[en] Research and Trends in the Field of Social Media from 2012 to 2016: A Content Analysis of Studies in Selected Journals

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Abstract. This paper aims at making a trend analysis of 1142 studies in the field of social media that were published in 12 SSCI journals from 2012 to 2016. Citation and content analyses were used to investigate the trends. Among the 4391 articles published in these journals, 1142 articles were identified as being related to the topic of social media. In the analysis, first, these articles were cross-analyzed by published years, journal, research topic, and citation count. Next, these articles on different sub-topics were analyzed according to their research settings, participants, research design types, and research methods.
Keywords: Social media; research trends; citation analysis; communication journals; review.

Investigación y tendencias en el campo de las redes sociales desde 2012 hasta 2016: un análisis de contenido de artículos publicados en revistas indexadas

Resumen. Este trabajo de investigación tiene como objetivo realizar un análisis de las tendencias de en el campo de las redes sociales. Se analizan 1142 estudios que se publicaron en 12 revistas SSCI de 2012 a 2016. Se utilizaron análisis de citas y de contenido para investigar las tendencias. Entre los 4391 artículos publicados en estas revistas, se identificaron 1142 relacionados con el tema de las redes sociales. Primero, estos artículos fueron analizados en forma cruzada por años publicados, revista, tema de investigación y recuento de citas. A continuación, estos artículos sobre diferentes subtemas se analizaron de acuerdo con sus entornos de investigación, los participantes, tipos de diseño de investigación y métodos de investigación.
Palabras clave: Medios de comunicación; tendencias de investigación; análisis de citas; revistas de comunicación; revisión.

Summary. 1. Introduction. 2. Literature Review Social Media Field. 3. Research into Trend Analysis. 4. Trend Studies in Communication Science. 5. Methodology in Trend Studies; 5.1. Materials and Methods; 5.1.1. Method; 5.1.2. Data collection; 5.1.3. Coding Scheme and Procedure; 5.1.4. Statistical analyses. 6. Discussion. 7. Conclusions. 8. References.

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1. Introduction

Computer-mediated social networking has been able to enter the agenda for politics, education, business and other fields as there has been a search for how to benefit from social networking site such as Wikipedia, Facebook, YouTube, Linkedin, Twitter, and second life as much as possible (Aydın, 2014; Kaplan & Haenlein, 2010). The concept of social media as today's new emerging term is linked to the social media platforms particularly MySpace (in 2003) and Facebook (in 2004) as the speed of internet increases (Kaplan & Haenlein, 2009). Today the social media studies have covered a wide range of topics from the personality of users in social media (e.g. Correa, Hinsley & de Zúñiga, 2010; Ahn, 2012; Rohn, 2014; Sailer & McCulloh, 2012) to social media use for health communication (Moorhead, et al., 2013).

The knowledge structure in any academic field generates a new type of knowledge regarding the frequent research areas, research tendencies, research scope, multidisciplinary areas, important researchers, networks of researchers and papers, contributions and collaborations among different institutions and regions (Maurer & Khan, 2010). Further, scientific journals carry some characteristics like research trends and this is estimated by doing content analysis (Darmani, Dwaikat, & Portilla, 2013). Although several research studies have investigated the trends in different fields (e.g. public relations and wikis) (e.g. Alias et al., 2013a; Kim et al., 2014; Sallot et al., 2003) to our best knowledge, very little recent research has investigated the trends in the field of social networking sites (e.g. Zhang & Leung, 2014). Therefore, this paper aims to contribute bridging this research gap, investigating the trends of studies in the field of social media that were published in 12 journals that included in the Social Science Citation Index (SSCI) from 2012 to 2016. This study specifically uses content analysis and impact main factor analysis.

2. Literature Review Social Media

While social media is a term that widely is web-based and mobile technology-based channels for communication and sharing over the internet (Toral et al., 2009). With the widespread use of the Internet as a global network, a heterogeneous social network has emerged that allows interaction between individuals and communities residing in different regions. The concept of social media as a today's new emerging term allows users to create and build up communication to identify members with similar interests. However, social media is not considered to be a new phenomenon because the evolving of it has been on the scene since the dawn of human interaction as there have been several early forms of them since the 1990s such as Six Degrees, BlackPlanet, Asian Avenue, and MoveOn, (Kaplan & Haenlein, 2010, p. 60). More than two decades, social networking sites have impacted upon the interaction and communication of

individuals immensely as the versatile use of Web 2.0 applications such as Facebook, Twitter, Myspace, Google+, Instagram, LinkedIn, YouTube contribute to active collaboration and sharing of information and opinions (Schutte, 2009). However, among these tools, Facebook has a leading position as such there are more than 2 billion registered and active users worldwide (Ellison et al., 2007; Harvey, 1990). The social media studies have covered a wide range of topics from the characteristics of these networking sites, their history, their impact on the internet (Boyd & Ellison, 2007), and the effect of online social networks on face-to-face communication behaviors (Sheldon, 2008).

