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Employees' use of social media technologies: a methodological and thematic review

Asma EL OUIRDI*

Department of Management, Faculty of Applied Economics, University of Antwerp, Antwerp, Belgium

Postal address: Stadscampus, S.C.465, Prinsstraat 13, 2000 Antwerpen – Belgium

Phone number: (0032)470285178

Fax: +32(0)32655079

E-mail: Asma.ElOuardi@student.uantwerpen.be

Mariam EL OUIRDI

Department of Management, Faculty of Applied Economics, University of Antwerp, Antwerp, Belgium

Postal address: Stadscampus, S.C.465, Prinsstraat 13, 2000 Antwerpen – Belgium

Phone number: (0032)471858198

Fax: +32(0)32655079

E-mail: Mariam.ElOuardi@student.uantwerpen.be

Jesse SEGERS

Department of Management, Faculty of Applied Economics, University of Antwerp, Antwerp, Belgium

* Corresponding author

Antwerp Management School, Antwerp, Belgium

Postal address: Stadscampus, S.C.465, Prinsstraat 13, 2000 Antwerpen – Belgium

Phone number: (0032)32655092

Fax: +32(0)32655079

E-mail: Jesse.Segers@ua.ac.be

Erik HENDERICKX

Department of Management, Faculty of Applied Economics, University of Antwerp, Antwerp, Belgium

Postal address: Stadscampus, S.C.444, Prinsstraat 13, 2000 Antwerpen – Belgium

Phone number: (0032)032655076

Fax: +32(0)32655079

E-mail: Erik.Henderickx@ua.ac.be

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With the ubiquity of social media in all aspects of daily life, research interest in the topic has been on the rise. Within the existing body of research on these tools, part of the literature focuses on the use of social technologies by employees. This article employs a systematic literature review methodology, with the objective of identifying the main methodologies and themes of research on employees' usage of social technologies. A total of 66 articles were included in this review, covering five major research themes, that is, legal aspects and policies, human resources management, knowledge management and sharing, learning, and communication. In terms of methodological choices, research on the use of social technologies by employees is found to be fragmented and in need of further quantitative studies, mixed-methods approaches, and theory-based research. Suggestions for future research are provided based on both thematic and methodological considerations.

Keywords: social media technologies; employees; methodological review; thematic review; systematic literature review; social media research

1. Introduction

Social media are online tools that allow users to share content, collaborate, and build networks and communities, with the possibility of reaching and involving large audiences (El Ouiridi et al. 2014). These social tools are built on Web 2.0 platforms, which are interactive, collaborative, and participative technologies (Murugesan 2007) that deliver continually-updated services (O'Reilly 2007). Social technologies are multidimensional tools in terms not only of users, who can be individuals, organisations, or governments (El Ouiridi et al. 2014), but also usage, which can be for personal, professional, or both purposes.

These social technologies have caught the interest of academics since their emergence in the early 2000s. Scholarly interest in the topic has been steadily increasing (Figure 1), as

indicated by the growing number of academic articles published in English, and indexed under the topic 'social media' in the academic database 'Web of Science'. A remarkable peak in academic publications is noticed starting from 2012 with 1195 articles, and continuing in 2013 with 1749 articles, compared to 672 articles in 2011 and 315 articles in 2010.

Insert Figure 1 about Here

Scholars have devoted efforts not only to studying social media, but also to identifying, assessing, organising, and interpreting the growing body of academic research on this topic. Many literature reviews have already sprung up, with varying methodological orientations, temporal frameworks, and thematic scopes. While some researchers conducted broad social media reviews aimed at providing a general view of the existing research on the topic (Wu, Sun, and Tan 2013), others focused on specific disciplines, uses or fields, such as the public sector (Magro 2012), academia (Guy 2012), and the health care sector (Gholami-Kordkheili, Wild, and Strech 2013; Hamm et al. 2013).

Amidst existing social media reviews, very few examined the use of these tools in corporate settings. Also, existing corporate-related reviews seem more focused on the externally facing usage of social media technologies. For instance, some researchers reviewed the literature on social media usage in advertising, communication, marketing, and public relations (Khang, Ki, and Ye 2012), while others reviewed their usage by both suppliers and customers in the tourism and hospitality industry (Leung et al. 2013). Additionally, the methodological approaches of existing social media reviews seem to be lacking more systematic methods.

Therefore, to fill these thematic and methodological gaps, we use a systematic literature review methodology in this paper, with the objective of answering the research question: what are the main methodologies and topics of research on the employees' usage of social media technologies? For this purpose, this article is organised as follows: firstly, we present the details of the systematic review methodology and the review's results; secondly, we report the methodological approaches of the identified literature; thirdly, we identify five main research themes, summarise research in each one of them, and assess their strengths and weaknesses; and finally, we conclude by identifying the limitations of the current review and providing suggestions for future research.

2. Systematic literature review methodology

Management literature reviews are usually narrative and criticised for being biased and lacking rigour, while reviews in the medical field have improved by adopting a more systematic, reproducible and transparent methodology (Tranfield, Denyer, and Smart 2003). Following general guidelines of the systematic literature review method, we present in the following subsections the scope of this review, the process of identifying relevant literature, and the papers included in this review.

