Blog Content and User Engagement - An Insight Using Statistical Analysis.

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Abstract - Since the past few years organizations have increasingly realized the value of social media in positioning, propagating and marketing the product/service and organization itself. Today every organization be it small or big has realized the essence of creating a space in the World Wide Web. Social Media through its multifaceted platforms has enabled the organizations to propagate their brands. There are a number of social media networks which are helpful in spreading the message to customers. Many organizations are having full time web analytics teams that are regularly trying to ensure that prospective customers are visiting their organization through various forms of social media. Web analytics is foreseen as a tool for Business Intelligence by organizations and there are a large number of analytics tools available for monitoring the visibility of a particular brand on the web. For example, Google has its own analytic tool that is very widely used. There are number of free as well as paid analytical tools available on the internet. The objective of this paper is to study what content in a blog present in the social media creates a greater impact on user engagement. The study statistically analyzes the relation between content of the blog and user engagement. The statistical analysis was carried out on a blog of a reputed management institute in Pune to arrive at conclusions.

Keyword-Social Media, Blogs, User engagement, Business Intelligence, blog content

I. INTRODUCTION

Within a short span of its emergence the phenomenon popularly known as Social media has got the attention of every one especially the business community, and its adoption has skyrocketed [20]. First time people talked about social networks in the late 1970s, when Hiltz and Turoff [51] wrote The Network Nation on "super connectivity" on computer mediated communication (CMC). Social network is widely being used today for multiple purposes. We may be able to ascertain the cause of its origin to sharing information; information about product, services, about people, organizations, events, and many more. Some of the first users of social media (earlier known as bulletin boards) were universities. Though CERN introduced the World Wide Web in 1989 only in 1993 it became available to the general public. And thereafter there has been no stop in the development and proliferation of social media through its multifaceted formats and platforms. It is evolving rapidly through continuous user interface.

Social Media has been defined by Kaplan and Haenlein [27] 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." Michaelidou et al [38] says that it is different from traditional media in many aspects such as quality, reach, frequency, usability, immediacy and permanence. It is participative and the power lies with the audience and not with the communicator. Even when organizations use this media to communicate about their product, services or organization itself, unlike the traditional media, it empowers the customer to talk directly to one another. According to Mangold [35] the content, timing, and frequency of the social media-based conversations occurring between consumers are outside managers' direct control.

The Nielsen and Morgan [43] report that internet users continue to spend more and more time with social media sites than any other type of sites. Therefore enterprises are keen on leveraging this medium to market their products. At a given point of time, when hundreds of thousands of people are engaged on social media,

companies need to identify the factors that would create maximum visibility of the products and/or services offered by them.

Blogs are considered a very important social media tool to promote an organization or its products and services. Since it allows detailed communication and is easy to customize according to the need of the organization, many use it in marketing activities. Since the late 1990s, after blogging started, it soon grew in popularity as a publishing tool as it did not require a pre-requisite knowledge of any technology. Therefore it became a cost effective means for organizations to create awareness about their product and propagate the brand Stelzner [49], [2, 30]. Organizations started their own blogs to promote their products as early as the late 1990s. Chamberlain [12] also discusses some of the downside of the social media where companies had to face major public relations issues due to bad blogging or because of some dissatisfied bloggers.

Gaudeul [17], Mutum [40] discusses in detail on what content makes a good blog. In this paper we endeavor to understand what a blog is, what makes a blog to be useful to an organization and in particular about the blog content itself. Blogs are free to create and they are open to the public. It is generally the work of one author but group blogs are not uncommon. Blogs can also offer an opportunity to interact with readers. Readers can post comments, express likes or dislikes and their opinion [42, 13, and 22] feels that there is also a current trend that is seen in organizations regarding collecting information about the brand and then promoting that collection of information through a blog for better brand visibility.

