Social media concepts - development of theoretical

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Abstract: - With the aim of enhancing the communication between different agents and authors, social media generate interconnectivity between different points, as well as providing the link between people, companies, and government, at last, different actors in society. Given the relevance of the theme to the current society, based on knowledge, in this article the objective is to map conception of social media in order to form a concept about the theme. For this, the bibliometric analysis was performed, based on a systematic search in the Scopus database. As a result, it was identified that the research emerges in the field of multidisciplinary areas intersecting the discussions on biochemistry, molecular genetics, psychology, engineering, knowledge management. It was perceived after reading the articles that the research emerges in the field of multidisciplinary areas intersecting the discussions on medicine, molecular genetics, psychology, engineering, knowledge management in the sense of this media serve to support local and global communication and lacking studies in the area.

Key-Words: - social networks, social media, bibliometry, concept

1 Introduction

As In digital society, started in the two thousand years, we are increasingly connected, geographical and temporal barriers are becoming smaller due to social media and Web 2.0 tools. The meaning of "internet 2.0", or "web 2.0" means, is linked, not only the internet as a system of publications and online database, but as a support for the structuring of social media networks. Thus, the Internet should be understood and used as a platform that supports different applications that are inserted in the network, allowing collaboration and collective construction by the people and groups.

Within this context, there is an increase in the use of applications as a source of information and influence with certain publics, and also a growing concern with the planning of the practices developed in these tools (Cromity, 2012). So in this scenario we can make explicit the use of social networks and social media. In some cases used as synonyms, in others referring to media as the medium of communication that supports technological tools and social networks as articulated threads to information technologies. From this context, the objective of the study, in this article is to map conception of social media in order to form a concept about the theme. For this the article is structured in five sections, besides this introductory one is described in the following section the procedures of the research. In the third section, the bibliometric result is presented in a detailed way from the scenario of the scientific publications resulting from this area. In the fourth section we review the literature on the topics social media and social networks and in the fifth section the final considerations, preceding the references that were used throughout the article.

2 Social Networks - systematic review

New technologies have been transforming communication into the context of the knowledge society. The use of social networks has been increasing over the years. In this scenario, there were investigations on the use of social media as tools of communication strategies and marketing in companies. Initially, everyone called new media what we now know as social media. They came

giving a new feeling and meaning to the communication. According to [1], social media was framed in the category of new media and social networks were called social networking sites. Many people confuse the terms social networks and social media, often using them as synonyms. They do not mean the same thing. Social networks are different from social media because networks are spaces for communication and interaction between their members or friends chosen by the user. Social media, it means "to allow conversations". They are web sites built to allow social interaction and information sharing in various formats: photos, messages, icons, and more. In order to locate, organize, structure and classify the conceptual results of social media, the method of Systematic Review (RS) of the literature was adopted for the course of the research, since RS is an explicit (comprehensive) method and reproducible to identify, evaluate and synthesize the existing body of completed and recorded works produced by researchers, scholars and [2]. According to [3] RS is a method that requires rigor and discipline of the researcher, because, instead of a revision of the traditional literature, it demands the observance and the more rigid fulfillment of standards and protocols planned systematically, as well as abilities and the researcher's commitment to undertaking systematic research within his broader research [4].

The RS follows criteria that guide the researcher in the field of research, through the following stages: a) definition of a problem question; b) search in the literature; c) selection of studies and extraction of data; d) methodological risk assessment; e) data analysis and synthesis; f) evaluation of the quality of evidence; g) writing and presenting the results. The rigor and methodological regularity present in RS aim to respond satisfactorily to the initial problem of a study, with reference to scientific data precisely collected and analyzed. In the course of this research, we reached the strict compliance of standards and protocols used in a RS, which allowed us to immerse ourselves in depth in the theme of hybrid teaching.

From the construction of the document named RS protocol, it was possible to define the criteria that led to the methodological practice of RS, and its objective is to investigate the different conceptions / understandings about social media, based on the question: What is the state of the art social media? In the search strategy to select the studies, the Scopus database (www.scopus.com) was stipulated as relevant to the research domain due to the relevance of this base in the academic environment and its interdisciplinary character. And also because it is one of the largest databases of bibliographic summaries and references of peer-reviewed scientific literature and its relevance.

