Analysis Of Using Social Network On Higher Education

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***Abstract*—The Internet has become the broadest area in which to exchange information and communicate.Some use this function in a positive way, whilst others do so negatively. With the growth of the Internet, social networks have also grown. Social networks are used in different fields and for different proposes. They are used in higher education to enhance training and collaborative learning and exchange knowledge in an interaction environment. This paper aims at finding the 10 best universities by measuring the use of social networks in education.Universities are selected for this experiment from the Academic Influence Ranking website for the domain of computer science overall (type A) (for more information about the selected universities please visit this link: `http://pubstat.org/`).**

Five tests were performed to gather statistical information.The first aimed at finding the best university based on the number of posts, users, impressions, and reach. It also aimed at finding the type of posts: original, repeated, or retweets. The second test aimed to finding the proportion of male and female interaction in social networks(this helps to determine who most interact with technology). The third test aimed to finding the top sites (Twitter, Facebook, YouTube, Instagram) used to send or receive posts. The fourth test aimed to finding the top sources for these posts (this helps to determine the most popular sources). Eleven sources were selected under this test. The fifth test measured the spread of posts in different locations.

The data set was collected in three time intervals. The first interval was from 2February to 9February, the second from 18February to 23February, and the third from 9March to 22March.Examining social networks through analyzing exchanged data shows what and who matter and how. The results help to determine how communication practices integrate with existing cultural practice and teacher learning, how interaction may be tested on social networks, and how new technologies may prop up such networks.

***Index Terms*—social networks; social media; e-learning;higher education;information and communication techniques.**

I. INTRODUCTION

Social networks penetrate todays society, with millions engrossed, some would debate to the point of unhealthy addiction, in applications like Facebook and Twitter. Facebook began in Harvard University before spreading to other universities in the US, so it may be appropriate to consider the role of social networks in education today.

According to usage statistics gathered earlier this year by Ofcom,66 percentage of all adults aged 16+ have a profile on at least one social networking site[17]. It is logical to suppose that, among those of university age, that percentage could be much higher.Educational institutions have responded by expanding the use of social networks to display their courses and assess and interact with students, but do social networks have an impact on education? Are social networks an educational or recreational tool?Some lecturers are beginning to utilize the benefits of social networks in education.

Many faculties and societies have attuned to the fact that 75percentage of students admit to being on Twitter all the time[3].Merging different modes of education generates informal interaction on social networks,which enhances educational engagement. The integration between formal and non-formal education leads to knowledge creation and the honing of communication skills by sharing collaborative activities.

Nowadays,formal education based on specific topics and curricula are supported by learning management system(LMS), and non-formal education is supported as knowledge is shared and thinking and communication skills enhanced through social media and collaborative tools. Social networks are a great way for educational institutions to interact with pupils and share knowledge and information among peers or between students and experts[18]. The authors of[18] compared different types of social networks used in higher education(see TABLE I).

TABLE I
TYPES OF SOCIAL MEDIA HIGHER EDUCATION INSTITUTIONS USE (COMPARATIVE BETWEEN 2010-2013)[18]

type of social media	2012-2013	2012-2011	2011-2010
Facebook	98%	87%	61%
Twitter	84%	59%	0.10%
Blogging	47%	46%	48%
LinkedIn	47%	16%	0%
Message Boards	37%	36%	38%

The paper is organized as follows. Section II summarizes the related work. Section III presents the problem questions. Section IV provides data sets. Section V discusses the research methodology. Section VI discusses variable definitions.Section VII applies methods to provide results. Section VIII concludes the paper and provides information about future work.

II. LITERATURE REVIEW

Recently, the use of information and communication technology (ICT)in education has become more common, from e-learning to social networks.With the growth of

the Internet, social networking has also grown,as has its impact on different fields. The most important impact is related to increased knowledge and information. However, information is stored in heterogeneous, distributed web pages. Social networks are web pages that provide many services to different users. Many reports have presented statistical information about the use of social networks, while much research has appeared in this field that shows the impact of social networks on education. Social networks improve communication skills and knowledge sharing by providing a large interactive environment. The use of social networks in education increases students interaction and leads to cooperative learning.

Reports posted by WeAreSocial [6], provide statistical information about social networks in 2015. Facebook has more than the 1.44 billion users. 751 million users browse Facebook via mobile devices. 75% interact with any publication on Facebook in the first three hours of publication.47% of Internet users use Facebook.The total number of Twitter users has reached more than 300 million. 28% of Twitter "re-tweet" operations were for Tweets that contain the Retweet RT phrase. 85% of Twitter users use the platform through mobile devices. There are nearly 20 million fake Twitter accounts. The average number of daily tweets is 400 million. The average number of tweets per account on Twitter is 208. YoutTube receives more than one billion users monthly.The total number of video hours watched each month is six billion.100 hours of video is uploaded to YouTube every minute. 80% of the number of visits to YouTube originate outside the United States. YouTube receives millions of subscriptions every day. The number of subscribers has doubled three times a day since last year, while the number of daily subscriptions doubled four times since last year. There are more than 400 million Instagram users. The number of images submitted to this social network reached 20 billion. The average number of images for each user on Instagram is 60. The number of followers in this network is 1.2 million.Every second, 20,000 users click on an image or set of images. Instagram reviews include up to 5,000 comments per second.More than eight million photos are posted on a daily basis[6].