It was found that a good content with certain types of ingredients will definitely succeed in garnering more user engagement and thus more visibility to the brand. We therefore tried to find out what are those features of the content that would bring more user engagement to a blog? We identified four factors based on the preliminary readings and a few interviews with blog users. These factors are dependent on who writes the blog (for example when Steve Jobs writes about its product it gets more user engagement), when the blog is written (if he writes the blog immediately before the launching of the product it gets lots of user engagement), why a blog is written (he may write to discuss the salient features of his product), for whom is the blog written (Jobs has specific target groups and the language and everything is driven to get their attention). All these four factors constitute what of the blog content.

II. LITERATURE REVIEW:

A blog (earlier known as web log) is a discussion or informational site published on the World Wide Web and consisting of discrete entries ("posts") [5].Kaplan and Haenlein [27] 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. The various web publishing tools facilitated the emergence and growth of blogs since the late 1990s. According to Gaudeul [18], blogs is a part of the larger concept of the social media network as it builds social relations with their readers and other bloggers through comments, shares, likes, vote and other social media tools. It is also a very widespread medium. As of 16 February 2011, there were over 156 million public blogs in existence [43]. In the initial stages of its development, blogs were limited to academic institutions, and individual bloggers who wrote their diary. According to Michael [36] since 2004 it has became a major political opinion forming tool. There are essentially two measures to see its popularity: popularity through citations, as well as popularity through affiliation. There are a number of tools to find out the popularity of a blog such as blogroll, permalinks, blogdex, Alexa Internet

The growing popularity of blogs has drawn an increasing amount of attention from corporate keen to expand market share and establish better customer relationships. Although there are a number of studies exploring the factors underlying popular or successful blogs, we found limited number of literature on what are the reasons because of which the blog user engages with the blog [33,53,1and 9].

Men [32], says that user engagement is one of the means to understand the effectiveness of a blog. White and Biggs (2011) mentions that the most common method used to analyze the user engagement is the comments that it receives. They also discuss in the book 'Bloggers Boot Camp' on the need to promote through twitter, Face book and other social media, to build traffic for the blog. White [9] discusses some of the types of the blogs as Short Post, Reviews, Features, Lists, Infographic, Caption, Interview, How-To, Battles etc... Bloggers and readers are likely to make use of a variety of means of signaling responsiveness, such as naming, format typing and quoting [6]. Batch et al [53], state that using tags is a recent phenomenon to get more user engagement. When users tag resources and share their tags, the tagging activities become collaborative tagging. Through social sharing, comments and guest posts, blogs provide the basis for building a targeted community. HubSpot's research showed that blogs top other forms of social media for effectiveness. In other words embedding with other social media sites is a very potent means to get visibility [14].

Kim et al [31] talks of blog temperature and says we can predict the popularity temperature of Internet discussion articles using the hit count. They categorized the levels of temperature as explosive, hot, warm, and cold, according to the number of reviews in the saturated state of the article. Moon and Han [39] differentiate

between the popular blogger from influential blogger. Kaplan and Haenlein [27], says that Along with the content generation blogs usually involve date stamped entries with the most recent entry at the top. Organizations have found blogs to be a very useful medium in building strong brand and market its products by reaching the consumers both before and after the engagement.

Blogs are considered as a medium through which individuals or groups can express their views, attitudes and opinions in a subjective manner [43, 27]. Klosek [28] states that there exists no law as to whether the board members of an organization should or should not write on blogs, so they can express their opinions and views via corporate blogs. Another paper discusses employees using blogs to vent out their angers and express opinions about their colleagues which led to discussions on regulations to be laid down for corporate blogging [28].

Studies show that corporate use frameworks for gathering data through business intelligence from blogs by automatically collecting and analyzing blog contents and bloggers' interaction networks [38]. Corporate, in order to optimize their blog visibility stress on the content of the blog. Seung-Hwan et al [31] uses the term CPU (Content Power Users) to exhibit the significant influence of certain content over the content of other users. David [35] discusses the heightened use of blogs by organizations as a medium to post the success stories.