2.1. Scope of the review

The scope of this review is defined by two sets of criteria relating to form and content. In terms of form, this review includes academic journal articles, also known as 'certified knowledge' because they had undergone critical review by fellow researchers (Fernandez-Alles and Ramos-Rodríguez 2009); and it excludes book chapters as well as non-academic articles, consisting of short magazine articles, viewpoints, interviews, and editorials. In terms of content, the focus of

this review is on the employees' usage of social media, so we initially excluded articles on the use of these tools for the external promotion of a corporate entity, especially in relation to the marketing and public relations fields.

2.2. Identification of relevant literature

The process of literature identification and review was conducted in two phases in December 2012 and December 2014. In the first phase, we searched for combinations of the keywords 'social media', 'Web 2.0', 'social networking sites', 'workplace', 'employee' and 'employer', in five databases: Emerald, ScienceDirect, Academic search elite, Business Source Premier, and Web of Knowledge. These databases were chosen based on the amount of quality academic content they provide (see Appendix 1), as well as their relevance to management and business research. This first round of search yielded 307 results in December 2012 (see Table 1 for the detailed protocol). The coding of the 307 identified articles was performed by one of the authors. The extracted information included the article's title, author(s), year of publication, journal, document type, and database. From this set, 115 duplicates were eliminated, resulting in an initial sample of 192 articles. Two of the authors read the abstracts of the 192 articles independently in order to verify their relevance to the research scope. Reliability was measured at this stage using ReCal, an online utility that computes inter-coder reliability coefficients and offers multiple coefficients for nominal-level data (Freelon 2010a; Freelon 2010b). This step aimed to ensure the consistency of the literature screening, as failure to establish it makes content analysis measures useless (Neuendorf 2002). Both Scott's Pi and Cohen's Kappa were calculated, scoring 0.849, which is above the accepted level of .80 specified by Lombard, Snyder-duch, and Bracken (2002). Disagreements between the two investigators were jointly reviewed until a final agreement was reached. A total of 129 articles were excluded for non-

compliance with the initially predefined content and form criteria, that is, for being non-academic (features, editorials, magazine articles, viewpoints), or off-topic. This first screening phase resulted in a sample of 63 articles. Next, these articles were extracted, and their full texts examined by two of the authors for final inclusion in the review, based on the same aforementioned criteria. Joint assessment resulted in further excluding 6 articles, resulting in 57 articles in the first round.

Insert Table 1 about Here

In December 2014, a second round of literature screening and reviewing was conducted with the purpose of updating the number of records. In this second round, given the authors' increased familiarity with the literature, the inclusion/exclusion criteria were further refined. In particular, it was decided to exclude articles on the use of social media by organisations to gather information about job applicants (Smith and Kidder 2010; Brown and Vaughn 2011; Clark and Roberts 2010), articles dealing with the technical development and design of social media tools relevant for employee usage in the workplace (Wang 2011; Lykourantzou et al. 2010; García et al. 2011; Ravenscroft et al. 2012), and articles that marginally explored the topic of focus of this review (Koo, Wati, and Jung 2011; Kaplan and Haenlein 2014).

The same keywords were used again to search for articles in academic databases. However, since the authors' subscription to Ebscohost's Academic Search Elite had been discontinued, records from the first phase's search on this database were kept without an update. Moreover, given the recent merger of Web of Knowledge and Web of Science, records from the first phase's search on Web of Knowledge were kept without an update, and new records were

created for Web of Science (see Table 1 for the detailed database protocol). Database screening resulted in 555 records, of which 237 duplicates were identified and removed, resulting in 320 unique records.

This sample was screened by two of the authors who applied the refined inclusion/exclusion criteria and conducted several rounds of reviews and discussion until a final agreement was reached. A final number of 66 articles were retained for inclusion in this review. The process of the second phase of the systematic literature review is illustrated in Figure 2.

Insert Figure 2 about Here

2.3. Systematic literature review results

The 66 articles included in this review were published between 2008 and 2014, with a steady and remarkable increase over this seven-year period (Figure 3), reflecting the same pattern of increased research on social media research overall (Figure 1). This can be explained by the fact that the social media concept itself, as well as the main social media websites, emerged only a few years ago. For instance, Facebook ® was created in 2004 but only opened to the large public in 2006, the same year Twitter ® was launched.

Insert Figure 3 about Here

3. Methodological review

This brief methodological review aims to give an overview of the methods used in research on employees' usage of social media, without thoroughly describing the research designs and

procedures of the reviewed literature. In terms of methodological approaches, excerpts describing the applied methods were extracted from each article. A joint work session and consultation with a third author led to categorising article methodologies into: a) qualitative research, using mainly interviews and case studies; b) quantitative research, using mainly surveys; c) mixed methods, combining both qualitative and quantitative approaches; and d) non-empirical research, consisting mainly of conceptual papers and reflective essays.