3. Methodological procedures

To answer the research question the bibliometric analysis was used, the study was organized in three distinct stages: planning, collection and result. These steps occurred in a convergent manner to answer the guiding question of the research: What is the state of the art of social media?

Planning began in May 2019, when the survey was conducted. In this phase, some criteria were defined as the limitation of electronic database search, not considering physical catalogs in libraries, given the large number of documents in the Web search databases. In the planning scope, they were stipulated as relevant for the Scopus database (www.scopus.com) due to the relevance of this base in the academic environment and its interdisciplinary character. And also because it is one of the largest databases of bibliographic summaries and references of peer-reviewed scientific literature and its relevance.

Considering the research problem, the search terms were delimited, in the planning phase, as follows: "" Social Media Concepts "OR" Social * Media *. "The use of the Boolean OR operator was intended to include the the greatest possible number of relevant studies that address the theme of interest of this research.And the use of the truncador (*) was done with the objective of potentializing the result seeking habitat and its written variations presented in the literature.It is considered that the variations of expressions used for searching are presented in a larger context within the same proposal, since a concept depends on the context to which it is related, it depends on its historical trajectory and preexisting conceptual analysis, and as a basic principle for the search, it was chosen when planning to search the use of the terms in the fields "title, abstract and keyword", without limiting temporal, language or any other restriction that may limit the result. From the planning of the research the data collection recovered a total of 155,529, works indexed without any temporal cut, first publication in 1927, until 2020. Thus, a cut was made, where they were selected for this systematic review, only article, with free access, published between 2014 and 2018.

As a result of this collection, a total of 8024 papers were identified. These were written by 166 authors, linked to 195 institutions from 182 different countries. A total of 164 keywords were used to identify and index the publications that are distributed in 27 areas of knowledge. Table 1 presents the results of this data collection in a general bibliometric analysis, when mapping the theme instructional design, in the Scopus database.

Data base	Scopus
Search Terms	""Social Media Concepts" OR "Social* Media*"
Search fields	*"title, abstract e key words"*
Total of recovered works	8024
Authors	166
Institutions	195
Countries	182
Key words	164
Knowledge areas	27

Table 1 - General bibliometric data
Source: author (2019)

The universe of 8024 scientific papers composes the sample for a general bibliometric analysis of publications in the area of social media, published between 2014 and 2018, composing a sample of five years of publication, which allows tesser the state of the art of the subject, from of the database consulted.

3.1 The scenario of scientific publications

The analyzed works are composed of 8024 studies, coming from the database scopus. In order to evaluate the results in a more detailed way for the bibliometric analysis, this result was exported to a bibliographic management software called EndNoteWeb. These data provided the organization of the relevant information in a bibliometric analysis, such as: temporal distribution; main authors, institutions and countries; type of publication in the area; main keywords and the most referenced works.

3.1.1 Time distribution of studies

In a first moment the temporal distribution of the works was analyzed, identifying that the publications were very timid in 2014 with 860, growing more intensely from 2015 when, this year, the publication number contemplates 1320 works in the area. As of 2016, research in the area has intensified reaching a total of 1492 researches in the area. This number increased in 2017 with 1829 jobs, growing significantly in the year 2018 with a total of 2523 publications. As shown in figure 1 below:

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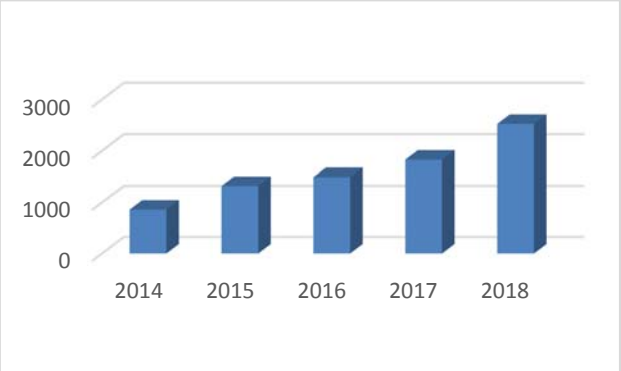


Graph 1 - time distribution of the works
Source: author (2019).

