Schneider et al., 2011). Therefore, future research could be aimed at

proposing alternative models to analyse this disclosure and other areas considered appropriate.

It is important to note that in the present study, the explanatory values obtained by the models proposed are not very high, which leads us to believe that other variables must exert a significant influence on the online disclosure of CSR information by universities. These variables should be identified and addressed in future research. It would also be useful to study the influence of these variables in other contexts and countries in order to observe the similarities and differences arising in this regard.

Another important issue remaining to be addressed is that of whether the online disclosure of CSR information by universities could heighten the commitment to CSR considerations in the business world, through education and the training of future managers. In this respect, student organisations have been found to be receptive to the discourse presented in sustainability reports (Nichols, 2010). Consequently, another line of interest for future study would be to analyse the models needed to manage and properly channel CSR information in the university context. This question could be of decisive importance, both in students' choice of university and in enhancing the reputation of these institutions.

1.2. Conclusiones y futuras investigaciones

Las principales conclusiones de nuestro trabajo de investigación se pueden resumir como sigue:

1. Nuestros resultados muestran que las universidades pertenecientes a los países anglosajones que son las que, actualmente, están prestando una mayor atención a la divulgación de aspectos de RSC, aún ofrecen muy poca importancia a la divulgación online de tales aspectos según el modelo de evaluación propuesto, a pesar de los resultados de estudios anteriores, como el realizado por Lukman y Glavič (2007), quienes argumentan que las universidades se han convertido en uno de los principales agentes de la promoción de políticas de responsabilidad social.

2. Por otro lado, la investigación realizada nos lleva a concluir que, en general, las universidades no facilitan la búsqueda de información acerca de la RSC en sus páginas web. No existe una homogeneidad en el modo de divulgar la información de RSC. En efecto, la información sobre RSC se encuentra muy dispersa en sus páginas webs y, a veces, se incluye en los informes técnicos o en el informe anual, obviando la utilización de informes específicos de sostenibilidad o de responsabilidad social lo que, a su vez, dificulta el proceso de benchmarking. En este sentido, sería necesario el establecimiento de una serie de pautas comunes que solucionara esta heterogeneidad y facilitara que la información divulgada fuera útil para los diferentes usuarios.

De hecho, si bien las universidades pueden aprovecharse de los beneficios que ofrecen las TIC con el fin de fomentar la participación de las partes interesadas en la gestión de la universidad, no parecen darse cuenta de que estas partes interesadas requieren una información más completa acerca de RSC en sus diferentes dimensiones (Al-Khatar y Naser, 2003). Estos resultados difieren de los resultados obtenidos en otros estudios según los cuales las universidades están desarrollando herramientas que mejoran sus relaciones con sus interlocutores, adaptándose a sus expectativas y aumentando su influencia y participación en la gestión universitaria (Al-Khatar y Naser, 2003; Jongbloed et al., 2008; Castelo y Lima, 2008; Gaete, 2009; Krazimierz, 2010).

Así pues, de la interpretación de estos resultados parece indicarnos que las universidades están divulgando información sobre RSC atendiendo a unos requerimientos básicos, posiblemente usando esta información como medio de legitimación de su actuación y de mejora de la imagen, pero sin llegar a considerarlo como herramienta para la rendición de cuentas y sin considerarlo como una exigencia dirigida a atender las demandas de los stakeholders de su organización. Sin embargo, la evidencia sugiere que las universidades no están tratando de analizar y satisfacer las necesidades de las partes interesadas, a pesar de la gran influencia que tienen en cualquier organización (Johnson et al., 2006). Éste es un aspecto importante que, en nuestra opinión, requiere un análisis posterior para incluir a los grupos de

interés interesados en la gestión, la estrategia y el control de las actuaciones de las universidades.