Kio paper[1], looks at the content of a school-related Facebook fan page on which students from a particular school post about their school. The content is analyzed and coded into five categories. These are School Policies (21%), Student Conduct (15%), Reflection on Teachers (8%), Reminiscence (9%), and Encouragement (11%). The five categories comprise almost 64% of the total posts on the page[1].

Borruto [2]We carried out a study of the tweets posted between April 2013 and March 2014. Due to the huge amount of data, tweets were sampled and pre-processed to discard dirty data. We then applied several analysis techniques to infer significant results. Our analyses are not only statistical as they concern aspects of user behavior. We focused on tweet typology.Mentions are used in more than 2% of the total number of tweets.Hashtags are utilizedless than mentions (0.77%). In terms of location,the US has the highest rate of tweet production (35.17%). English is the most popular language. The increased frequency of tweets can be due to different factors, for instance, more free time or a higher number of advertising campaigns.Important relations were found between user activity and the time of Twitter registration. Users who created an account before 2008 are no longer active, whereas newly registeredusers are active.The younger the user, the higher the frequency of tweets they send[2].

Authors in [16] discussed the increasing number of libraries in universities that utilize social networks such as Facebook and MySpace. The information technology department for the library at Georgia reports using Facebook to network with mechanical engineering students. With the undergraduate enrollment for mechanical engineering around 1,700 students, I was surprised to discover that more than 1,300 of them were on Facebook. This presented an intriguing opportunity to directly market the library to more than 75% of mytarget audience. Matthews felt that Facebook had enabled the libraries to connect subjects and support student requirements[16].

The National School Board Association [17] finds the use of social networks to be emergent. Almost seven in 10 districts(69%) say they have student Web site programs. Nearly half (49%) said their schools participate in online collaborative projects with other schools, and almost as many (46%) say their students participate in online pen pal or other international programs. Even more impressively, [m]ore than a third (35%) say their schools and/or students run blogs, either officially or in the context of instruction. More than one in five districts (22%) say their classrooms are involved in creating or maintaining wikis, web sites that allow visitors to add,remove or edit content[17].

From the perspective of a other researches; I found the social network have great impacts on education. Al-Ammary et al [9], investigated the approachs effect on students' behavioral intention to use social networks as learning tools. This study was conducted with undergraduate students in the information system department of Bahrain University. For this investigation,the study used the technology acceptance model (TAM), which focuses on understood usefulness and ease of use as well as behavioral intentions that lead to using social networks(SNs) as learning tools. A quantitative factor study was conducted using the survey method. The study confirmed that perceived usefulness and perceived ease are vital factors for predicting the students' behavioral intention to use social networks as learning tools. This investigation proved that social networks can be used as learning tools for higher education. Further, it showed that they have an important impact on behavioral intentions to use e-learning, when student acquire more skills and knowledge about technology lead to use it[9].

Beqiri[11], discussed the current state of using social networks to serve students at Kosova University and explained and analyzed the effect of social networks on higher education by studying student perspective using a questionnaire. Social networks are considered the primary and secondary source for collected data. Data can be gathered and research can be published using social networking platforms. Beqiri prepared questionnaires and collected data to be analyzed. The results from this study prove an increased use of social networks at Kosovo University and this use was found to have a positive impact on student activities such as research, communication, and projects. The most commonly used social platforms were email, followed by Facebook and Google+[11].

Stanciu et al [12], analyzed the effect of social networks on higher education in Romania. They focused on Twitter and Facebook for the social networks, and focused the study on theoretical basis and model implementation, which proposed to enhance the usefulness of social networking platforms for educational purposes by using five components: 1) communication with teachers or other students, 2)collaboration in a group of learning, 3) sharing resources through documents and multimedia resources, and 4) the usefulness and the 5) frequency of access.The results of this study proved that the social networking platform is popular among students and can be a valuable tool for education. Using social networks expanded the students perspective. Positive impacts of using social networks in higher education included such as tracking new resources, getting information and solutions quickly, and publishing research and bibliography notes. However, there are some negative impacts as well. In the case of the Twitter platform, which not allow users to create groups, teachers cannot collect their students as groups on Twitter. Twitter also uses a limited message size, which became source for spam. Further, some student interact on negative form who take information and their requirement but not post any useful information. One of the most common problems for e-learning solutions is how these networks could be used to socialize at school and at home[12].