It was found that that there is limited research done on weblogs. Various business 2.0 tools have helped the organizations to use the blogs more efficiently in analyzing the traffic on the web. The aim is to leverage their businesses and helping them create a brand image for their products, services and offerings related information. According to e-marketer report [17], it is seen that top brands spend a limited amount of time reaching out to influencers for marketing purposes, but these individuals—generally bloggers or social media users with a greater than average reach among consumers—still have a significant presence in the marketplace and are prized by marketers for their ability to spread the word about products or services they believe in.

What is a good content that makes a blog popular? There are umpteen numbers of blogs on what is a good blog content. One major theme is to identify what your potential reader would like to read and address them [34, 48, 6]. Joe Pulizzi [46] of content management institute discusses at length what blog content is and what will make it sell from a marketer's point of view. He in particular discusses the timing of the blog and use of other media to leverage ones blog. Though blog has not gained much of popularity, when it is used in alignment with the other social media platforms it multiplies faster and reaches a greater audience. Thus the objective of the paper is to find out what content of a blog creates maximum user engagement.

III. HYPOTHESIS:

A number of research papers have discussed the importance of the content of the blog in making it popular or more visible. Chen [23] analyzed the bloggers' posts and blog visitors' reply posts on popular websites and found that the bloggers' attracted larger popularity of blog visitors' replies. Glen [19] explored the importance of blog content that makes the blog popular through an analysis of 5 most popular blogs. Mohammad et al [41], discussed that the blog receives a number of hits if the content of the blog talks about certain popular opinions. A 2010 research paper mentions that the content providers must be familiar with individual user preferences in order to recommend content that matches narrowly defined personal interests. Thus is hypothesized that (H1) There is a significant impact of the content of the blog to the user engagement on social media.

Bibb Latane [29], proposed that the Social Impact Theory consisting of three variables viz, Strength, Immediacy and Number (SIN) wherein the strength (S) is a measure of how much influence, power, or intensity the target perceives the source to possess. The amount of influence, power, or intensity is often determined through factors such as age, social class, whether or not a previous relationship had existed, or anticipation of a future relationship existing. Chen [23], analyzed the bloggers' posts and blog visitors' reply posts on popular websites and found that the bloggers' social presence framing attracted larger popularity of blog visitors' replies. Jeff Jarvis, a communications professional and a blogger, wrote a series of increasingly agitated complaints about Dell through his blog which resulted in Dell closing down its social network site within a month. Thus it is hypothesized that H1a: There is a significant impact of the immediacy of the content with respect to an event to the user engagement.

It is observed that the relevance of news is short-lived. The analysis that follows a news gradually loses its impact. Researchers argue that when organizations use blogging as a tool for building its brand, it is felt if the blogs come immediately following a major event or prior to, it leaves a greater impact on the visitor's minds. For example, Apple inc. always publishes blogs written by its CEO immediately before and after a product launch and creates hype. Fresh content is the key to your blog's success. This is one of the reasons that the measurement of a website's issue-relevance is a better measure of the impact of a website on a particular topic, or company than general influence. Timing is everything, and maintaining a blog is no exception to the rule. Glen [19] thus says that learning when your audience is tuning in, and therefore when to post, is mandatory for any successful blogger. Thus it is hypothesized that H1b: There is a strong impact on when the blog is written to the user engagement.

The question next is why a blog is written and the impact it creates. Some findings point to the potential of blogs as a tool for reflection and learning in practitioner-oriented courses. Osman [44] says that studies demonstrated a reasonably high level of critical thinking and were able to link theory to their experiences and observations in the work place. Teng-Kai [50] addresses the concept of Blogger-Centric Contextual Advertising, which refers to the assignment of personal ads to any blog page, chosen in accordance to bloggers' interests. As blogs become a platform for expressing personal opinions, they naturally contain various kinds of statements, including facts, comments and statements about personal interests, of both a positive and negative nature. Thus it is hypothesized that, H1c: There is a significant impact on why the blog is written to the engagement of user.