Non-empirical research methods were used in 46.97% of the reviewed articles (n=31), followed by qualitative approaches in 28.79% of the papers (n=19), quantitative methods employed in 18.18% of the articles (n=12), and mixed methods in 6.06% of the literature (n=4) (Table 2). This methodological fragmentation can be explained by the variety of themes and research questions investigated in the reviewed articles, as well as the varying levels of analysis.

Insert Table 2 about Here

The dominance of non-empirical and qualitative approaches in the reviewed literature on employees' usage of social media can be explained by the novelty of the topic. This methodological status perfectly reflects the stages new disciplines go through prior to maturation (Passmore and Fillery-Travis 2011). Research in new areas is first focused on definitional issues, followed by exploration studies, before attention is shifted towards theory, methods and measures (Passmore and Fillery-Travis 2011). Therefore, as is the case with nascent streams of research, early studies on social media usage by employees consisted of conceptual papers, theoretical discussions, proposed models, and qualitative investigations, paving the way for more theory-based and in-depth quantitative research.

4. Thematic review

The main themes of research in the reviewed literature were identified by two of the authors. Each investigator carefully examined the keywords and abstracts of the 66 articles, before reading their full texts to generate a list of recurring themes. As a result, legal aspects and policies were found to be the top theme of research with 22 articles, followed by human resources management with 16 articles, knowledge management and sharing with 12 articles, learning with 10 articles, and communication with 6 articles (Figure 4).

Insert Figure 4 about Here

These research themes combine business support functions (i.e. the human resources management and the legal departments), with organisational practices (i.e. communication), and other knowledge-intensive organisational capabilities (i.e. learning and knowledge management). The reason behind the varying levels of interest and focus given by scholars to each research theme is not evident, but a possible explanation could be that the literature is a mere reflection of the current practices within companies and of the debates raised in the practitioner literature.

4.1. Legal aspects and policies

Topics related to legal aspects were the top area of investigation in the reviewed literature on employee usage of social media at work, with 22 articles out of 66. Most of these articles were specifically related to the USA, and this seemed to be the only research area in this review where the geographic focus was fairly visible. The majority of articles in this theme referred thus to the American National Labor Relations Board (NLRB) and the National Labor Relations Act

(NLRA). Articles in this subject area examined four main interrelated ideas, namely the monitoring of employee usage of the Internet and social media, employee privacy in the workplace, the protection of employee social media usage in the workplace, and employee social media policies.

From an employer's perspective, monitoring employee Internet activity in the workplace is a practice that aims to protect the organisation from any potential legal liabilities that could result from the misconduct of employees online (Mello 2012), such as online harassment or sharing confidential information (Sánchez Abril, Levin, and Del Riego 2012; Gelms 2012; Kaupins and Park 2011). Despite the legal right of organisations to monitor the Internet usage of employees, the latter still expect a certain level of privacy (Sánchez Abril, Levin, and Del Riego 2012), and see monitoring as an invasion of their privacy (Mello 2012). If employees are informed about the monitoring, then there is no privacy violation (Elefant 2011), but organisations still need to be vigilant with regards to relevant regulations (Moore et al. 2011) and to stay abreast of social media privacy and protection laws (Hollinshead 2013). In sum, there is a need to strike a balance between the employees' right to privacy, and the employer's legitimate interest to protect its business (Russell and Stutz 2014).

Employees' usage of social media is sometimes referred to in the legal literature as the new virtual water cooler (Myers 2014; Neal 2012). Thus, the protection of employee use of social media, in relation to Section 7 of the NLRA pertaining to the employees' right to concerted activity, that is, union activity or any employee joint action to complain about their jobs or workplaces, has been discussed at length in several articles (Berkowitz, Downes, and Burdick 2012; Brady et al. 2011; Brice, Fifer, and Naron 2012; Mello 2012; Neal 2012; Lucero, Allen, and Elzweig 2013; Bryant 2012).

Employee social media policies are also a topic that has been widely covered in the legal literature. Some researchers conducted content analysis of existing employee social media policies to provide insight for both researchers and practitioners (Jacobson and Tufts 2013; Vaast and Kaganer 2013), and others provided practical recommendations for organisations regarding the formulation of these policies in light of all the major updates in American laws and examples of past cases (Younkins 2013; Jennings, Blount, and Weatherly 2014; Kirby and Raphan 2014; Mooney 2013; Hidy and McDonald 2013).

The emergence of legal aspects and social media policies as the top area of research in this review is possibly due to the combination of keywords used to screen the literature, namely 'employee' and 'employer'. Searching for these keywords yielded a fairly large number of articles capturing the dyadic relationship of these two parties in the framework of employment, and the emerging intricate role social media play in it. In general, the reviewed research in this theme was highly coherent and well focused on legal and practical issues related to social media usage by employees in the workplace. Nonetheless, the lack of investigation on laws regulating this usage in geographical areas other than the USA seems to be a weakness in this research stream. Another major weakness of legal literature on employees' social media usage is the lack of empirical work, which is an aspect that is associated with legal scholarship in general (Schuck 1989).