Liccardi et al [13], investigated the role of social networks in education by analyzing the effect of social networks on a student's educational experiences and reasons for using a social network. Liccardi et al collected data from students who participated on social networks. This study focused on computer science departments in UK and EU countries. They distributed a questionnaire to students to determine whether social networks developed their learning. They distributed a second questionnaire to teachers to determine how social networks benefited students. After analyzing these questionnaires, Liccardi et al measured the use and efficiency of social networks, the web, and e-learning. They used a context-based approach mechanism to analyze the questionnaires. The main contribution of the paper is to analyze the current state of education and find the link between the education and social networks. In this research paper, Liccardi et al studied the role and impact of social networking on education, and, for future direction, try to solve how social software can be effectively used to achieve these goals[13].

Derawi[15], discussed Facebook as the most popular e-learning platform. Derawi thought Facebook had facilities that make it the best for educational, which is supported by testing and easy to use on computers and mobile, sharing information between students is available. Derawi discussed how he employed Facebook tools to support education, and support students by adding additional resources and fast communication with other students. author support his paper by case study and implement the result practically[15].

Some research findings to the need to solve the challenges related to social networking to support all students with different locations and different age and departments. Aleman et al [4], analyzed the use of social networks and, information and communication technologies on education,focusing on the staff of a nursing department in Spain. The methodology used in that investigation was based on a questionnaire that was analyzed by experts. Aleman et al found the staff of the nursing faculty faced the challenge of using technology in education; they needed more training to use technology[4].

Tariq et al [5], discussed the effect of social networks on youth and teenagers life. The student must focus on education, but instead spends a long time on social networks, which led to the suggestion of using social networks in education. Previous study proved that more than 90% of adults use social networks. But the problem is not with positive using; rather the problem is the expected risk of using social networks to chat, which led to a negative impact on ideas and an increase in wasting time. Krishnaveni and Sathiyakumari wished to formulate laws that enter the social networks when a user enters an ID number. This will reduce the risk associated with using social networks, but it will also create an opportunity for forging ID numbers[5].

Santos et al [14], discussed whether social networks have an effect on education by determining how students use social networks and what activities they complete within social networks. How students use these sites was subject of a study on two small scales; one for student undergraduates in Singapore and another group for graduate students in Brazil. Data collected from surveys and interviews proved that Brazilian students used social networks for both education and socialization, while students from Singapore used social networks for communication purposes. Santos et al analyzed the reasons for the differentiation between these results, and proposed recommendations for future work. The cause of the resulting differentiation is that the impact of"regional areas where access to learning resources are not always easy or long distance becomes an issue" and they terminated their work by questioning avenues for future work, which discuss what is needed to increase knowledge about the significance of SNS as a learning tools. Of course, the limitation of the sample provided, a limited result and a need for more research before it is possible to adopt the final results[14].

III. PROBLEM QUESTION

My paper aims to find answer for follow six questions:

- What is the rank of selected university based on number of posts, users, impression and reach?
- And what type of posts?
- who most interactive with technology male or female?
- What the most top sites from these (twitter , Facebook , youtube , instagram) that used to send or receive posts on social network?
- What are the most popular sources that used to posts?
- Where posts spread around locations?

IV. DATASET

Initially, I acquire a data set and partition it into five groups to test. First test related to posts and users in order to find the selected university ranks. Second test aim to find the proportion of male and female interaction in the use of social networks(this help to determine who most interactive with technology). Third test aims to find the most top sites from these sites (twitter , Facebook , youtube , instagram). Fourth test aims to find the top sources that used to posts within social network (this help to determine most popular sources). Fifth test aims to measuring the spread of posts around different locations. The data was collected from the Dataset provide by keyhole website http://etlaq.co/go/3916.html. Data collected on three different intervals: first intervals start from 2Feb to 9Feb, second interval start from 18Feb to 23Feb, third interval start from 9Mar to 22Mar.

V. RESEARCH METHODOLOGY

I use data collection to make simple analysis for data that collected for first, second, third, and forth tests by using excel software which is a very valuable tool to analyzed simple data. For fifth test, measuring the spread of posts around different locations and Classification the university according to the variable of location of posts using Cluster Analysis K-Means.

VI. VARIABLE DIFFENITION

- Post means number of posts in specific time.
- User means number of user who posted hashtag in specific time.
- Impression is number of the tweets sent that actually generate interaction or replies from others online.
- Reach is total number of tweets sent by an account.
- Original is percentage of original posts.
- RTs is percentage of retweets posts.
- Replies is percentage of replies post.
- Male, female means percentage of the male and female who used social network on education.
- Top source refers to percentage of devices that used to post.
- Top site refer to percentage of site that used to post.
- Location means Generate information about where users posting specific hashtags.