Of the 8024 articles published, 398 were selected from reading the title. After reading the title, the abstract was read and forty articles were selected for full reading.

After the complete reading of the selected articles, using the previously defined criteria,

The term social media began its discussion with the advent of the internet in 1990, this is due to the concept explicitly stated by Eisenstein et al., 2014, when it explicitly states that the design of social media is linked to computer-based communication that led to changes in the nature of written language. The research made a temporal cut of the discussions on the theme of social media, between the years 2014 and 2018, which gave rise to the table summarizing the main publications on the subject fomented in those years, as follows:

Author (s)	Title	Concept of Social Media
Miotto, J.M. Altmann, E.G.	Predictability of extreme events in social media	Social media is present in daily life through the use of videos, news, publications, etc.
Dron, J. , Anderson, T.	On the design of social media for learning	This article presents two conceptual models that we develop to understand ways in which social media can support learning. A model relates to the "social" aspect of social media, describing the different ways in which people can learn from each other in one or more of three social forms: groups, networks, and sets. The other model relates to the 'media' side of social media, describing how technologies are built and the roles people play in creating and executing them, treating them in terms of softness and hardness.
Simão, T. a , b ,, Goldberg, A. d , Aharonson-Daniel, L. a , b , Leykin, D. a , b , e , Adini, B. a , b	Twitter in the cross fire - The use of social media in the Westgate mall terror attack in Kenya	Social media can be understood as an accessible and widely available medium for a two-way flow of information between the public and the authorities.
Al-Rahmi, WM , Othman, MS , Musa, MA	The improvement of students' academic performance by using social media through collaborative learning in malaysian higher education	Social media is a very active medium of communications that can occur through social networks such as Facebook, Twitter and LinkedIn.
Cooper, A	The use of online strategies and social media for research dissemination in education	Social media are networks of dissemination of social media research when using strategies with robust ways of mobilizing knowledge and disseminating knowledge.
van Wyk, MM	Using social media in an open distance learning teaching practice course	Social media can serve as support and engagement of teachers of economic education in teaching practice at a distance learning institution. Only sixty-nine student teachers.
Criswell, J. , Canty, N	Deconstructing Social Media: An Analysis of Twitter and Facebook Use in the Publishing Industry	Social media can be associated with the Twitter and Facebook platforms used as marketing tools by the publishing

		industry.
Blaschke, L.M.	Using social media to engage and develop the online learner in self-determined learning	Social media technology provides educators an opportunity to engage students in the online classroom as well as support the development of students' skills and competencies.
Galbraith, K.L	Practical and ethical considerations for using social media in community consultation and public disclosure activities	Social media are dissemination platforms that are becoming increasingly integrated into the clinical and research dimensions of emergency medicine.
Rimkuniene, D. , Zinkeviciute, V.	Social media in communication of temporary organisations: role, needs, strategic perspective	Social media is regarded as a phenomenon of the new era, it is said to be the powerful mechanism that opens up vast opportunities for collaborative communication.
Vaca Ruiz, C, Aiello, LM , Jaimes, A	Modeling dynamics of attention in social media with user efficiency	Media is a means of sharing and online social networking is the leaven of sharing and consuming content, resulting in a complex interaction between individual activity and the attention
		received from others.
LEWIS, Seth C	Reciprocity as a Key Concept for Social Media and Society	The concept of social exchange can help us to understand social media increasingly dominated by social exchange - where the sharing, receiving and recirculation of information "gifts" are central to the social and technical frameworks themselves.
LOMBORG, Stine	Meaning" in Social Media. Social Media + Society,	Social media can be understood as a generative process by which users negotiate the communicative potentials and constraints of a text or medium vis-à-vis preexisting mental models of individuals, expectations, and intentions in context.
BUCHER, Taina.	Networking, or What the Social Means in Social Media	Social media simply means creating connections within the confines of adaptive algorithmic architectures. Each click, share, enjoy and post creates a connection, initiates a relationship.