4.2. Human resources management

From the reviewed 66 papers, 16 articles examined human resources-related topics. Some researchers investigated the predictors of employees' usage of social technologies, including demographic characteristics (Lin et al. 2012; Tormo-Carbó, Seguí-Mas, and Oltra 2014), co-worker support, supervisor support, and job-related demands (Charoensukmongkol 2014). Other

studies examined the benefits of using social media for employees. Empirical findings demonstrated that the use of social technologies in the assimilation of new young employees created high morale and increased the employees' feelings of cultural belonging (Leidner, Koch, and Gonzalez 2010), the use of an internal social networking improved employee engagement (Koch, Gonzalez, and Leidner 2012), the use of social technologies increased job performance (Moqbel, Nevo, and Kock 2013; Leftheriotis and Giannakos 2014; Charoensukmongkol 2014), and the use of an internal micro-blogging tool enhanced social capital and increased the work-related usage of these tools (Sun and Shang 2014). The positive impacts resulting from the use of social technologies encourage organisations to further adopt more tools (Xarchos and Charland 2008).

In contrast, several risks are also associated with the use of social media by employees. For instance, it is argued that social media usage can present risks for employees' careers (Dreher 2014), as it is found to be associated with a number of risky behaviours, such as wasting time or creating offensive content (Landers and Callan 2014). Additionally, a case study revealed that the information posted by employees on online social networking sites form a vulnerability that criminals can exploit to attack organisations (Hart 2010). Other issues related to human resources management and social media usage included how to deal with friend requests from the boss (Peluchette, Karl, and Fertig 2013), workplace romances, and sexual harassment that spill over to social media (Mainiero and Jones 2013), and the possible conflicting values of employees and social media tools (Koch, Leidner, and Gonzalez 2013).

In summary, the body of research on the human resources-related aspects of employees' usage of social media seems satisfactory, in terms of both thematic and methodological variety. Another strength of this theme is the investigation of both the positive and negative impacts of

social media usage on employees. A weakness that is noted, however, is the limited number of theories used, as only a small fraction of the reviewed articles was built on existing relevant theories to advance knowledge on this area. For instance, an important topic such as the impact of social media usage on employee job performance (Moqbel, Nevo, and Kock 2013; Leftheriotis and Giannakos 2014; Charoensukmongkol 2014) was investigated using a quantitative exploratory approach, without using any theoretical frameworks.

4.3. Knowledge management and sharing

The use of social technologies in knowledge management and sharing in the workplace was examined in 12 articles. These technologies are claimed to hold great opportunities for organisational knowledge management (Schneckenberg 2009) and to have the potential to motivate employees to participate in knowledge sharing efforts (Back and Koch 2011). Social media can increase tacit knowledge sharing through the improvement of social capital (Kline and Konstanze 2013), but they can also trigger contradictory tensions that can hinder knowledge sharing (Majchrzak et al. 2013). A number of studies provide empirical support for the positive benefits of the use of social technologies in knowledge sharing. Research findings demonstrated that social bookmarking tools can facilitate the movement of ideas within organisations, and thus contribute to employee innovativeness (Gray, Parise, and Iyer 2011); Wikis can help democratise organisational knowledge, especially if supported by senior executives (Hasan and Pfaff 2012); and online communities can enhance creativity at work (Yan, Davison, and Mo 2013), and help tap into the intellectual capital of employees and thus build a culture of innovation (Dahl, Lawrence, and Pierce 2011). Adopting a more holistic approach, other researchers showed that employees can combine and benefit from multiple social technologies at once for their knowledge practices in the workplace (Jarrahi and Sawyer 2013), and that both knowledge

seekers and knowledge contributors play a crucial role in driving knowledge exchanges on social media (Beck, Pahlke, and Seebach 2014).

Other studies examined the determinants of the use of social technologies in knowledge sharing, and found that the participation of employees in knowledge sharing efforts can be contingent on their gender and position, their organisation's size (Yan, Zha, and Yan 2014), the perceived organisational support for such tools, and the expected benefits and rewards from such usage (Paroutis and Saleh 2009).

Upon examination of this limited body of research, we noticed one major weakness and one major strength. On the one hand, and in line with the conclusions of Majchrzak et al. (2013), there is a prevalence of a pro-technology bias in existing research, examining mostly the positive impacts of social technologies on knowledge management, and overlooking possible negative impacts. On the other hand, a major strength of research on the use of social technologies in knowledge management is building on several theoretical frameworks, such as the knowledge-based view of the firm (Beck, Pahlke, and Seebach 2014), the affordances lens (Majchrzak et al. 2013), self-perception theory (Yan, Davison, and Mo 2013), activity theory (Hasan and Pfaff 2012), socio-materiality (Jarrahi and Sawyer 2013), and structural holes theory (Gray, Parise, and Iyer 2011).

4.4. Learning

In the reviewed literature, 10 articles examined the use of social media by employees in learning. These technologies are claimed to hold considerable potential for workplace learning (Boateng, Mbarika, and Thomas 2010; Cook and Pachler 2012; Karakas and Manisaligil 2012) and to have the capability to improve organisational performance if integrated with workplace training and formal learning (Zhao and Kemp 2012).