VII. RESULT AND DISCUSSION

A. Find the number of posts, users, and Share of post (original, RTs, reply)

TABLE II
NUMBER OF POSTS AND USERS

University	number of user	percentage of user	rank of user	number of posts	percentage of posts	rank of posts
MIT	330	13.53%	5	381	13.46%	5
CM	338	13.86%	4	404	14.28%	4
Stanford	412	16.89%	3	457	16.15%	3
CB	107	4.39%	7	120	4.24%	7
IUC	13	0.53%	10	13	0.46%	10
GIT	227	9.31%	6	251	8.87%	6
SC	474	19.43%	1	604	21.34%	1
Maryland	423	17.34%	2	471	16.64%	2
CSD	92	3.77%	8	95	3.36%	8
TA	23	0.94%	9	34	1.20%	9
Total	2439			2830		

TABLE III
NUMBER OF REACH AND IMPRESSION

University	number of impression	percentage of impression	rank of impression	number of reach	percentage of reach	rank of reach
MIT	2201068	9.17%	4	2134099	9.57%	4
CM	2541866	10.59%	3	2376216	10.66%	3
Stanford	13100710	54.56%	1	12319236	55.27%	1
CB	289510	1.21%	7	282991	1.27%	7
IUC	9703	0.04%	10	9703	0.04%	10
GIT	587128	2.45%	6	389891	1.75%	6
SC	3941726	16.42%	2	3525304	15.82%	2
Maryland	1071607	4.46%	5	988652	4.44%	5
CSD	228073	0.95%	8	223313	1.00%	8
TA	41260	0.17%	9	40596	0.18%	9
Total	24012651			22290001		

1) What is the rank of selected university based on number of posts, users, impression and reach? : TAPLE II and TABLE III shows that the University of Stanford had 54.56 % impression where it came in first rank, as for Reach 55.27 %, for (Users) and (Post) the SC University have got the greatest Percent 19.43 %, 21.34 % Respectively. As shown as in fig (1),(2),(3), and (4).

2) what type of posts?: TABLE IV shows that the California San Diego (CSD) University have got Replies39.75 % where it came in first rank, for RTs was Maryland University in the first rank18.44%, as for Original the Texas Austin (TA) University have got the greatest Percent 14.18. As shown as in fig 5

B. Find the proportion of male and female interaction in the use of social networks (this help to determine who most interactive with technology)

Through the TABLE V we find that the Males were more interactive with technology than Females in 3 Universities(Illinois Urbana Champaign (IUC)-Maryland-Texas Austin(TA))