3. Las universidades anglosajonas mejor clasificadas en el modelo propuesto, no ocupan los lugares más altos en el ranking de Webometric, que mide la divulgación de información online. En efecto, las universidades que ocupan las mejores posiciones en el ranking Webometric son los que, en general, dan menos información sobre RSC. Esto nos lleva a concluir que, en la actualidad, la información sobre RSC no se tiene en cuenta como información relevante en cuanto a los parámetros que miden la divulgación de información. A la luz de esta situación, creemos que las universidades deberían reconsiderar sus esfuerzos en este ámbito y establecer unos objetivos específicos a fin de mejorar en un futuro próximo.

4. Dentro del conjunto de las universidades del ámbito anglosajón, las universidades pertenecientes a EEUU son las universidades líderes, según la valoración obtenida en el modelo propuesto. Sin embargo, sus niveles de divulgación de información de aspectos relacionados con la RSC aún alcanzan unos valores bajos, lo que indica que deberían dedicar mayores esfuerzos para lograr altos niveles de compromiso en cuanto a la divulgación de tales aspectos, lo que podría suponer una ventaja competitiva respecto a otras universidades que no apuesten por esta estrategia.

Además, las universidades estadounidenses están llevando a cabo prácticas homogéneas en la divulgación de dicha información, independientemente de su carácter público o privado, por lo tanto, no consideran la divulgación de la RSC como un elemento diferenciador que les permitiera situarse en una posición de ventaja competitiva. No obstante, el volumen de divulgación de información de RSC sí está actuando como un elemento diferenciador, en cuanto a las universidades de mayor calidad docente e investigadora puesto que son, también, las que divulgan en mayor medida información RSC. De hecho, las universidades públicas de mayor calidad presentan unos modelos de divulgación diferentes del resto (de menor rango) tanto en el contenido como en el contexto. Sin embargo,

las universidades privadas, sólo se diferencian en el contenido de la información de RSC divulgada. En este sentido también podemos concluir que existe un cierto grado de homogeneidad en la información divulgada que facilita la comparación de la misma.

5. En la misma línea, las universidades españolas, lejos de utilizar las TICs para mejorar su rendición de cuentas, están desaprovechando sus posibilidades tanto para la divulgación online de información de RSC, como para favorecer la implicación e interacción de los grupos de interés en la gestión de tales aspectos. De igual forma, los resultados parecen indicar que las universidades españolas no están mostrando interés en recoger, con el apoyo de las TICs, la opinión de los grupos de interés a la hora de diseñar y ejecutar sus políticas de RSC.

Las universidades públicas españolas son las que presentan mayores niveles de divulgación de información socialmente responsable, a pesar de que tal divulgación por parte de las universidades privadas podría ser elemento diferenciador y de competitividad de las mismas respecto a las universidades de carácter público.

Al igual que en el área anglosajona, la divulgación de información de RSC está actuando como un elemento diferenciador, ya que las universidades de mayor calidad docente e investigadora son también las que divulgan en mayor medida información RSC, aspecto éste que podría servir de elemento clave para la toma de decisiones de los estudiantes (Schimmel et al., 2010).

También parece que existe homogeneidad, tanto en el contenido de la información de RS divulgada online como en el contexto en el que lo hacen entre las universidades con la calificación más alta, por una parte, y la más baja, por otra. Esto parece indicar que existen patrones informales de divulgación entre las universidades con similares políticas de comunicación destacando, como mejores prácticas, aquéllas que presentan unos niveles superiores en visibilidad en la web. Esto posiblemente se esté produciendo por imitación de las diversas organizaciones de las mejor posicionadas.

6. A la hora de analizar las universidades de EEUU y las universidades españolas, nuestros resultados indican que las universidades españolas muestran un menor compromiso en cuanto a la divulgación de información online de RSC, ofreciendo escasa información al respecto en sus páginas webs, y presentando muy pocos informes de RSC. Conclusiones similares se obtuvieron de las universidades de Estados Unidos, aunque éstas tienen un historial más largo en el campo de la RSC. Sin embargo, los datos obtenidos con respecto a la divulgación de sus páginas web no son tan diferentes de los de otras universidades más recientes en estos aspectos.