Empirical findings showed that the users of social technologies in workplace learning value the interactivity, peer support, and instant feedback offered by these tools (Leino, Tanhua-Piironen, and Sommers-Piironen 2012), and that the more employees use social media at work, the more they learn (van Puijenbroek et al. 2014). In more specific examples, empirical evidence from case studies showed that wikis were efficient as corporate tools in informal learning (Milovanovi et al. 2012), mobile Web 2.0 applications were effective aids for informal learning in the workplace (Gu, Churchill, and Lu 2014), and virtual social environments are useful in mentoring employees (Hamilton, Langlois, and Watson 2010), enabling team learning and creating collaborative learning atmospheres (Bosch-Sijtsema and Haapamäki 2014).

In summary, research on this theme showed that using social media for learning is not limited to educational institutions, but is also extended to the workplace, for formal and informal learning and training. The fact that social technologies are emerging as popular educational tools in the workplace can be explained by their flexible access, timely delivery, and cost-effectiveness (Wang 2011). This body of research featured a thematic variety, but the main weakness observed was the scarcity of studies employing experimental or interventional methods and the prevalence of qualitative approaches so far.

4.5. Communication

The six identified articles within this theme examined the use of social media by employees for communication purposes. Social technologies can contribute directly to the processes of horizontal and vertical communication within organisations (Davison et al. 2014), and findings of empirical case studies showed that overall both managers and employees believe in the benefits of social media usage in communication (Trimi and Galanxhi 2014). Indeed, social media can enhance internal communication in a cost- and time-efficient manner (Denyer, Parry,

and Flowers 2011) and increase the reach and richness of communication (Huang, Baptista, and Galliers 2013). Additionally, social technologies can be effective tools for internal brand building (Omilion-Hodges and Baker 2014) and for internally channelling the opinions of employees and involving them in managerial decision-making (Miles and Mangold 2014).

This research theme featured two interrelated weaknesses in terms of quantity and quality. The first weakness is the low number of identified studies. It is surprising to see that an important field such as internal communication has received scant attention in social media scholarship. This could be due to the fact that the practice of social media usage in internal communication is still at an embryonic stage (Ruck and Welch 2012) and that most communication research at this point is mostly externally oriented. The second weakness is the lack of maturity of this theme, demonstrated by the research methodologies used in the reviewed literature, and which are limited to non-empirical and qualitative research. This methodological weakness is not only inevitably a result of the limited research on social media usage in internal communication, but it is also a reflection of the overall status of the research reviewed in this article.

5. Limitations

There are two main limitations to this review. The first limitation pertains to the selected keywords. Although our keyword combinations were meant to be broad and inclusive, and the scope of searching the literature included titles, keywords and abstracts whenever applicable, some relevant literature might have been overlooked. To extend the scope of future literature reviews, examples of keywords to take into account include enterprise 2.0, learning 2.0, knowledge management 2.0, and corporate social software. The second limitation of this review pertains to the risk of bias in including and excluding articles, even with the predefined criteria.

6. Directions for future research

Suggestions for future research on social media usage by employees can be made based on the methodological and thematic findings of this review. Methodologically speaking, case study designs were used in almost one-third of the reviewed articles in this review, and while this methodology is not considered a weakness, future studies ought to go beyond description to start building theory from empirical findings, by developing constructs, measures, and testable theoretical propositions (Eisenhardt and Graebner 2007). There is also a pronounced need for more quantitative and experimental research in all topics related to the employees' usage of social media. Moreover, longitudinal research is needed in future studies.

Thematically speaking, there is a need for further research in all identified themes, as well as in new ones. In the legal field, future research can investigate the legal implications of employee usage of social media in regions other than the USA. Scholars may also investigate topics such as the factors impacting the adoption of social media policies in countries other than the USA, the impact of these policies on employee job performance and on organisational climate, and the integration of social media policies in broader organisational policies. It is also suggested to study the impact of any new laws on these policies and to examine the types of policies that will tend to be the most important and most commonly used in practice (Kaupins and Park 2011).

In human resources management, there is a need for future theory-based research, which is remarkably lacking in the field. Additional research questions include the influence and usefulness of weak ties developed through internal social networks (Koch, Gonzalez, and Leidner 2012), and the relationship between social media usage and employees' inherent needs, values, and interests (Lin et al. 2012).

In knowledge management, an interesting avenue for future research is the investigation of possible negative impacts of the use of social technologies in knowledge management and sharing, such as information overload. There is also a need to survey different levels of employees on their practices in this field (Zhang, Vogel, and Zhou 2012).

For methodological considerations in future research on social media usage in workplace learning, there is a need for larger sample sizes to identify more possibilities in technology-supported informal learning in the workplace (Gu, Churchill, and Lu 2014), and for multiple methods such as team observation, and team member interviews, to investigate social technologies such as virtual environments and how they can contribute to virtual team learning and innovation (Bosch-Sijtsema and Haapamäki 2014). Future research may also investigate the antecedents and consequences of social media usage in learning, and how these tools are changing self-directed learning (Karakas and Manisaligil 2012).