3. Research into Trend Analysis

Several studies on the trend analysis of different topics have been produced in the recent decade. For example, Alias et al. (2013a) analyzed the content of studies in the open-source enterprise as Wikis that was published in six major journals (e.g. TOJET, ET&S, ETR&D-EDUC TECH RES, COMPUT EDUC, AUSTRALAS J EDUC TEC, BRIT J EDUC TECHNOL). Bojović et al. (2014) analyzed the articles published between 2006 and 2010 in 42 forestry journals (N = 16,258). They were categorized in one of 22 subfields, using their content and keywords. On the other hand, some other studies used the bibliometric scorings like the journal impact factor (JIF) to the assessment of the quality of research in different fields. For example, Foo (2009) analyzed the trends of nine biomedical engineering journals over a 9-year period (the year 1999 to the year 2007), using the bibliometric scorings (e.g. the journal impact factor). Snook et al. (2008) analyzed police psychology articles in five forensic psychology journals to examine publication and research trends related the field of forensic psychology. An LI-score was determined by dividing the total number of pages dedicated to Police psychology articles by the total number of journal pages. More recently, Domröse et al. (2015) analyzed the trends among journals in the journals among the top 43 in the field of obstetrics and gynecology from 2007 to 2013. The analyses in that study were performed based on Eigenfactor Score (ES), the impact factor (IF), and Article Influence Score (AIS) of 43 journals.

4. Trend Studies in Communication Science

While some studies examined public relations by content and bibliometric analyses of published studies (e.g., Sallot et al., 2003). Kim et al. (2014) used similar methods to analyze the keywords in titles of studies published in journals to define the prominent keywords in PR scholarship trends using a semantic network analysis (SemNA) in the 36-year period from 1975 to 2011. Some other studies used content analysis recently. For example, Alias et al. (2013b) analyzed research trends and content analysis of studies regarding articles on YouTube published in seven major journals. In 2014, Zhang and Leung (2014) analyzed 84 journal articles on SNS's published in six top communication journals listed in Thomson Reuters web of science (SSCI) during 2006-2011. More recently, Duhé (2015)

investigated major trends and themes in the field of PR, the 321-articles review of new media research published in six PR journals from 1981 to 2014.

Several other studies approached the trend of communication studies differently in the last two decades. For example, in 1996, Houser examined the impact of the omission of 27 peer-reviewed journals from SSCI and AHCI citation-based analysis of communication science literature during 1990. In 2001, Tomasello (2001) investigated the relationships between the content, frequency, and pattern of published web-based research articles in five communication journals and the internet's influence on the communication process. In 2008, Feeley applied journal relatedness algorithm to ascertain the 19 semantically related journals in communication. Further, for the purpose of investigating the citation patterns among journals in the field of communication, network analysis was used both indegree (the number of direct cited) and outbound data for the 19 top communication journals from 2003 through 2005. Four years later, So (2010) investigated interest in Asian communication in the 20-year time, using 23 communication journals in the SSCI database. Asia-related journal article titles and counts the number of authors of Asian origins was specifically analyzed. The results indicated that the studies on new media and public relations increased, China, Japan, and South Korea have the largest share of title references, followed by Israel, Taiwan, India, and Hong Kong. Levine (2010) investigated the trend of 30 communication journals based on the number of citations they received. Ye and Ki (2012) investigated trends, patterns, and academic rigor in the field of Internet-related public relations studies between 1992 and 2009. The research articles were analyzed based on research topics, authorship, methodological approaches, and theoretical frameworks. The results indicated that there was an increase in a dominance of quantitative research, a lack of applied theoretical frameworks and the number of published articles. Li and Tang (2012) conducted a meta-analysis over mass communication research on China between 2000 and 2010, analyzing 159 articles published in 20 major communication journals. Miller, Deeter, Trelstad, Hawk, Ingram, and Ramirez (2013) investigated the trend of 5,228 articles published in 18 leading communication journals from 2004-2010, focusing on African studies. The results indicated that very little research was conducted about African communication and very few African-affiliated authors produced research in this field. To create a comprehensive picture of the scholarship were reviewed. More recently, Nekmat, Gower, and Ye (2014) examined the trend in 261 management research articles published in public relations-specific journals, as well as business, communication, strategic communication, and broader management journals,