		The network grows dynamically, evolves, becomes. Networking. The social in social media is not a fact, but a doing.
JOTIKABUKKANA, Phat et al	Social Media Text Classification by Enhancing Well-Formed Text Trained Model.	Social media is a powerful communication tool in the digital information age.

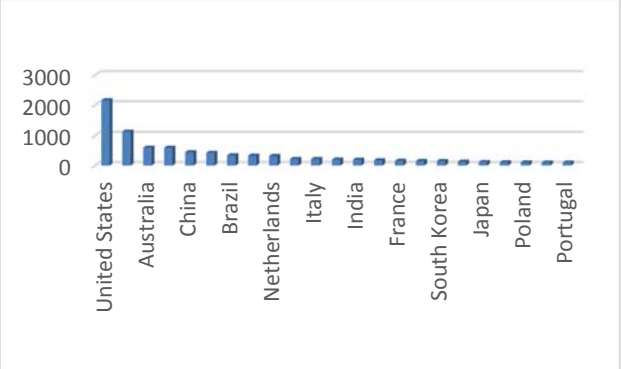
Table 3 - Integrating summary on the theme Social Media.
Source: author (2019).

Social media enables people to learn and to relate in different ways. Thus they can be used in education, politics, health, culture among other dimensions of our society. Through the research it was evidenced that social media, in some publications were also treated of social networks. Being that the focus of this research is the search for the concept of social media, however due to this finding in the next section will also be addressed the theme social networks.

3.1.1 Distribution of research on authors, institutions and countries

Of the 8.024 papers, there is a varied list of authors, institutions and countries that stand out in the research regarding the habitat of innovation.

When analyzing the country that has the most publication in the area it can be seen that the United States stands out with an average of 25% of the total publications, a total of 2160 works. In second place, the United Kingdom stands out with 13% of the publications, that is, 1133 works. Figure 2 shows the major countries involved ranging from countries with a minimum of 100 publications in the area.



Graph 2 - Distribution by country of work
Source: author (2019).

Brazil appears in 7th place in the publications in the area, considering the indexation of the consulted database, which infers in representation equal to 4% of the total of publications, equivalent to 341 works which implies in the discussion being innovative in the country. Another analysis is related to the identification of prominent authors in the area where it was observed that 10 authors can be referred to as reference in the social media theme, considering author reference that has more than ten publications indexed in the area. In order to organize this data, Table 2 was elaborated, with authors of outstanding in the area, their respective numbers of published articles, institution in which they are affiliated and country. Brazil appears in 7th place in the publications in the area, considering the indexation of the consulted database, which infers in representation equal to 4% of the total of publications, equivalent to 341 works which implies in the discussion being innovative in the country.

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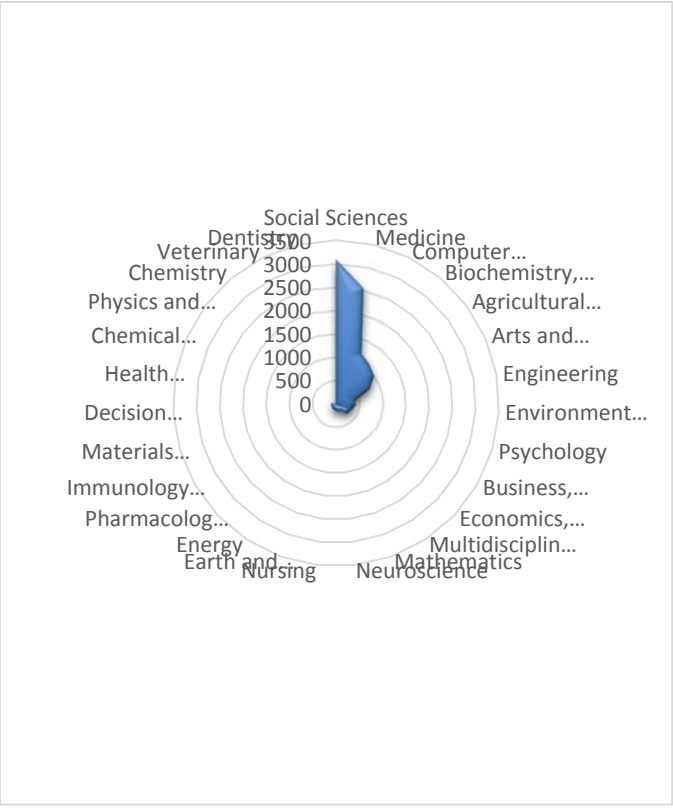
Authors	Number of publications	Affiliation	Country
Brownstein, JS	14	Harvard Medical School	United States
Caldarelli, G.	12	ECLT	Italy
Griffiths, MD	12	Nottingham Trent University	United Kingdom
Allem, JP	10	University of Southern California	United States
Dredze, M.	10	Johns Hopkins University	United States
Fu, KW	10	The University of Hong Kong	Hong Kong
Hilton, S.	10	University of Glasgow	United Kingdom
Quattrociocchi, W.	10	Università Ca' Foscari Venezia	Italy
Scala, A.	10	Istituto Dei Sistemi Complessi	Italy
Thoma, B.	10	University of Saskatchewan	Canada