Regarding social media usage in internal communication, there is a need for further research on organisational practices and for studies assessing the risks associated with internal usage of social media. There is also a need to investigate the dynamic interaction between Web 2.0 technologies, other Internet-based technologies, and non-technological communication patterns in the workplace, especially in a broad population of organisations (Davison et al. 2014).

Additional opportunities for future research arise for themes lacking in the literature. In leadership, for example, a missing avenue of research on social media from an organisational perspective is how top management teams and leaders use these tools, and how their practices affect both their organisations and their leadership styles.

7. Conclusion

A literature review on a novel and rapidly expanding field is a challenging task. Although limited

in scope, this paper provides valuable insights on the use of social media by employees. We applied a systematic review methodology, through which we identified 66 articles, and we categorised them into five major research themes, that is, legal aspects and policies, human resource management, knowledge management and sharing, learning, and communication. In terms of methodologies, we found that there is need for more quantitative and experimental studies, as well as theory-based research. Additionally, given the complexity of the constantly evolving social media technologies, there is need for a research paradigm that incorporates innovative methodologies that are both time sensitive and capable of capturing the multifaceted nature of social media tools.

In conclusion, and in agreement with Khang , Ki, and Ye (2012), we predict that the increasing pace of research on social media will continue in an attempt to keep up with the practitioner literature and actual practices within organisations.

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Appendix 1. Descriptions of the used databases in the two rounds

The following information was retrieved from the databases' respective websites in October 2013.

Emerald: <http://www.emeraldinsight.com/>

Emerald is a global publisher providing the highest quality, peer-reviewed research. With over 40 years' experience, Emerald manages a portfolio of over 290 journals and over 2000 books and book series volumes. Featuring journals that are indexed by Thomson Reuters (ISI) and Scopus, content is selected for original contribution to the subject field, as well as practical relevance to policy-making and future inquiry. Emerald's management collection features almost 100,000 articles from over 200 titles.

Elsevier's ScienceDirect: <http://www.sciencedirect.com/>

ScienceDirect is a leading full-text scientific database offering journal articles and book chapters from more than 2500 peer reviewed journals and more than 11,000 books. The database contains currently more than 11 million articles/chapters, a content base that is growing at a rate of almost 0.5 million additions per year.

Ebscohost's Academic search elite: <http://www.ebscohost.com/academic/academic-search-elite>

This database contains valuable, comprehensive multidisciplinary content, and provides access to acclaimed full-text journals, magazines, and other valuable resources. Its contents include over 13,600 indexed and abstracted journals; more than 2300 full-text journals; over 12,000 peer-reviewed, indexed and abstracted journals; more than 1800 peer-reviewed, full-text journals; and PDF content dating back to as far as 1985.

Ebscohost's Business Source Premier: <http://www.ebscohost.com/academic/business-source-premier>

Business Source Premier is the industry's most popular business research database, featuring the full text of more than 2200 journals. Full text is provided dating back to 1965, and searchable cited references back to 1998. Its contents also include company profiles, industry reports, market research reports, and SWOT analyses.

Web of Knowledge: <http://wokinfo.com/citationconnection/>

Web of Knowledge is a multidisciplinary research platform that allows users to search several databases simultaneously via one interface. It contains over 54 million records covering 5294 social science publications in 55 disciplines; 6.5 million records across 157,000 conference proceedings; 760 million+ cited references; and 100 years of abstracts.

The following information was retrieved from the database's website in December 2014.

Web of Science: <http://wokinfo.com/citationconnection/>:

Web of Science is the world's largest collection of research data, books, journals, proceedings, publications and patents. It includes 100+ years of abstracts, over 90 million records covering 5300 social science publications in 55 disciplines, 800 million+ cited references, and 8.2 million records across 160,000 conference proceedings.

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Table 1. Database search protocol in the first and second rounds

Database	Scope and search criteria	First round		Second round	
		Date of search	Number of items	Date of search	Number of items
Emerlad	Search: Journals Abstracts	13/12/2012	24	10/12/2014	49
Elsevier's ScienceDirect	Search: All journals Abstract, keywords, and titles. Document type: article and review article	13/12/2012	31	10/12/2014	74
Ebscohost's Academic search elite	Search: Abstract or author-supplied abstract. Scholarly (peer reviewed) journals. Document type: article. Language: English	13/12/2012	36	13/12/2012	36
Ebscohost's Business Source Premier	Search: Abstract or author-supplied abstract. Scholarly (peer reviewed) journals. Publication type: Academic journal. Document type: Article.	13/12/2012	99	10/12/2014	156
Web of Knowledge	Search: Topic. Document type: Article. Language: English	13/12/2012	117	13/12/2012	117
Web of Science	Search: Topic. Document type: Article. Language: English	N/A	N/A	10/12/2014	123
Total			307		555

Table 2. Research methodologies used in the reviewed literature

	Number of articles	Percentage
Non-empirical	31	46.97
Qualitative	19	28.79
Quantitative	12	18.18
Mixed methods	4	6.06
Total	66	100