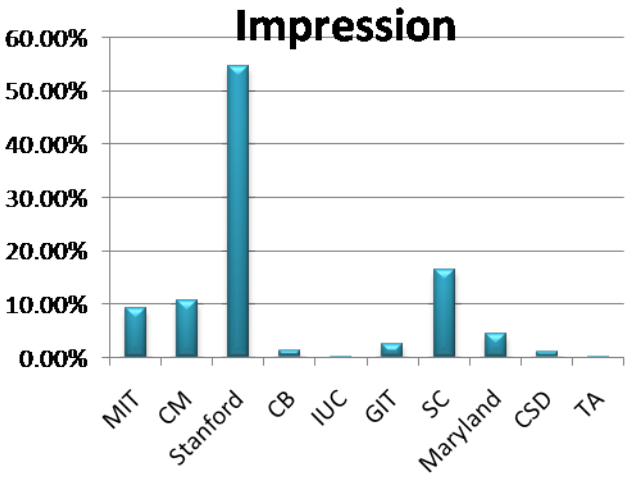

Fig. 1. distribution the impression according to university

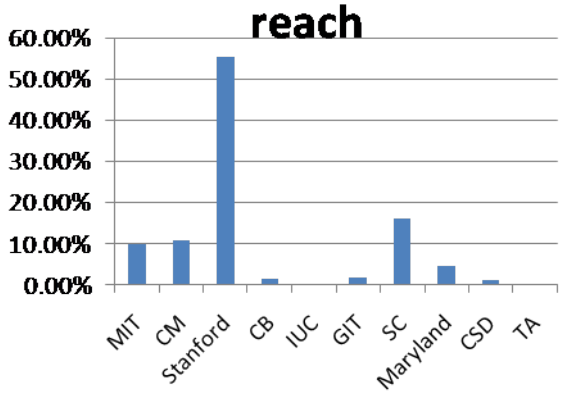

Fig. 2. distribution the reach according to university

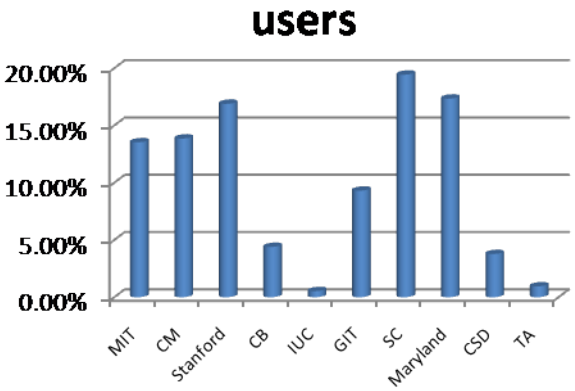

Fig. 3. distribution the users according to university

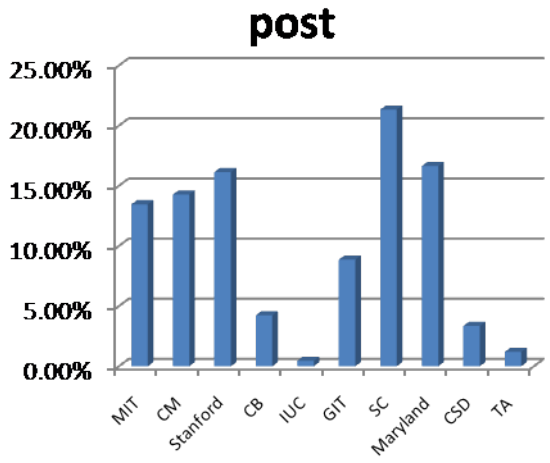

Fig. 4. distribution the posts according to university

TABLE IV
DISTRIBUTION OF SHARE OF POST (ORIGINAL, RTS, REPLY)

University	replays %	rank based on replay	RTs %	rank based on RTs	original %	rank based on original
MIT	3.29%	7	12.90%	4	8.80%	7
CM	8.50%	4	8.41%	7	10.84%	4
Stanford	2.40%	8	15.48%	2	7.55%	9
CB	1.92%	9	15.04%	3	7.79%	8
IUC	0.00%	10	2.56%	9	14.09%	2
GIT	5.35%	6	9.30%	6	10.52%	5
SC	6.58%	5	12.17%	5	9.04%	6
Maryland	9.32%	3	18.44%	1	5.81%	10
CSD	39.75%	1	5.02%	8	11.37%	3
TA	22.89%	2	0.69%	10	14.18%	1

while the Female were more interactive with technology in the rest of the universities.There is difference between males and females for interactive with technology according to Universities except California Berkeley (CB) University and little difference in Carnegie Mellon (CM) and California San Diego (CSD). As shown as in fig (6).

C. find the most top sites from these (twitter, Facebook, YouTube, Instagram)

Researcher adopted in determining the levels of site according to the mean and the relative importance (relative weight) on the following criterion as shown in TABLE VI: The degree of availability (AD) of Twitter was (Second) (Mean=3.03 and AD=75.8 %) in Universities, Facebook was (Third) (Mean=1.97 and AD=49.2 %), Instagram Was (Fourth) (Mean=1.43 and AD=35.8 %) and Youtube was (Not used) (Mean=0.4 and AD=10 %). We note Twitter achieved the first rank in 5 Universities, and Facebook one University, Instagram and Youtube no University. as shown in TABLE VII , Fig(9) and Fig(10) show all that. * The degree of availability ** Level of Site

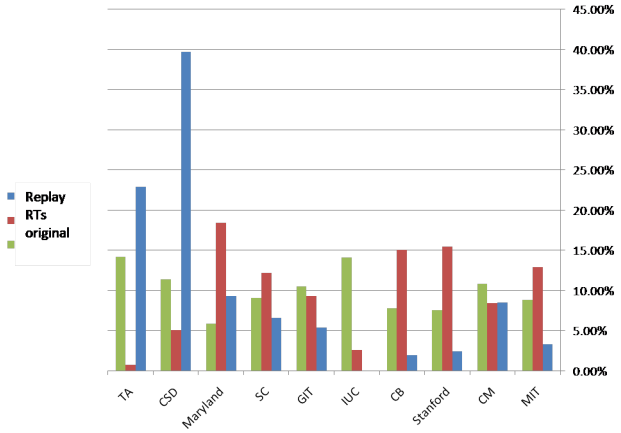

Fig. 5. distribution of original, RTs and replay posts amount universities

TABLE V
DEMOGRAPHICS

University	male percentage	female percentage
MIT	9%	14%
CM	10%	11%
Stanford	8%	14%
CB	10%	10%
IUC	14%	0%
GIT	8%	16%
SC	9%	12%
Maryland	11%	8%
CSD	10%	11%
TA	12%	6%

TABLE VI
TOP EFFECTIVE SOCIAL NETWORK SITES ON EDUCATION

Weight mean From 0-0.8	Level of site Not used	The degree of availability 0% -20%
More than 0.80-1.6	Fourth	More than 20%-40%
More than 1.6-2.4	Third	More than 40%-60%
More than 2.4-3.2	Second	More than 60%-80%
More than 3.2-4.0	First	More than 80%-100%