7. Por otro lado, nuestro trabajo de investigación ha analizado los factores que influían en la divulgación de información socialmente responsable por parte de las universidades. Nuestros resultados han mostrado que factores como el tamaño de la universidad, afiliación, carácter privado de la universidad y la posición en el ranking de Shanghai tienen una influencia positiva en la divulgación de información de RSC. Este hallazgo confirma que, cuanto más antigua sea la universidad, y mayor número de facultades posea la misma, sobre todo cuando estas facultades están especializadas en temas relacionados con la RSC, mayor será la divulgación online de información de RSC. Estos resultados confirman los obtenidos previamente en trabajos previos (Gordon et al., 2002 y Gallego et al., 2011).

Por otra parte, dadas las diferentes naturalezas, pública versus privada, de las universidades, era de esperar, y esto fue confirmado en nuestro estudio, que iban a presentar diferentes patrones de comportamiento con respecto a la transparencia informativa relacionada con la responsabilidad social. Así, algunos estudios han argumentado que las organizaciones, al actuar bajo criterios de responsabilidad social, pueden adquirir una posición de ventaja competitiva y obtener mejores resultados (Gordon et al, 2002.). Al mantener buenas relaciones con las partes interesadas, y la satisfacción de sus expectativas en este sentido, dichas organizaciones pueden aumentar sus activos intangibles, recursos y capacidades, y así mejorar su competitividad (Castelo y Lima, 2008).

Además, investigaciones previas han indicado que en el escenario de la crisis financiera mundial actual, en el que la financiación de las universidades está disminuyendo, tanto en universidades públicas como privadas, esta cuestión se vuelve relevante para atraer a un mayor número de estudiantes a las universidades. En este sentido, nuestro estudio parece indicar que las universidades públicas son las más comprometidos con estos aspectos.

En conclusión, el creciente interés por aumentar el compromiso social de las universidades y la necesidad de mejorar los criterios de responsabilidad social, tanto en la docencia como en la investigación, así como en términos de la estrategia corporativa, han sido la justificación de la investigación realizada en esta tesis, que pretende contribuir al conocimiento de la responsabilidad social en las universidades y ser de utilidad para los gestores universitarios implicados en la mejora del compromiso social de sus instituciones.

Si entendemos la divulgación de información sobre la responsabilidad social, como parte fundamental de la responsabilidad social universitaria y un aspecto clave de la RSC, la contribución de este estudio no es sólo en términos de la propuesta de un modelo que facilite la evaluación del grado de divulgación de información online sobre la responsabilidad social en las universidades. También, se pretende fomentar la realización de una evaluación comparativa, con el fin de ayudar a la mejora de estas prácticas y responder más adecuadamente al deber de rendición de cuentas en las organizaciones, mejorando su legitimidad frente a la necesidad de satisfacer las expectativas de las partes interesadas.

Los resultados en esta línea de investigación podrían conducir a un profundo debate, si se tiene en cuenta el hecho de que la RSC está adquiriendo un papel de mayor protagonismo en el ámbito de las Administraciones Públicas y, en concreto, en el caso de las Universidades. Como se ha señalado por la UNESCO, las universidades tienen la misión específica de contribuir al desarrollo sostenible y la mejora general de la sociedad. Habiendo observado la escasa importancia que las universidades

dan a la divulgación de información socialmente responsable en sus páginas web, pensamos que es un tema que requiere una atención especial, sobre todo si las universidades quieren tener en cuenta la RSC como factor estratégico y diferenciador.

