The Use of Social Media In Education: A Review Of Recent Research

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Abstract

Social networking sites a major category of social media, such as Facebook, Twitter, Instagram, and Flickr, have become an integral part of daily life of people. With the widespread use of social media among students, instructors and researchers, there has been an increased interest in using social media to support teaching and learning processes. As a result of this growing interest, various research studies are available concerning the impact of social media use on student learning and engagement. This paper is a review using a systematic approach. In this study, we conducted a systematic search of the literature, on social media use for educational purposes, and examined peer-reviewed studies published in the English language dating from January 2005 to March 2015. The literature search was conducted on March 10, 2015, using top journals of education and educational research category. These journals are selected from 2013 ISI Web of Knowledge Journal Citation Reports according to value of impact factor. Analyzes of the scope of the study consist of sample groups, environments, used technology, model of studies, field of studies, data collection tools, used statistical analysis techniques, article's countries, count of article's author.

1. Introduction

For nearly the last ten years, social network sites (SNSs), a major category of social media, have become a vital part of our daily lives, and scholars have been conducting researches on the effective use of SNSs in many disciplines ranging from law, economics, sociology, and psychology, to information technology, management, marketing, and computer mediated communication [1][2]. Given the tremendous popularity of social media in the social sciences today, there are a large number of studies about the social media for political attitudes and civic behaviors [3] [4], predictive model on tie strength [5], cultural knowledge sharing and interaction pattern [6], personality and behavior of the individual social media users [7] [8], and so on. With the widespread use among students, instructors and scholars, there has been an increased interest in using social media to support teaching and learning processes despite the fact that these media themselves make no educational promises. Considering its rising popularity, the educational potential of social media has not been set on, and there is currently a lack of information about the uses, benefits, and limitations for educational purposes. Various results from the researches are conflicting, some of them emphasizing its pedagogical advantages and others cautioning against its use in schools [2].

First of all, we believe that determining the definition of social media and social network sites is necessary herein. Kaplan and Haenlein (2010) defined social media as "a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0, and that allow the creation and exchange of user generated content" [9][10]. However, Boyd and Ellison (2007) define SNSs, an important category of social media, as "web-based services that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system" [11]. By definitions, social media provides an interactive web-based platform to users for sharing and discussing own ideas. As it known according to the social constructivism, sharing and discussion is an effective way for building new knowledge. Sharing ideas and discussing them allows students to transfer their knowledge and builds a strong foundation for communicating ideas [12]. Recent researches on the use of social media for academic purposes indicate that there are a variety of ways including sharing of resources, collaborative learning, inquiry-based learning and reflective learning [13]. Junco, Heiberger and Loken (2011) in their study, focused

the use of social media in traditional learning environments, and they aimed to examine the causal link between educationally relevant social media use and student engagement [14]. In their exploratory study Manan, Alias and Pandian (2012) investigate the possibility of blending a conventional classroom teaching with an online instruction via a social networking website, Facebook.

With this systematic review of existing literature on the use of social media for educational purposes will be provide a fundamental conception of recent trends. Systematic review as a method of making sense of large bodies of information, and a means of contributing to the answers to questions about what works and what does not - and many other types of question too [15]. With this principle, the current study provides a systematic review of the scientific literature related to the use of social media for educational purposes to date in order to provide an overview of main research themes and methods, as well as implications for future research. To accomplish this purpose, the selected literature was reviewed systematically, searching for specific information regarding the sample groups, environments, used technology, model of studies, field of studies, data collection tools, used statistical analysis techniques, article's countries, and count of author.

2. Methods

This review study used a systematic approach to retrieve the relevant research studies. In this study, we conducted a systematic search of the literature, on social media use for educational purposes, and examined peer-reviewed studies published in the English language dating from January 2005 to March 2015. The literature search was conducted on March 10, 2015, using the top 15 journals of education and educational research category. These journals were selected from 2013 ISI Web of Knowledge Journal Citation Reports according to value of impact factor. The searches were performed using "social media" and "social network" terms in article's title, abstract and keywords, using the following 15 journals respectively, "Review Of Educational Research", "Educational Psychologist", "Journal Of Research On Educational Effectiveness", "Educational Research Review", "Learning And Instruction", "Journal Of Research In Science Teaching", "Educational Researcher", "Science Education", "Journal Of The Learning Sciences", "Journal Of Engineering Education", "Advances In Health Sciences Education", "Computers & Education", "Studies In Science Education", Scientific Studies Of Reading", and "American Educational Research Journal". Only original research studies focused on use social media in educational environment for various purposes were included this review. And dissertation theses, reports, conference papers or abstracts, letters to the editor were excluded.

2.1 Content analysis criteria

Analyzes of the scope of the study consist of sample groups, publication years, environments, used technology, model of studies, paradigm methods, field of studies, data collection tools, preferred of used statistical analysis techniques, article's countries, number of article's author, preferred social media environment, number of used references.

2.2 Data analysis

All the data was accumulated for each paper (article) in Microsoft Excel program formed according to content analysis criteria. Later on, the data reports are classified according to stated criteria by using filter characteristics.