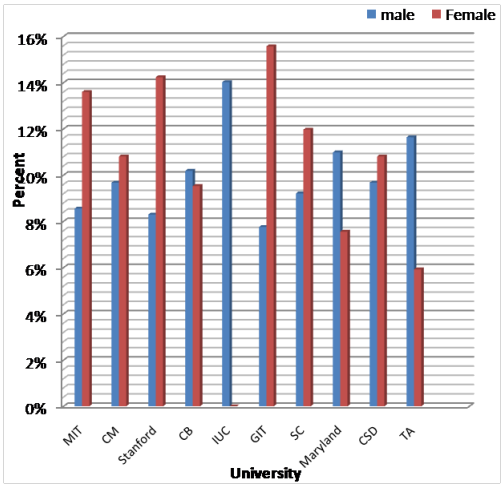

Fig. 6. Male and Females interactive with technology in universities

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D. Find the top sources for these posts (this help to determine most popular sources)

TABLE VIII show that 28.3 % in Universities use Iphone where came in the first rank, in second rank was desktop/web 17.9 % while Blackberry came in the last rank 0.49 % as shown as in fig (11).

E. measuring the spread of posts around different locations and Classification the university according to the variable of location of posts using Cluster Analysis K-Means

1) measuring the spread of posts around different locations: From TABLE IX we find56.06 % from Members of the Universities Establish the Hashtag from USA where came in the first rank, in second rank was Indonesia14.20% while Somalia came in the last rank 0.09 %. As shown as in figure (12). Some locations havent any Hashtag, so it is deleted from analysis.

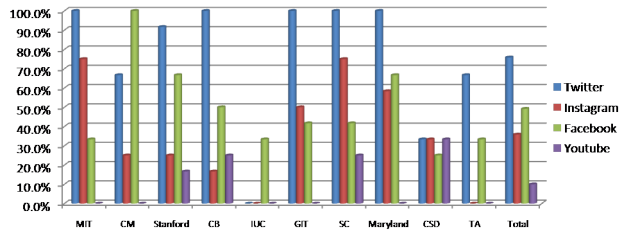

Fig. 7. Level of Sites in universities

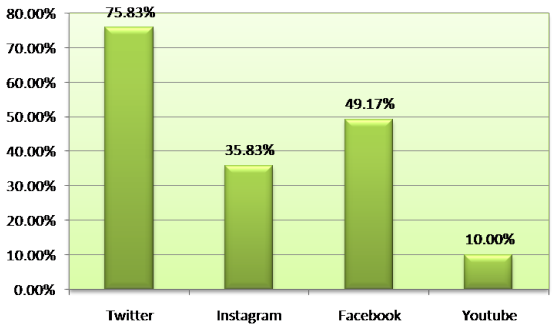

Fig. 8. degree of availability (AD) of Sites

TABLE VII
RANK OF SITES IN UNIVERSITIES

uni	Twitter Mean	DA*	LS**	Instagram Mean	DA*	LS**	Facebook Mean	DA*	LS**	YouTube Mean	DA*	LS**
MIT	4	100.0%	First	3	75.0%	Second	1.33	33.3%	Fourth	0	0.0%	Not
CM	2.67	66.7%	Second	1	25.0%	Fourth	4	100.0%	First	0	0.0%	Not
Stanford	3.67	91.7%	First	1	25.0%	Fourth	2.67	66.7%	Second	0.67	16.7%	Not
CB	4	100.0%	First	0.67	16.7%	Not	2	50.0%	Third	1	25.0%	Fourth
IUC	0	0.0%	Not	0	0.0%	Not	1.33	33.3%	Fourth	0	0.0%	Not
GIT	4	100.0%	First	2	50.0%	Third	1.67	41.7%	Third	0	0.0%	Not
SC	4	100.0%	First	3	75.0%	Second	1.67	41.7%	Third	1	25.0%	Not
Maryland	4	100.0%	First	2.33	58.3%	Third	2.67	66.7%	Second	0	0.0%	Not
CSD	1.33	33.3%	Fourth	1.33	33.3%	Fourth	1	25.0%	Fourth	1.33	33.3%	Fourth
TA	2.67	66.7%	Second	0	0.0%	Not	1.33	33.3%	Fourth	0	0.0%	Not
Total	3.03	75.8%	Second	1.43	35.8%	Fourth	1.97	49.2%	Third	0.4	10.0%	Not

TABLE VIII
MOST POPULAR SOURCES THAT USED FOR SOCIAL NETWORK

Sources	Percent	Rank
Ipad	1.44%	10
BlackBerry	0.49%	12
Ifttt	10.91%	4
Facebook	4.45%	7
Dlvr.it	2.11%	8
mobile/web	10.45%	5
Google	0.63%	11
Android	14.86%	3
twitterfeed	6.68%	6
desktop/web	17.90%	2
iphone	28.30%	1
other	1.79%	9