En cuanto a las **futuras líneas de investigación**, destacamos que nuestro estudio ha sido el resultado de un análisis preliminar de la investigación sobre la divulgación de información sobre responsabilidad social que de manera online, esto es, a través de Internet, está siendo publicada por las universidades, con el objetivo de destacar las mejores prácticas en esta materia. No obstante, aunque existen esfuerzos al respecto, hemos de subrayar la ausencia de un modelo de divulgación de RSC que estandarice y facilite la misma. De hecho, la normalización en la presentación de informes aumenta la transparencia y facilita la rendición de cuentas incrementando los resultados en el tiempo (Schneider et al., 2011). Por lo tanto, la investigación futura podría proponer otros modelos de análisis de dicha divulgación que traten de analizar estos temas y otros que se consideren apropiados.

Destacamos que en este estudio los modelos propuestos no obtuvieron valores explicativos altos, lo que nos lleva a creer que otras variables ejercen una influencia significativa sobre la divulgación online de información de RSC en las universidades. Tales variables podrían ser identificadas y abordadas en investigaciones posteriores. Además, sería interesante estudiar la influencia de estas variables en otros contextos y países para observar las similitudes y las diferencias en este sentido.

Otra importante cuestión pendiente, planteada por nuestra investigación, podría consistir en analizar si la divulgación de información online de RSC por las universidades podría ayudar a mejorar el compromiso de gestión de la RSC en las empresas a través de la educación y la formación de los futuros gerentes, ya que las organizaciones estudiantiles han demostrado ser vulnerables al discurso de los informes de sostenibilidad (Nichols, 2010). En consecuencia, una línea de interés para futuros estudios sería analizar los modelos necesarios para gestionar y

canalizar adecuadamente la información universitaria de RSC. Esta cuestión podría ser decisiva tanto en la elección de la universidad por parte de los estudiantes como en la formación de prestigio de estas instituciones.

2. Bibliografía

Al-Khatar, K. y Naser, K. (2003). User's Perceptions of Corporate Social Responsibility and Accountability: Evidence from an Emerging Economy. Managerial Auditing Journal, 18 (6/7), 538.

Castelo B.M. y Lima R.L. (2008). Factors Influencing Social Responsibility Disclosure by Portuguese Companies. Journal of Business Ethics, 83 (4), 685–701.

Gaete, R.A. (2009). Stakeholder participation in the evaluation of socially responsible behavior of university management: prospects, obstacles and proposals. Paper presented at the XV AECA Congress. (Valladolid, España), 1-15.

Gallego Álvarez, I., Rodríguez Domínguez, L., García Sánchez, I.M. (2011). Information disclosed online by Spanish universities: content and explanatory factors. Online Information Review, 35 (3), 360-385.

Gordon, T., Fischer, M., Malone, D. y Tower, G. (2002). A comparative empirical examination of extent of disclosure by private and public colleges and universities in the United States. Journal of Accounting and Public Policy, 21 (3), 235-275.

Johnson, G., Scholes, K. and Whittington. (2006). Exploring corporate strategy: Enhanced media edition: Text and Cases (Enhanced Media Text and Case).

Jongbloed, B., Enders, J. y Salerno, C. (2008). Higher Education and its Communities: Interconnections, Interdependencias and a research agenda. Higher Education, 56, 303-324.

Krazimierz M. (2010). Redefining external stakeholders in Nordic Higher Education. Tertiary Education and Management, 16 (1), 45-60.

Lukman, R. y Glavič, P. (2007). What are the key elements of a sustainable university?. Clean Technologies and Environmental Policy, 9 (2), 103-114.

Nichols, M.R. (2010). The Institutionalization of Sustainability at Universities: Effects on Student Collective Action. Ph. Doctoral Thesis, Canada: Chapel Hill.

Schimmel, K., Motley, D., Racic, S., Marco, G. and Eschenfelder, M. (2010). The importance of university web pages in selecting a higher education institution. Research in Higher Education Journal, 9, 1–16.

Schneider, J., Campbell, D., Vargo, C. and Hall, R. (2011). An Analysis of Reported Sustainability-Related Efforts in the Petroleum Refining Industry. The Journal of Corporate Citizenship, 44, 69–84.