3. Results

Totally, 58 of the paper in the category of education and educational research were reported according to stated criteria. The data of each criterion is given below with graphics and tables.
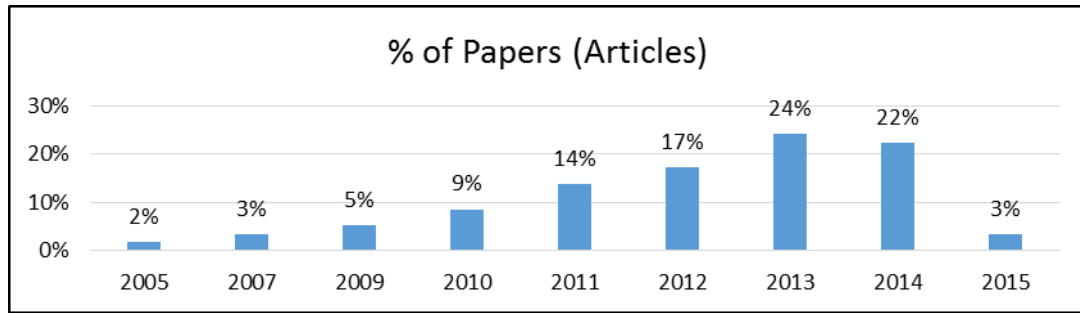
Fig.1. Percentage of papers according to publication years.

As it is seen in fig.1, in the last five years, many articles have been published more than past years. 37 articles published from January 2009 to March 2015, others published in recent years.

Table 1. Percentage of papers according to sample groups.

Sample Groups	Academics	Stu. High	Stu. Master	Stu. Primary	Stu. Secondary	Stu. University	Teachers	Others
% of Papers	12.07	13.79	6.90	3.45	12.07	43.10	8.62	18.97

According to table 1, university students have been mostly preferred in the studies as samples.

Table 2. Percentage of papers according to study environments.

Environment	Blended	Class	Laboratory	Online	Virtual	Others
% of Papers	17.24	18.97	5.17	41.38	1.72	15.52

According to table 2, studies have been carried out in various environments. However online, classroom and blended have been mostly used in the studies.

Table 3. Percentage of papers according to model of the studies.

Models	Case-Study	Experimental	Meta-Analysis	Survey	Others
% of Papers	6.90	20.69	1.72	62.07	8.62

As it is seen in table 3, survey and experimental model have been mostly preferred to collect data in papers.

Table 4. Percentage of papers according to paradigm model of the studies.

Paradigm Models	Qualitative	Quantative	Quantative - Qualitative
% of Papers	24.14	63.79	12.07

According to table 4, most of the papers are quantitative and some of them are qualitative. Qualitative and quantitative researches have been applied together in very few articles.
This study shows that some of the published papers were written on e-learning and distance education. There are also some papers written on collaboration education.

Table 5. Percentage of papers according to preferred social media of the studies.

Preferred Social Media Environment	Facebook	Flickr	Google Apps.	Skype	Social media	Twitter or Blogs	Web 2.0	Wikis	Youtube	Others
% of Papers	31.03	1.72	3.45	3.45	24.14	5.17	6.90	3.45	5.17	44.83

According to table 5, Facebook has mostly preferred in the articles. The remarkable point is little-known social media environments usually used on researches.

Table 6. Percentage of papers according to data collecting tools used in papers.

Data Collection	Focus Group	Interview	Literature Review	Observation	Questionnaire	Survey	Others
% of Papers	27.59	18.97	8.62	12.07	43.10	22.41	13.79

As it is seen in table 6, questionnaire has been mostly preferred by the authors of papers.

Table 7. Percentage of papers according to analysis techniques of the papers

Analysis Techniques	% of Papers	Analysis Techniques	% of Papers
ANOVA (ANalysis Of Variance)	8.62	Partial Least Square (PLS)	1.72
Chi-square	1.72	Pearson Correlation test	8.62
Digital evaluation instrument	1.72	Percentage	29.31
Frequency	18.97	Post-hoc	1.72
Mann Whitney U tests	1.72	Standard Deviation	41.38
Mean	56.90	T-test	15.52
Multiple correlationcoefficien	1.72	Variance Analysis	1.72
Multiple regression analysis	6.90	Others	34.48
Multivariate linear analysis	1.72		

As it is seen in table 7, mean, standard deviation, and percentage have been mostly used to analyze the data in articles. Also frequency, ANOVA, Pearson correlation test, multiple regression analysis have been used to analyze data in articles.

Table 8. Percentage of papers according to number of authors.

Number of Authors	1	2	3	4	5	6	7
% of Papers	18.97	27.59	22.41	18.97	8.62	1.72	1,72

As it is seen in table 8, most of the articles have been written by 2 authors in researches. The second majority group is seen to be written by 3 authors. Beside this, there are seven authors in one of the articles published in selected journals.

These researches have been performed in 19 countries. The distributions of the first seven countries are as follows: The USA 38%, Spain %15.5, Australia %12, Taiwan %7 and Turkey, Malaysia, Netherland %3.5.

Table 9. Percentage of papers according to references numbers of papers
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Number of References	0 - 30	31 - 60	61 - 90	91 >
% of Papers	8.62	55.17	25.86	10.34

This study shows that published articles have the reference between the numbers of 1-177. According to table 9, most of articles have number of references between the numbers of 31-60.

4. Conclusion

Nowadays, social media is very widely used by the younger generation. In recent years, some researchers had worked on the impact of social media on education. Especially, these researches, that are mostly on e-learning and distance education, have been usually realized with university students. In researches, survey and experimental model have been mostly preferred to collect data, most of the papers are quantitative and some of the papers are qualitative. Facebook, that is the most popular social media environment, has been mostly preferred in these studies. Also the authors have usually preferred the followings; questionnaire that is a data collecting tool, mean, standard deviation, and percentage which are analysis techniques. Researches were carried out in online, classroom, and blended environments. Approximately half of the researches have been performed in the USA.

The rapidly increasing use of social media will affect every area of life. Therefore education, that is a basic element of life, will be the most affected field from social media. To ensure positive results from this effect, more improving researches should be done in education.

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