2) Classification the university according to the variable of location of posts using Cluster Analysis K-Means: Cluster analysis or clustering is the task of grouping a set of objects in such a way that objects in the same group (called a cluster) are more similar (in some sense or another) to each other than to those in other groups (clusters). It is a main task

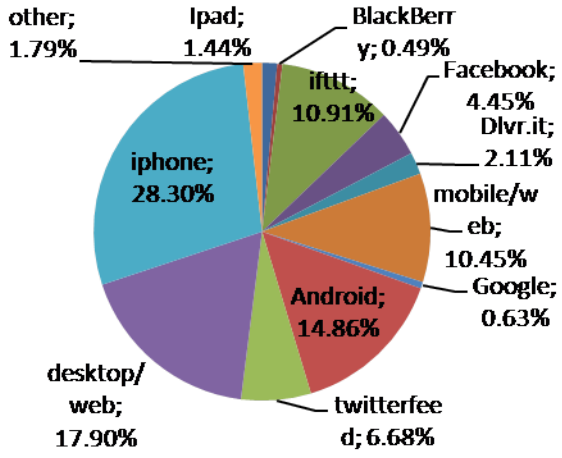

Fig. 9. top source that used for social networks

TABLE IX
THE SPREAD OF POSTS AROUND DIFFERENT LOCATIONS

Location	Percent	Rank
Somalia	0.09%	20
Iran	0.18%	18
Algeria	5.21%	4
Norway	0.27%	15
Netherland	0.36%	13.5
Lithuania	0.18%	18
Tunisia	0.18%	18
Turkey	0.72%	12
Canada	7.46%	3
France	1.54%	9
Germany	2.55%	6
China	0.22%	16
Indonesia	14.20%	2
South Korea	0.45%	13
India	2.49%	7
Nigeria	1.98%	8
Italy	1.39%	11
Spain	1.46%	10
Britain	2.65%	5
Colombia	0.36%	13.5
US	56.07%	1

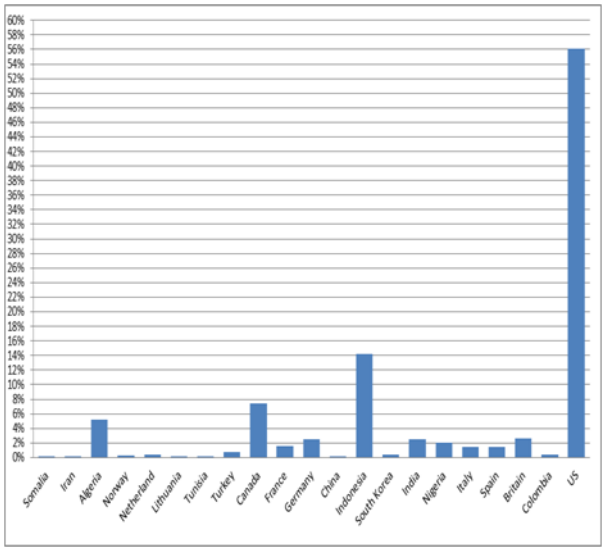

Fig. 10. spread of posts around different locations

of exploratory data mining, and a common technique for statistical data analysis, used in many fields, including machine learning, pattern recognition, image analysis, information retrieval, bioinformatics and data compression. One of methods of Cluster Analysis is (Cluster Analysis K-Means), which we willuse.In this method shoud be converting the data to critical z scores, For applying this analysis the researcher used SPSS 20 to grouping the universities according to variable of location.

Results of Cluster Analysis: Through the TABLE X first group Massachusetts Institute of Technology, in second group we find University of Southern California have a greater distance from the center of the group (3.691), while Stanford University is unique in third group, fourth group included Uni-

versity of Carnegie Mellon, Georgia Institute of Technology and Southern California, where the distance of each of them (2.47), (3.484) and (2.949) respectively. Through TABLE XI,

TABLE X
THE CLUSTER MEMBERSHIP

university	cluster	Distance
Massachusetts Institute of Technology	1	.000
Carnegie Mellon University	4	2.470
Stanford University	3	.000
University of California Berkeley	2	2.687
University of Illinois Urbana Champaign	2	3.492
Georgia Institute of Technology	4	3.484
University of Southern California	2	3.691
University of Maryland	2	3.447
University of California San Diego	4	2.949
University of Texas Austin	2	3.360

TABLE XI
THE DISTRIBUTION OF CLUSTERS

first cluster	second cluster	third cluster	fourth cluster
Massachusetts Institute of Technology	California Berkeley, Illinois Urbana Champaign, Southern California, Maryland, Texas Austin	Stanford	Carnegie Mellon, Georgia Institute