5. Methodology in Trend Studies

In the last decade, while several studies have investigated the link between the impact factor and the measure of quality. (e.g. Aksnes, 2003; Antonakis & Lalive 2008; Campanario, 2014; Judge et al., 2007; Meho & Yang, 2007), some other studies have followed different ways to analyze cited studies; for example, year of publication, source type, language and the link between the impact factor and

quality (e.g. Braun et al., 2006; Elango & Ho, 2017; Kousha & Thelwall, 2007; Miyairi & Chang, 2012; Moed, 2005; Nederhof, van Leeuwen & van Raan, 2010; Smith, 1981; van Leeuwen, 2012; Vinkler, 2002; Patience et al., 2017). First, Vinkler (2002) found that there is a direct relationship between the increase in the mean citation impact of papers and the number of references that authors listed. Next, in Braun et al. (2006) found that the first and second ranked journals of the top 100 impact factor list within Journal Citation Reports 2001 are not listed in the 60 journals with the highest h-index. Following that, in 2007, Kousha and Thelwall (2007) investigated a sample of 1577 Web citations of the URLs or title of research articles in 64 OA journals from different fields such as physics, chemistry, biology, and computing. According to the results, 25% reflected scientific impact, from references to web source (23%) and other academics sources (2%). More recently, van Leeuwen (2012), analyzed aggregated data regarding five subject categories (e.g biochemistry and molecular biology, economics, information and library science, mathematics, pathology), and they found that impact in the short term is representative of citation impact in the years to come. In the same year with van Leeuwen (2012), Miyairi and Chan (2012) analyzed bibliometric characteristics of Taiwan's highly cited papers published from 2000 to 2009. They found that Taiwan's output of highly cited papers was greatest in the categories of Engineering, Clinical Medicine, and Physics, while those in Agricultural Sciences and Mathematics exceeded the expected output level in related terms.

Finally, Elango and Ho (2017) analyzed highly cited papers from India in Science Citation Index Expanded. They found that all while the highly cited papers first were not cited following the publication year, co-authored (or international collaboration) papers were cited more than single-authored ones, further, international collaboration was performed mostly with USA partners.

5.1. Materials and Methods

5.1.1. Method

Much research has been conducted to investigate the research trends in different fields, using bibliometrics, scientometrics, and content analysis techniques (Maurer & Khan, 2010). Among these techniques, the first two benefit much from mathematical and statistical analysis to measure production and scientific process (Maurer & Khan, 2010). On the other hand, content analysis as a widely used qualitative research technique is used to interpret meaning from written data (Hsieh & Shannon, 2005). This study used content analysis technique in the analysis of the articles. Content analysis is helpful in terms of increasing the quality of journals and the decisions and policies made for allocating resources and funds and proposing the future directions for the field (Maurer & Khan, 2010). Also, in this study, citation analysis was used for the first time in trend studies in the field of communication science. The citation analysis was used in this study because citation analysis has been used in the natural and social sciences for such purposes as evaluating the research contributions of articles, journals, individuals, and institutions (Goodwin & Garfield, 1980).

5.1.2. Data collection

The material of this study includes articles published from 2012 to 2016 in communication journals classified under the subject category social media of the 2017 edition of Journal Citation Reports. The reason why the Social Sciences Citation Index (SSCI) was used for journal selection criteria is that SSCI journals are generally commonly recognized as having higher research quality, longer histories, and easier accessibility in academia (Zhang & Leung, 2014).

Data collection for this research includes the following three steps: a) the five-year impact factor (Thomson Reuters' Social Sciences Citation Index (SSCI)) was used to determine major peer-reviewed journals in the field of communication, b) a coding scheme was created after we reviewed 10% of the sample articles related to only social media studies in our pilot study, as this is the main focus of this study, and c) some journals were excluded as they are not directly related to social media theme instead they focus on a single theme such as health communication and public relationships (e.g. Int J Advert, Public Opin Quart, Journalism Stud, J Health Commun, Public Relat Rev) and finally 12 journals were selected for this study are: *J Comput-Mediat Comm, J Commun, New Media Soc, Cyberpsych Beh Soc N, Commun Res, Inform Commun Soc, Commun Theor, Hum Commun Res, J Broadcast Electron, Media Cult Soc, Mass Commun Soc, and J Mass Commun Q. Therefore, these* twelve peer-reviewed serial publications in the field of social media were evaluated (see Table 2).