Table 2: relation authors with the highest number of publications with their affiliations and country
Source: author (2019)

Based on this table 2 in relation to the graph 2 it is noticed that the countries of prominence of publication, is related to authors with greater number of publication. The United States appears with the largest number of publications, and the affiliation of three authors who publish the most in this area is also from that country. Already in second place in the general rank, the UK with 12 publications. Thus, it is noticed that considering the authors of highlights the countries that stand out in the first instances is: Italy with 3 authors. However in figure 2 this country appears as the eleventh country of prominence. The publication is concentrated in large numbers from a variety of authors. From the general survey it was possible to analyze still an area of knowledge of the social media theme. Publications are concentrated in the area of social science with 23% of the total number Medicine with 19% of publications. In total there are 27 areas of knowledge as shown in chart 3.



Among the 27 areas, there are the five that stand out: Social Sciences with 3100 publications, Medicine with 2545, Computer Science with 1207, Biochemistry, Genetics and Molecular Biology with 1109; Agricultural and Biological Sciences with 1007.

From the bibliometric analysis, based on the retrieved work group, in the Scopus database, it was possible to identify a total of 148 different keywords. Being that of these the highlight is for the word "Social Media" with 3324 occurrences. The sequence was followed by Human and Humans in a total of 3275 and 2629 occurrences respectively. In fourth place, the word article 2231ocorrencias stands out. It is still female with 1862 occurrence standing out in fifth place. For the analysis of these 148 different words used in the 8024 articles, the tags cloud, shown in figure 1, was elaborated from the recovered works, highlighting the key words.

Figure 1: Tag cloud
Source: author (2019).

The relationship of the discussion on social media is becoming increasingly integrated into the clinical and research dimensions of emergency medicine. This is because they can provide methods for sharing crucial information to specific individuals or groups quickly (Galbraith, 2014). The theme also talks to media that are commonly used in our daily lives like videos, news, publications, newspapers among other things that unexpectedly gain a tremendous amount of attention.

The discussion also involves the concern of evaluations in the educational scenario bringing areas such as social sciences and medicine for discussion. The discussion also covers communication systems, contact networks, medical studies of healing, implementation, planning, development and technological management within the knowledge society.

4. Literature Review

4.1 Social Media Conception

The discussion about the term social media, begins with the term media, "support, the vehicle or communication channel, through which information can be conducted, distributed or disseminated, as a" means "of communication" [5] in this sense even the human body can be considered a media that has the potential to inform and communicate something . What differs from social media of other communication and information technologies is the possibility for the user to expose content in a public way and through this to be able to create ties with other users that have common interest. Thus facilitating the dissemination and sharing of knowledge.