TABLE XII
THE DISTRIBUTION OF CLUSTERS

location (variable)	clu 1	clu 2	clu 3	clu 4
Zscore(Somalia)	-.31623	.31623	-.31623	-.31623
Zscore(Iran)	-.31623	.31623	-.31623	-.31623
Zscore(Algeria)	-.28297	-.30655	-.34193	.71922
Zscore(Norway)	1.03712	-.44448	2.51871	-.44448
Zscore(Netherland)	-.47434	.00000	1.89737	-.47434
Zscore(Lithuania)	-.31623	-.31623	2.84605	-.31623
Zscore(Tunisia)	-.31623	-.31623	2.84605	-.31623
Zscore(Turkey)	.17617	.17617	1.05700	-.70466
Zscore(Canada)	.16716	.20224	-.34255	-.27861
Zscore(France)	-.17269	-.50417	-.41451	1.03602
Zscore(Germany)	.02579	.33201	-.46211	-.40790
Zscore(China)	-.46585	-.46585	2.26303	.17735
Zscore(Indonesia)	-.71619	.29239	.06723	-.27100
Zscore(SouthKorea)	2.75744	-.23635	-.39392	-.39392
Zscore(India)	1.66869	-.56288	2.03888	-.29772
Zscore(Nigeria)	-.03182	-.35000	-.35000	.71060
Zscore(Italy)	.21555	-.40715	2.13157	-.10378
Zscore(Spain)	.45856	-.62421	-.24139	.96796
Zscore(Britain)	2.26439	-.53373	-.53099	.31176
Zscore(Colombia)	1.89737	-.47434	1.89737	-.47434
Zscore(US)	-1.3244	.72800	-1.5393	-.25876

TABLE XIII
DISTANCES BETWEEN FINAL CLUSTER CENTERS

Cluster	1	2	3	4
1		6.141	7.708	5.632
2	6.141		8.157	3.503
3	7.708	8.157		8.138
4	5.632	3.503	8.138	

which represents the means variables of the study, we find that the second group progressing in six variables (Somalia, Iran, Canada, Germany, China, Indonesia, America), while the third group is distinct from the rest of the groups in means of (Norway, the Netherlands, Lithuania, Tunisia, Turkey, China, India, Italy, Colombia). The fourth group is distinct from other groups in means of (Algeria, France, Nigeria, Spain). The first group is distinct in means of (South Korea, Britain).

TABLE XII shows the distances between the various centers of the final groups, and here shows that the mean third group is far from the mean the rest of the groups (8.138) for fourth group, (7.708) for first group and (8.157) for second group.

VIII. CONCLUSION AND FUTURE WORK

This paper aims to find statistical information about integration between education and technology , by analysis the use of social networks on higher education. I make five tests, each one have its own proposes. first test proven that Stanford university had 54.56 % impression where it came in first rank, as for Reach 55.27 % which had greater interaction or replies about their posts, and had greater number of tweets sent by its account. For (number of posts in specific time) and (number of user who posted hashtag in specific time) the SC University have got the greatest Percent 19.43 % 21.34 % Respectively. The CSD University have got Replies39.75 % where it came in first rank, for RTs was Maryland University in the first rank18.44 % as for Original the TA University have got the greatest Percent 14.18.

Second test proven that the Males were more interactive with technology than Females in 3 Universities(IUC-Maryland-TA) while the Female were more interactive with technology in the rest of the universities.There is difference between males and females for interactive with technology according to Universities except CB University and little difference in CM and CSD.

Third test I note the degree of availability (AD) of Twitter was (Second) (Mean=3.03 and AD=75.8 %) in Universities, Facebook was (Third) (Mean=1.97 and AD=49.2 %), Instagram Was (Fourth) (Mean=1.43 and AD=35.8 %) and Youtube was (Not used) (Mean=0.4 and AD=10 %). We note Twitter achieved the first rank in 5 Universities, and Facebook one University, Instagram and Youtube no University.

Fourth test proven that 28.3 % in Universities use Iphone where came in the first rank, in second rank was desktop/web 17.9 % while Blackberry came in the last rank 0.49 %.

We find University of Southern California have a greater distance from the center of the group (3.691), while Stanford University is unique in third group, fourth group included University of Carnegie Mellon, Georgia Institute of Technology and Southern California, where the distance of each of them

(2.47), (3.484) and (2.949) respectively in fifth test.

First study help us to take decision about best university from selected university according to number of posts where SC University is best one. While Stanford university have best interaction with its posts. Second study determine who more active on using social networks, it maybe influenced by official works and hobbies of gender. Third and forth studies encourage companies to developing and marketing their products. Fifth study may help geographic experts to take some decision based on information that given on this test.

This study conducted on limited universities in order to analysis the using of social networks in education. Many other universities have impact on social network but not used on this paper. So we will repeat this study on large scale of university and large and continues time in order to receive accurate and valuable information.

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