The search comprised an article-to-article evaluation ('hand search') of peer-reviewed social media journals, limited to original articles, and reviews. The existing social media theories classify social networks into six categories such as a) social presence, b) media richness, c) self-presentation and self-disclosure, including blogs, collaborative projects (Wikipedia), d) social networking sites, e) connect sharing communities (YouTube), and f) virtual social worlds (Second life) and Virtual game worlds (World of Warcraft) (Kaplan & Haenlein, 2010, p. 60). The analysis was not performed over technical notes, case studies, commentaries, letters to the editor and book reviews.

5.1.3. Coding Scheme and Procedure

The scheme for this study was adopted from previous research (Bojović, et al., 2014; Tang, 2004; Huang & Chang, 2011; Jiang, et al., 2014). The scheme includes two parts: a) general information about the articles (e.g. journal name, publication year, the number of citations WoS citation index in SCI, SSCI and AHCI, authorship and institution affiliation, and region and country/territory of focus, b) coding methodologies of the articles (e.g research areas, research approaches, research methods, analysis techniques, and application of statistics).

In this study, the two coders are the researcher of this study who received a Ph.D. degree in the field of communication and language teaching. The following 20 categories were selected based on recurring themes among from 23 areas from Divisions of International Communication Association (ICA) and 48 areas from (National Communication Association) NCA (see Table 2.). First, the keywords of the articles were taken into consideration in determining the research areas then the

coders divided the research of the articles into two variables as the main research and interrelated research area. They analyzed a total of 1142 articles published in the 12 journals (see Table 2). The reliability of coding was measured using Cohen's kappa (Cohen, 1960), (K= 0.88 for the inclusion of articles).

5.1.4. Statistical analyses

The content of this analysis of the journal articles selected for this study included descriptive statistics conducted over publications regarding citations received by articles in the journals from SCI/SSCI/AHCI in each journal (e.g. means and standard deviations). The citation classics refer to the ranking of articles from top to bottom in a specific field of research area (Garfield, 1987). Also, to investigate the extent of the scientific impact, a number of citations of an academic paper is frequently used (Tanner-Smith & Polanin, 2016, p.121). Finally, measuring scientific impact provide several advantages: First, the rate of scientific impact gives ideas about how effective the most cited articles on the spread of ideas compared to the less cited ones (Tanner-Smith, & Polanin, 2016, p.123), second; ranking the rate of citations of articles can improve the field and provide the basis for new concepts, methods, or techniques (Garfield, 1987), "total citations can be considered as reflecting the prestige of a journal, while impact factors highlight a journal's current value on one or more research fronts" (Leydesdorff, 2007: 278–279).

Table 1. Overview of social media studies published in 12 communication journals between 2012 and 2016

Journal	5-yr IF	Sum of the Times Cited	h-index	Avg. Citations per Year	Citing Articles	Total Article
J Comput-Mediat Comm	5.629	2048	21	10.95	1661	187
J Commun	5.377	1643	28	8.85	2331	340
New Media Soc	4.978	3316	27	5.40	2559	614*
Cyberpsych Beh Soc N	3.866	4294	28	6.94	3043	619*
Commun Res	3.807	1287	16	6.10	1330	211
Inform Commun Soc	3.617	3030	24	5.24	2259	578*
Commun Theor	3.168	728	14	5.92	631	123
Hum Commun Res	3.034	692	12	5.67	616	122
J Broadcast Electron	2.543	970	16	4.31	853	225
Media Cult Soc	1.709	1127	13	2.26	977	499*
Mass Commun Soc	1.543	614	10	2.59	525	237
J Mass Commun Q	1.086	628	12	0.99	538	636*

As Table 1. presents 12 journals published from 2012 to 2016 have a different level of bibliometrics. Regarding, 5 year IF, while the two journals (e.g. J Comput-Mediat Comm and J Commun) have IF over 5, a journal has IF over 4 (e.g. New Media Soc), five journals have IF over 3 (e.g. Cyberpsych Beh Soc N, Commun Res, Inform Commun Soc, Commun Theor, and Hum Commun Res), a journal has

IF over 2 (e.g. J Broadcast Electron) and the three journals have IF over 1(e.g. Media Cult Soc, Mass Commun Soc, and J Mass Commun Q). On the other hand, most of the papers are published in the five journals respectively (e.g. J Mass Commun Q, Cyberpsych Beh Soc N, New Media Soc, Cyberpsych Beh Soc N, Inform Commun Soc, Media Cult Soc).