In this context, social media can act as instruments or as technological agents. In the first scenario the media provides physical support for the information, but to manipulate them it takes a technological agent. Already in the second, it is able to manipulate the information itself, this relation can be exemplified in the use of a pen-drive to store data and in the need of the computer to remove, insert, merge content and define social media as "an online environment created for the purpose of mass collaboration. That's where mass collaboration takes place, not technology per se. " Other definitions concerning the media theme may be related to maintaining the consensus that a user communicates certain content (information, knowledge, idea ...) in an environment that provides interaction. Some of these interaction activities are: online access and archives, digital object sharing, collaboration and co-creation, user profile and networking and virtual life tools.We can highlight that within this existing media different platforms that are availables in different types of media such as: blogs, wikis, forums and social networking sites, podcast forums, content communications and microblogging (short updates posted by users), RSS feeds , and "marking". There are different types of social media, and so the convergence of these media, coupled with the search for social interaction and increased use of mobile devices, drive the popularization of social networks. I understand social networking as a social media category. To help understand this and as a means of bringing the conceptual order to guide more effective use, we find it useful to think of social media as a support for different mixtures of three basic social forms: and help us solve our problems. This is a poorly mapped territory: we know a lot about how intentionally formed and purpose-built groups can help our learning, but we

know much less about how this can happen in the collection type of people connected through social media, web and through applications furniture. To help understand this and as a means of bringing the conceptual order to guide the most effective use, we find that it is useful to think of social media as a support for different mixtures of three basic social categories: group, network and set [6]. In this scenario the social network is a category that through a media provide the connectivity in communication between people. Thus social media offers an accessible and widely available medium for a two-way flow of information between the public and the authorities [7]. Media is a phenomenon of the digital age, affirming itself as a powerful mechanism that can open space for vast opportunities for collaborative communication. [8]. The tools used by social media are based on the ideological and technological foundations of Web 2.0 and enable the creation and exchange of user-generated content [9] has been a revolutionary development for corporations and individuals Applications such as Twitter, Instagram or Foursquare , which did not even exist a decade ago, form an essential part of today's media and communication landscape. Wikipedia, created in 2001, now comprises approximately 35 million articles in 288 different languages. Facebook, launched in 2004, connects more than 1.4 billion active members worldwide, a larger user base than the populations of Europe and North America combined. YouTube, founded in 2005, processes more than 3 billion searches per month, making it the second-largest search engine behind the industry giant [10]. It is said that social media is a powerful communication tool in our era of digital information. The large amount of data generated by the user is a new and useful source of data, this is a communication medium that connects people geographically, there are no more barriers between time and space.

4.2 Social networks

The thematic social networks, we first explain about the term network, this can be understood as a set of nodes, lines, that connect flowing in the sharing of the information that is transmitted in the network according to figure 2:

Figure 2 - Social networks.
Source: authors (2019).

Social networks can be formed with the inclusion of users or with the exclusion of these, which can be collaborative and competitive among each other. This discussion about this theme is current, but organized society and acting in networks is not just something of the "modern world", because it turns out that in antiquity people already had an organization in network and its connectivity was determined by the technologies of transport available at the time . The concept of networks - both for metaphorical use and for analytical use - would be that the configuration of interpersonal interlinked links connected to the actions of people and the institutions of society.

In this context the word network can be understood with a group of people or groups that are influenced and also influence the others with the interconnections they have with the users of the network. These ties between the participants may be stronger or weaker, allowing for greater or greater interaction in the exchange of information.

5 Conclusion

Speaking in social networks implies aspects related to innovation, so this is linked to communication related to the medium applied to the connectivity through technological development. This action has an intensive task in knowledge whose main goal should be to promote interactions between different user agents through networks, channels and networks in the knowledge society.

The scientific mapping of the production related to the theme social networks from the Scopus database for the elaboration of this article allowed a bibliometric analysis of the theme, describing in sequence the main discussions related in

contemporaneity and the existing intersection in the last five years. As a result, it was identified that the research emerges in the field of technologies, as well as innovation in general, related to networks, groups and technological groups.

In this sense, the conception of social media extracted in this research is that this is a medium that enable people to communicate through different fermentations between them networks, platforms, communication channels among others that can enable people to connect.

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