The advent of Web 2.0 technologies has enabled the efficient creation and distribution of user-generated content (UGC), resulting in vast changes in the online media landscape. McQuail [37] feels that consumers today are active and in charge of their media experiences, making it more important than ever to understand motivational factors that drive media consumption. According to Daugherty [15], the online information market continues to shift toward a user-centric model and away from the conventional media model, characterized as publisher-centric. The growing popularity of blogs has drawn an increasing amount of attention from corporate keen to expand market share and establish better customer relationships. It is thus imperative to probe into why some blogs attract a tremendous amount of interest and why they are sustainable. Although there are a number of studies exploring the factors underlying popular or successful blogs, few results have been reported from the integrated perspective of Information System success and marketing. By segregating blog quality into information quality and system quality, this study investigates the linkage between blog quality and blog-user satisfaction, feels Hsieha [24].Moon and Han [39], talk of the interpersonal similarity that presents the interaction among bloggers and like-minded readers. They also mention that when there is an influential interpersonal engagement the Blogs have more visibility. Thus it is hypothesized that H1d: There exists a significant impact on about whom the blog is written to the engagement of the user.

IV. RESEARCH BACKGROUND AND SCOPE:

Through the following research study we intend to find out the significance of content of a blog and the corresponding user engagement. The purpose of the research is to identify what kind of content written in a blog attracts user engagement in the form of likes, comments, shares and votes especially for an academic institution's blog in order to make it more visible and increase the reach. Similarly it also aims to identify the amount of user engagements in the form of likes, shares, votes and comments.

Research objectives-

- i. To determine whether the content of a blog attracts more users towards the blog.
- ii. To identify what content on a blog attracts more users.
- iii. To validate the findings based on a set of data using a statistical tool.

We identified two set of variables: the independent variable content and the dependant variable user engagement.

Hence for our research purpose we define the following terms:

- 1. Content of a blog: Content is the matter that consists of text, pictures, images, links to the web.
- 2. *User engagement*: The user engagement is the summation of the number of likes shares comments and votes received by a particular blog.
- 3. Tag: tag is an index term assigned to a piece of information.
- 4. *Social Media*: Social media refers to the means of interactions among people in which they create, share, and exchange information and ideas in virtual communities and networks.
- 5. *Blog*: A blog is a discussion or informational site published on the World Wide Web and consisting of discrete entries ("posts") typically displayed in reverse chronological order (the most recent post appears first).
- 6. Proximity to an event: The blog is written prior or post occurrence of an event.
- 7. Corporate interaction: The mention of corporate interaction or names in the content of the blog.
- 8. Achievements: the recognition achieved through some awards or prizes.
- 9. *Embedded with social media*: The blog is networked with other social media platforms like Facebook, LinkedIn, Google plus etc.
- 10. Names of individuals: mentioning of names of individuals in the content of the blog.
- 11. *Length of the blog*: For the analysis purpose those blogs that had less than 500 words were considered as short and other as long.

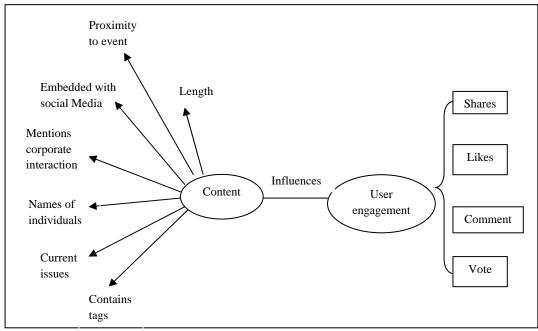


Fig. 1.1 Concept diagram for blog content and user engagement

Also the user engagement is the combined summation of the number of likes shares comments and votes the blog has received. For the simplicity of the research purpose we have divided the content variable further into various subsets.

The subsets are as follows:

- 1. Length of the blog
- 2. Proximity of the blog to an event
- 3. Blog content embedded with social media
- 4. Mentioning of corporate relations/collaboration in the content of the blog.
- 5. Names of individuals in the blog content
- 6. Blog written on current issues.
- 7. Blog contains tags
- 8. Achievements mentioned in the blog content.

Similarly we have identified four different modes to depict the user engagement for a particular blog.