Table 2. Overview of research objects and methodological approaches

Items	Frequency (Percentage)
Publication type	Research Article - 991 (86,8%); Review Article - 119 (10,4%); Editorial 32 - 2,8%).
Research areas	Advertising - 10 (*0,9%); Communication Technology - 197 (*17,3%); Communication Psychology and Ethics - 182 (*15,9%); Communication Law and Policy - 24 (2,1%); Critical and Cultural Studies - 65 (5,7%); Media Industries and Economics - 21 (1,8%); Family Communication - 32 (2,8%); Game Studies - 98 (8,6%); Gender Communication Studies - 52 (4,6%); Health Communication - 22 (1,9%); Intercultural Communication - 27 (2,4%); Interpersonal Communication - 56 (4,9%); Journalism Studies - 38 (3,3%); Mass Communication - 26 (2,3%); Organizational Communication - 24 (2,1%); Political Communication - 125 (10,9%); Public Relations - 22 (1,9%); Visual Communication - 66 (5,8%); Speech Communication - 15 (1,3%); Group Communication - 32 (2,8%); Other - 8 (0,7%).
Research approach	Quantitative - 714 (62,5%); Qualitative - 258 (22,6%); Mixed - 32 (2,8%); Critical and interpretative - 82 (7,2%); Conceptual/Review - 56 (4,9%).
Research technique	Questionnaire - 130 (11,4%); Survey - 316 (*27,7%); Testing - 22 (1,9%); Modeling/theory - 57 (5%); Historical analysis - 13 (1,1%); Interview - 88 (7,7%); Data mining - 266 (*23,3%); Textual analysis - 6 (**0,5%); Critique/essay - 73 (6,4%); Case study - 22 (1,9%); Experiment - 107 (9,4%); Ethnography/participation/Observation - 23 (2%); Focus group - 19 (1,7%).
Analysis technique	Cluster analysis - 17 (1,5%); Content analysis - 138 (12,1%); Correlation - 59 (5,2%); Descriptive - 77 (6,7%); Discourse analysis - 27 (2,4%); Discrete time logic analysis - 10 (0,9%); Empirical analysis - 16 (1,4%); Factor analysis - 166 (14,5%); Interactions/post hoc tests - 15 (1,3%); Meta-Analysis - 14 (1,2%); Modeling/theory - 124 (10,9%); Network analysis - 66 (5,8%); Path analysis - 15 (1,3%); Regressions (Logistic/Linear/Multiple) - 135 (11,8%); Sentiment Analysis - 10 (0,9%); Standard deviation - 72 (6,3%); Textual/thematic Analysis - 72 (6,3%); No analysis - 109 (9,5%).
Application of Statistics	Frequency - 127 (11,1%); Mean description - 89 (7,8%); Correlation - 132 (11,6%); Regression - 160 (14%); t-test - 49 (4,3%); Chi-square - 74 (6,5%); ANOVA - 113 (9,9%); ANCOVA - 22 (1,9%); MANOVA - 20 (1,8%); MANCOVA - 8 (0,7%); SEM - 26 (2,3%); No statistics - 322 (28,2%).

As stated in Zhang and Leung (2015)'s study on the review of SNS, the methods used in SNS research are very diverse and therefore it is not easy to outline all findings for all studies. In the same line with Zhang and Leung (2015)'s study, the present study presents an SNS framework for further research Table 2 shows the analysis of the research on SNS from the perspective of methodological frameworks such as types of research, area, approach and method regarding the research, analysis technique and statistical analysis. The results indicate that a) among 1142 articles published in 12 communication journal, 86,8% of the total publications are research articles while only 2,8% is editorials. The rest is review type article, b) Communication Technology (*17,3%) and Communication Psychology and Ethics (*15,9%) are the two frequent areas in the SNS while advertising (*0,9%) has been the least studied area; c) quantitative approach (62,5%) has been frequently followed while critical and interpretative (7,2%); Conceptual/Review (4,9%) and mixed-method (2,8%) approach are the least used, c) Survey (*27,7%); data mining (*23,3%) are frequently benefitted in SNS

research while textual analysis (**0,5%) is benefitted the least in the data collection, d) the available research used content analysis (12,1%) frequently while meta-analysis (1,2%) were not preferred frequently and e) finally the statistical analyses applied are very diverse include multiple ranges.