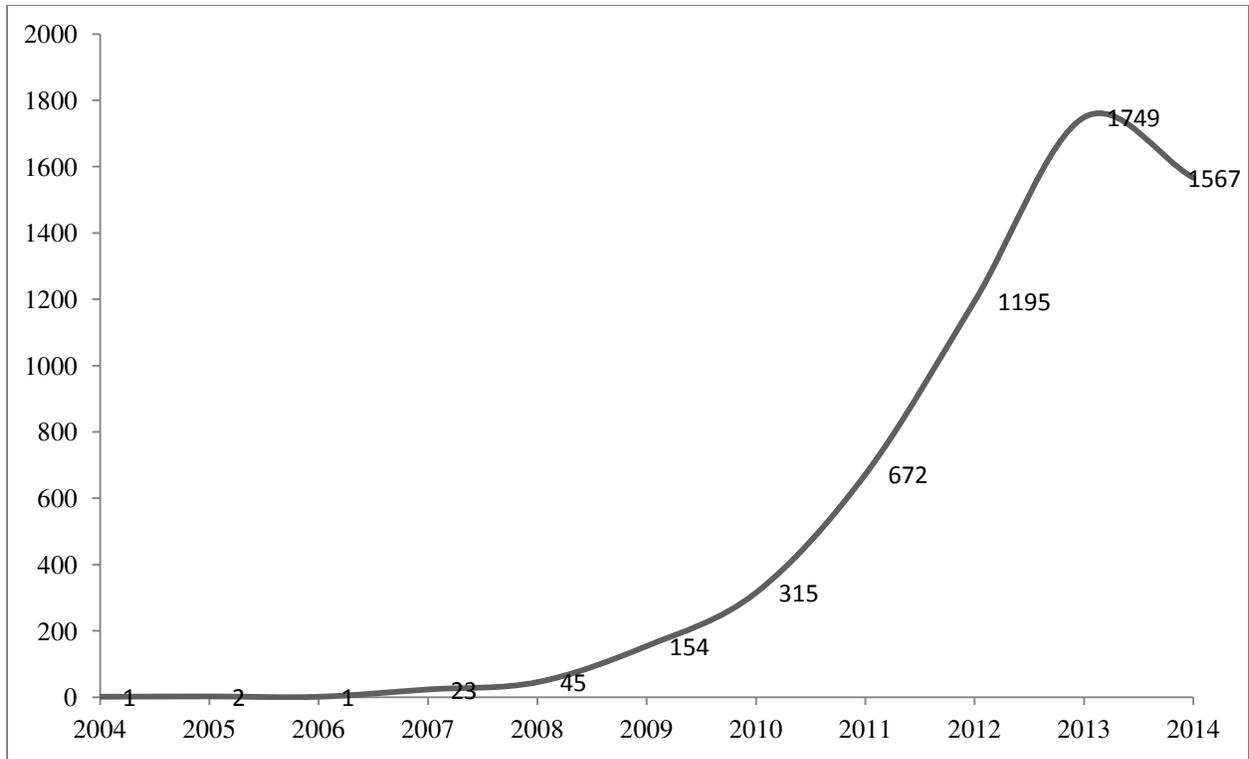


Figure 1. Number of yearly academic articles published in English on the topic of 'social media' in the 'Web of Science' database, as of 17 December 2014.

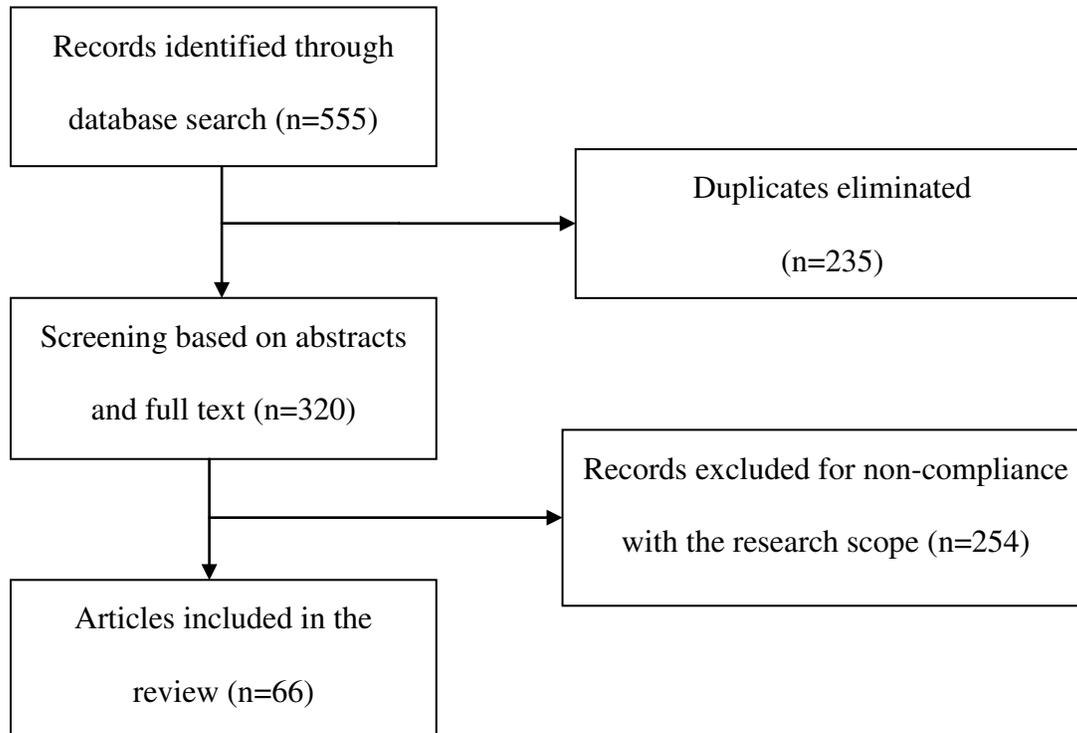


Figure 2. Flow chart of the second phase of the systematic literature review process of literature on the employees' usage of social media