- 1. Shares
- 2. Likes
- 3. Comments
- 4. Votes

The user engagement is the combined effect of the number of shares, likes comments and the votes received by a blog.

The scope of the research study limits to a blog content being analyzed on the basis of various factors and the corresponding user engagement being calculated by summing up the various likes shares comments and votes received by the blog.

I. METHODOLOGY

We created a model of 4 Ws (Fig 1.2) which consists of the measures for the content on the blog and its impact on the user engagement leading to brand visibility.

For this study we have considered a Management institute's blog as a measure to validate our model.

In our research we identified Ws that majorly constitute the content of a blog as follows:

- 1. What is written in the blog(content)
- 2. When the blog is written(immediacy)
- 3. Why the blog is written(reason)

4. For Whom the blog is written(customer)

On identifying the factors that constitute the content of the blog, we also measured the impact of the blog content through the user engagement through an analysis of the number of shares, likes, votes and the comments received by the blogs.

The management institute that we have identified uses blogs extensively as a medium to interact with its stakeholders especially customers, in this case students. So the organization had 5 different categories in blog. For the research purpose, we used the directors blog as the source of data

For our research purpose we have related the hypotheses H1, H1a, H1b, H1c, H1d to the W-model as follows: The hypotheses H1 relates to what of the W model wherein all the independent variables –length of the blog, proximity to an event, blog embedded with social media, mention of corporate relations/collaboration in the blog, mention of names of individuals in the blog, current issues, contains tags and achievements are responsible for attracting user engagement. The hypotheses H1a and H1b relates to when of the W model in which the independent variables – which mentions about the immediacy and to the time when the blog is written i.e. the variable proximity to an event attracts more user engagement. The hypotheses H1c relates to the why of the W model in which the variable achievements attracts more user engagement. The hypotheses H1d relates to about whom of the W model in which the independent variables – mention about corporate interactions, embedded with social media, attracts more user engagement.

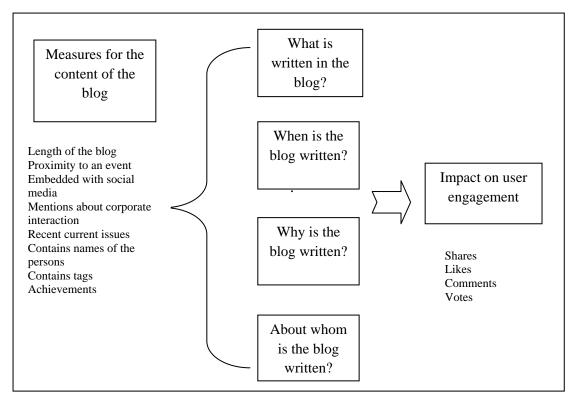


Fig 1.2 4 Ws of content of the blog

V. FINDINGS AND ANALYSIS

Since the data for our research contained independent and dependant variables, in order to test the validity of the data we used the SPSS 20 tool to carry out a regression analysis. We conducted a correlation coefficient between the variables to find out the correlation between the user engagement and each of the independent variables to see which of the variable has a greater impact on the user engagements. According to (Anderson 2011) when conducting a correlation coefficient a measure of linear association between two variables that takes on values between -1 and +1. Values near +1 indicate a strong positive linear relationship; values near -1 indicate a strong negative linear relationship.

Analysis: To validate the data and accept or reject the hypotheses we used regression on the user engagement (dependant variable) vis-à-vis each content (independent variable) as follows:

i. Regression analysis of length of the blog and user engagement:

Variables Entered/Removeda

Model	Variables Entered	Variables Removed	Method
1	proximity to an event ^b		Enter

a. Dependent Variable: User Engagement

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R	Std. Error of
			Square	the Estimate
1	.828ª	.686	.672	5.91125

a. Predictors: (Constant), proximity to an event

Coefficients^a

Model	Unstandardize	ed Coefficients	Standardized Coefficients	t	Sig.
	В	Std. Error	Beta		
(Constant)	.917	1.706		.537	.596
proximity to an event	16.776	2.366	.828	7.089	.000

a. Dependent Variable: User Engagement

Explanation: The first table simply identifies the variables used for the analysis. The other tables provide the information that assesses the relationship between the independent and dependent variables. The model summary table provides the R and R^2 value. The R value is 0.117, which represents the simple correlation. It indicates a low degree of correlation. The R^2 value indicates how much of the dependent variable, "user engagement", can be explained by the independent variable, "length of the blog". In this case, 1.4% can be explained, which is low.