Table 3. Subject area and frequency of direct citation analysis

Subject area	Direct Citation				Co-authorship	
	N	Mean	Sum	%	Avg. Authors	Avg. Citations per Authors
Health Communication	22	4,23	93	1,9%	3,0	1,4
Public Relations	22	4,00	88	1,9%	2,4	1,7
Gender Communication Studies	52	5,42	282	4,6%	2,7	2,0
Visual Communication	66	6,76	446	5,8%	3,5	2,0
Game Studies	98	6,65	652	8,6%	3,2	2,1
Family Communication	32	6,69	214	2,8%	3,1	2,2
Communication Psychology and Ethics	182	8,79	1600	16,0%	2,9	3,0
Intercultural Communication	26	7,88	205	2,3%	2,6	3,0
Advertising	10	5,50	55	0,9%	1,6	3,4
Interpersonal Communication	56	8,80	493	4,9%	2,4	3,7
Communication Technology	197	9,06	1784	17,3%	2,3	3,9
Critical and Cultural Studies	65	6,22	404	5,7%	1,6	3,9
Speech Communication	15	8,87	133	1,3%	2,3	3,9
Communication Law and Policy	24	9,46	227	2,1%	2,3	4,2
Other	8	14,50	116	0,7%	3,3	4,5
Organizational Communication	23	11,13	256	2,0%	2,4	4,7
Group Communication	32	10,78	345	2,8%	2,1	5,1
Mass Communication	26	12,92	336	2,3%	2,3	5,7
Political Communication	125	16,49	2061	11,0%	2,2	7,3
Media Industries and Economics	21	13,48	283	1,8%	1,7	7,9
Journalism Studies	38	15,84	602	3,3%	1,8	8,7
Total	1140	9,36	10675	100,0%	2,5	3,8

Table 3 shows the relation between the subject area and average citations per authors. This present study found that journalism studies, Media Industries, Political Communication, Mass Communication and group communication studies have been cited more frequently by average authors respectively (e.g. average Citations per authors rate is over 5) comparing to Health Communication and Public Relations topics (e.g. average Citations per Authors rate is less than 2). The rest of the topics presented in Table 3 have been cited between 2 and 5 according to the average Citations per Authors rate.

Table 4 shows the number of articles published in the 10 major journals by authors from 10 countries. Further, the Table shows author and citation mean scores of these published articles from among 1142 articles. The percent of these articles authored by the 10 countries is %81,7. The Table 4 indicates that first, nearly half of the articles (42.8 %) were authored by USA and the articles were mostly published by Human Communication Research Journal (9.7%). Second, while USA authors could publish in Communication Research Journal,

Communication Theory and Electronic Journal of Broadcast articles, the rest of the countries could not publish more than 4 articles. Third, UK authors published most of the articles in these 10 journals after the USA and the percentage of the published articles by the rest of the country authors are similar. Fourth, Italian, Chinese and German authors published joint papers with more than 3 authors mostly according to the mean author scores shown in the table. Finally, USA and Netherland authored articles cited more than the other country authors as the citation mean score is over 10 while the least cited paper was authored by China.

Table 4. Journals article origins and citation percent by countries

Journals	Country									
	CHN	ITA	BEL	CAN	AUS	NLD	DEU	SKR	UK	USA
	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)
J Comput-Mediat Comm	2 (0,2)	2 (0,2)	2 (0,2)	4 (0,4)	0 (0)	10 (0,9)	4 (0,4)	6 (0,5)	7 (0,6)	61 (5,3)
J Commun	0 (0)	3 (0,3)	0 (0)	4 (0,4)	1 (0,1)	0 (0)	4 (0,4)	3 (0,3)	3 (0,3)	46 (4,0)
New Media Soc	3 (0,3)	3 (0,3)	5 (0,4)	10 (0,9)	10 (0,9)	11 (1,0)	10 (0,9)	3 (0,3)	15 (1,3)	81 (7,1)
Cyberpsych Beh Soc N	4 (0,4)	11 (1,0)	3 (0,3)	7 (0,6)	6 (0,5)	3 (0,3)	7 (0,6)	7 (0,6)	10 (0,9)	74 (6,5)
Commun Res*	0 (0)	0 (0)	0 (0)	0 (0)	1 (0,1)	2 (0,2)	0 (0)	2 (0,2)	0 (0)	19 (1,7)
Inform Commun Soc	1 (0,1)	5 (0,4)	1 (0,1)	1 (0,1)	5 (0,4)	4 (0,4)	1 (0,1)	0 (0)	17 (1,5)	31 (2,7)
Commun Theor*	0 (0)	1 (0,1)	1 (0,1)	1 (0,1)	1 (0,1)	1 (0,1)	1 (0,1)	0 (0)	3 (0,3)	28 (2,5)
Hum Commun Res	7 (0,6)	10 (0,9)	25 (2,2)	19 (1,7)	11 (1,0)	14 (1,2)	19 (1,7)	24 (2,1)	22 (1,9)	111 (9,7)
J Broadcast Electron*	0 (0)	0 (0)	0 (0)	1 (0,1)	0 (0)	0 (0)	1 (0,1)	4 (0,4)	0 (0)	26 (2,3)
Media Cult Soc	1 (0,1)	0 (0)	0 (0)	2 (0,2)	4 (0,4)	2 (0,2)	2 (0,2)	0 (0)	10 (0,9)	12 (1,1)
Total Articles	29 (2,5)	35 (3,1)	37 (3,2)	38 (3,3)	39 (3,4)	47(4,1)	49 (4,3)	49 (4,3)	87 (7,6)	489 (42,8)
Authors Mean	3,21	3,91	2,41	2,79	2,13	2,83	3	2,39	2,25	2,37
Citation Mean	5,34	9,89	3,30	7,92	9,59	10,96	7,67	8,16	6,47	11,15
Citation Sum	155	346	122	301	374	515	376	400	563	5428