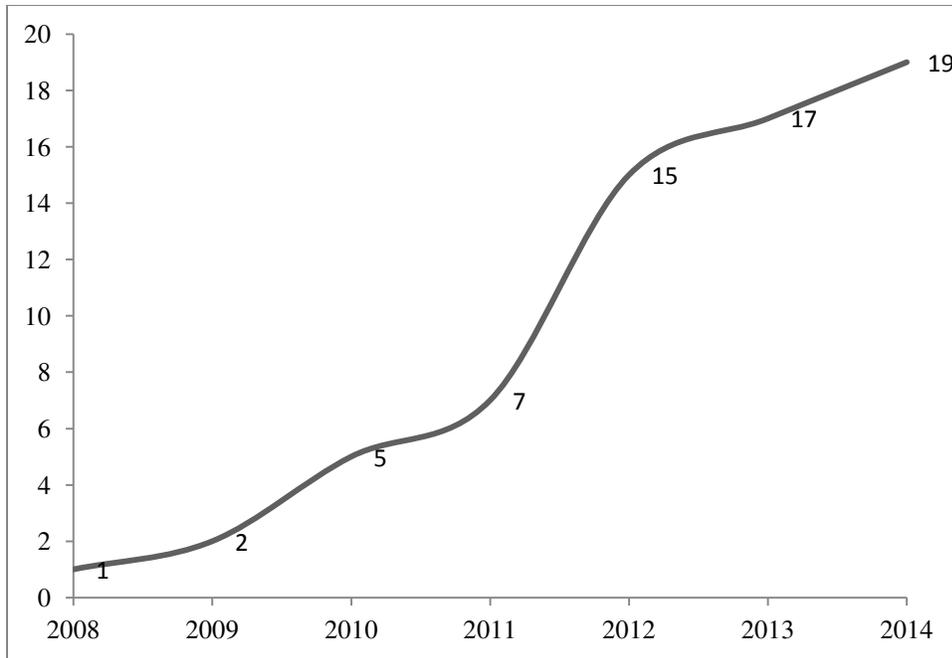


Figure 3. Number of included articles in the review by year of publication

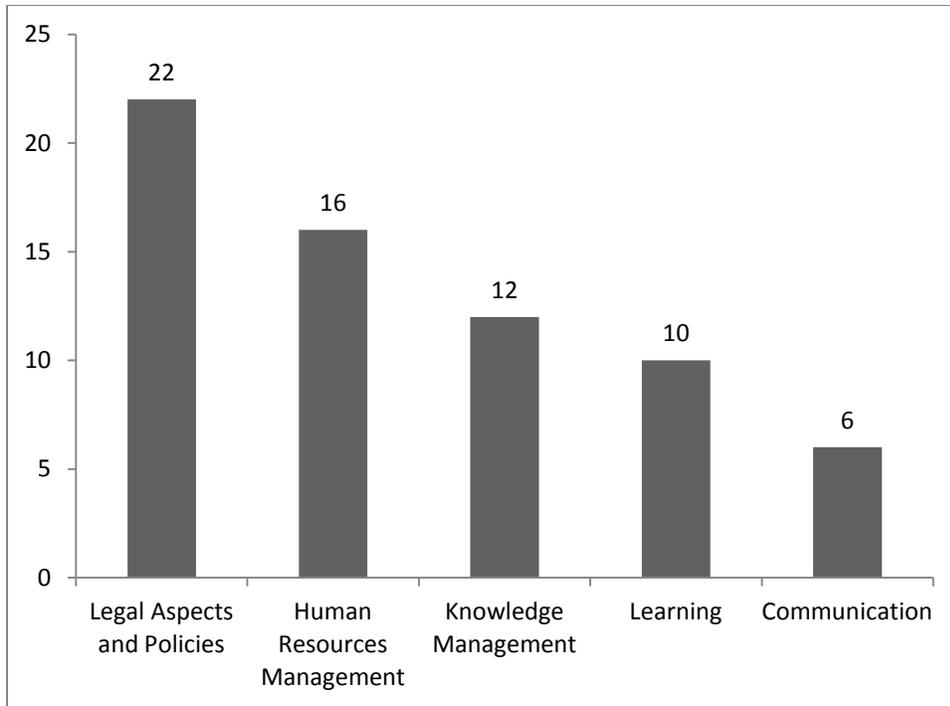


Figure 4. Main themes of research on employees' usage of social media.