6. Discussion

Within the aim of this paper, a content of 1142 studies in the field of social media that were published in 12 Social Sciences Citation Index (SSCI) journals was analyzed. First, citation analysis was used to evaluate the research contributions of articles, journals, institutions, and individuals and to the rank, the articles from top to bottom in the field of social media can lead to the field to provide the basis for new concepts, methods, or techniques (Garfield, 1987). Second, impact factor values were used to evaluate the effectiveness the most cited articles on the spread of ideas (Tanner-Smith & Polanin, 2016, p.119) and to emphasize the journals' that are selected for the analysis in this study up-to-date significance in the field of social media (Leydesdorff, 2007: 278–279). The results showed that first, 5-year IF of the two journals (e.g. J Comput-Mediat Comm and J Commun) have IF over 5

and New Media Soc journal has IF almost 5 while the other 9 journals have less IF than those three journals. However, most of the papers were not published in these highest impact journals except New Media Soc. Interestingly, although J Mass Commun Q have published most of the papers in the field among these 12 journals, it has the least 5-year IF (e.g. 1.086). Therefore, these results indicate that there is no direct link between the number of published articles and the IF rate.

Second, from the perspective of methodological design, the journals preferred to publish research articles (e.g. 86,8%) and the articles mostly focused on communication technology (*17,3%) and communication psychology and ethics (*15,9%) and advertising was not an attractive topic (*0,9%). As Newhagen and Rafeali (1996) suggested that researchers that focus features of communication on the Internet examine "multimedia, hypertextuality, packet switching, synchronicity, and interactivity." Further, They argued that communication researchers should develop a deeper understanding the Internet by examining computer architecture instead of leaving this area to engineers. Similarly, Pasadeos, Berger, and Renfro (2010) found that new technologies were one of the two most researched areas in public relations studies that were conducted between 2000 and 2005. More recently, in a review study by Verčič, Verčič, and Sriramesh (2015), it was found that the articles published in the last decade mostly investigated the link between digital, social and portable devices in the area of public relations.

Third, journalism studies, media industries, political communication, mass communication and group interactions studies have been cited more frequently. As several studies suggested that there is a link between methodologically strength publications are cited more frequently than lower quality publications (e.g. Balaban, 2012; Etter & Stapleton, 2009, p.832).

Fourth, the research articles used mostly the quantitative approach (62,5%) but mixed-method (2,8%) approach was not much preferred. Survey (*27,7%) and data mining (*23,3%) are frequently benefitted. In the same line with our study, Tran (2007) found that nearly 42% of articles on Asian societies from nine U.S.based communication journals in 1990–2005 were theory-oriented and the majority used quantitative methodology. Khang et al. (2012) found that articles on social media research in advertising, communication, marketing, and public relations published during 1997–2010 used quantitative methods (58.5%). Another finding on the predominance of quantitative research was by An and Cheng (2007) who examined crisis communication research articles in the Journal of Public Relations and Public Relations Review from 1975 to 2006.

Regarding the second frequent data collection method in our finding, Yin Zhang and Louis Leung (2014) survey/questionnaire was found to be the most frequently used method (54.8%), followed by experiment (16.7%), content analysis of SNS user profiles (10.7%), ethnography/participant observation (4.8%), interview (4.8%), and thematic or textual analysis (2.4%). The rest were conceptual or critical pieces (6.0%). In this sense, the social science paradigm was the leading paradigm of inquiry, most articles used some theories, and the survey was the most frequently used method (Lo & Wei, 2010). Further, other trend studies on Asian communication research showed that survey is the top-ranked quantitative method, and the interview is the most frequently used qualitative method (e.g. Lo & Wei, 2010; Lwin & Salmon, 2015). In the same line with our finding, regarding the

mixed-method approach, a study by Ha and Boynton (2013) found that the portion of articles using two or more methods (i.e., experiment and survey) was less than 10%, which is a negative indicator for interdisciplinary crisis communication research.

Similar results were found in a study by Cooper, Potter, and Dupagne (1994) who investigated the assumption that if the amount of qualitative research has increased during the past decades in mass communication research. They studied ten leading communication journals on critical studies in mass communication monographs during the 1965-1989 period. Results showed that quantitative research is more predominant in communication research (57,8%). Further, quantitative approaches were more prevalent than qualitative approaches, which is consistent with the findings of previous trend studies about advertising, marketing, and online media research (Cho & Khang, 2006; Cooper et al., 1994; Perloff, 1976; Stafford, 2005; Yale & Gilly, 1988). In another study, Ye and Ki (2012) found that Internet-related public relations articles published from 1992 to 2009 did not use much quantitative research.

Finally, nearly half of the articles (42.8 %) were authored by the USA and the articles were mostly published by Human Communication Research Journal (9.7%). USA authors published the highest number articles in the highest IF journals. Following the USA, UK authors published most of the articles in these 10 journals. Fourth, Italian, Chinese, and German collaborated more than 3 authors. USA and Netherland authored articles cited more than the other country authors while the least cited paper was authored by China.

7. Conclusions

Social network analysis (SNA) approaches are used to examine the structure of a society, to enlarge the network and to follow the patterns of change. Network analysis provides a number of tools to visualize the properties of social networks and networks.

Parallel to our findings in this study, the previous studies have suggested that the dominant thematic area in our social media trend research is communication technology (Tomasello et al., 2009; Zhang & Leung, 2014; Tomasello, 2001; Nam & Barnett, 2010). Further, current academic studies on social networking usually focus on two important dimensions. The first group studies examine the changes in individuals' behaviors, changes in self-esteem, and other potential psychiatric problems and issues on SNS platforms and cause-effect relations in these changes, focusing on the psychology of the users. One of the findings of this study suggested that communication psychology and ethics and interpersonal communication issues have come to the fore (see Table 2). On the other hand, from the perspective of social impact, the second group SNS studies analyses the external factors such as interest groups, civil society and public opinion leading to the users individual and collective behaviors in society as such the critical and cultural studies and intercultural communication. The SNS studies have increased recently because social media platforms such as Facebook, Twitter and Instagram can play an increasingly important role in shaping political communication in

various parts of the world (Stieglitz & Dang-Xuan, 2012; Tumasjan et al., 2011; Ekström & Sveningsson, 2017; Bode & Dalrymple, 2014; Song et al., 2014). Political communication studies are one of the dominant themes in our work as well as in similar trend researchers. The influence of social media on the attitudes of people has led politicians to turn towards social media platforms rather than traditional media as a means of political propaganda. This use of social media not only improved productivity in terms of politicians but also narrowed it in the distance between citizens and politicians. As a result, the growing relevance of communication in social media implies a fundamental change in traditional public communication, which has usually been exclusively initiated and managed by specific actors, e.g., politicians companies as well as journalists (Chadwick 2006).

This study tries to shed light on the current state of SNS studies and the 5-year history; instead of solely comparing communication journals. Specifically, citation analysis was further used after thematic and methodological content analyses. The results of this study implicate that communication technology, communication psychology and ethics, political communication, interpersonal communication, critical and cultural studies themes and research designs can be more frequent in the further studies. The shift in the trend of the SNS fields can be frequent when compared to the trends in other fields because of communication technology as such the results of this study indicates that especially mass media and journalism that were popular topics in communication field have lost their popularity.

Considering the results of this trend study, it can be argued that more studies that combine qualitative and quantitative methods should be conducted as previous literature has shown that very few such studies have used mixed-research approach. Further, it can be implicated that the integration between the novel technologies such as virtual reality, interactive games, haptic systems, speech and non-speech audio with the social media may increase and the effects of these technologies on the human behaviors *Human-Computer Interaction* (*HCI*) may be investigated in further studies *Human-Computer Interaction* (*HCI*). Therefore, these sort of studies can benefit from more sophisticated analyses that combine both quantitative and qualitative techniques such as machine learning, task analysis, recognition techniques, person detection, tracking, and motion analysis, face analysis and other perceptual technologies various methods and tools. Finally, more sophisticated studies may require a collaboration between experts in the field of communication and psychology and such technology systems (Berkowitz, 1995; Marini et al., 2011; Porter, 2006).

8. References

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