In the coefficients table, the unstandardized slope of 2.47 tells us that the user engagement changes by about 2.5 points for every addition to the length of the blog.

Result 1: The length of the blog has a very low impact in attracting a significant amount of user engagement for a blog.

ii. Regression analysis of proximity to an event and user engagement:

Variables Entered/Removed^a

Model	Variables Entered	Variables Removed	Method
1	proximity to an event ^b		Enter

a. Dependent Variable: User Engagement

b. All requested variables entered.

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	1756.074	1	1756.074	50.256	.000 ^b
1	Residual	803.686	23	34.943		
	Total	2559.760	24			

a. Dependent Variable: User Engagement

b. Predictors: (Constant), proximity to an event

Coefficients^a

Model		Unstandardize	ed Coefficients	Standardized Coefficients	t	Sig.
		В	Std. Error	Beta		
1	(Constant)	.917	1.706		.537	.596
1	proximity to an event	16.776	2.366	.828	7.089	.000

a. Dependent Variable: User Engagement

Explanation: The R value in the model summary table is 0.828, which indicates a high degree of correlation. The R^2 value is 68.6%, which is more than 50% for the user engagement. In the coefficients table, the unstandardized slope of 16.77 tells us that the user engagement changes by about 16.8 points for every addition to the blog written with a proximity to an event.

Result 2: A blog written with reference to proximity to an event has a high impact in attracting a significant number of user engagements.

iii. Regression analysis of embedded with social media and user engagement:

Variables Entered/Removeda

Model	Variables	Variables	Method
	Entered	Removed	
1	embedded wit social		Enter
	media ^b		

- a. Dependent Variable: User Engagement
- b. All requested variables entered.

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	1466.331	1	1466.331	30.844	.000 ^b
1	Residual	1093.429	23	47.540		
	Total	2559.760	24			

- a. Dependent Variable: User Engagement
- b. Predictors: (Constant), embedded with social media

Coefficients^a

Model		Unstandardize	ed Coefficients	Standardized Coefficients	t	Sig.
		В	Std. Error	Beta		
1	(Constant)	1.000	2.079		.481	.635
1	embedded wit social media	15.429	2.778	.757	5.554	.000

a. Dependent Variable: User Engagement

Explanation: The R value in the model summary table is 0.757, which indicates a high degree of correlation. The R^2 value of 57.3% is more than 50% for the user engagement. In the coefficients table, the unstandardized slope of 15.42 tells us that the user engagement changes by about 15.4 points for a blog that is embedded with social media platforms.

Result 3: A blog that is embedded with different social media platforms has a significant impact in attracting a reasonable amount of user engagement for the blog.

iv. Regression analysis of mention about corporate interactions and user engagement:

Variables Entered/Removeda

Model	Variables Entered	Variables Removed	Method
1	mentions about corporate interaction ⁿ		Enter

- a. Dependent Variable: User Engagement
- b. All requested variables entered.

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	1744.016	1	1744.016	49.173	.000 ^b
1	Residual	815.744	23	35.467		
	Total	2559.760	24			

- a. Dependent Variable: User Engagement
- b. Predictors: (Constant), mentions about corporate interaction

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		В	Std. Error	Beta		
1	(Constant)	1.615	1.652		.978	.338
1	mentions about corporate interaction	16.718	2.384	.825	7.012	.000

a. Dependent Variable: User Engagement

Explanation: The R value in the model summary table is 0.825, which indicates a high degree of correlation. The R^2 of 68.1% is again 50% for the user engagement. In the coefficients table, the unstandardized slope of 16.71 tells us that the user engagement changes by about 17 points for a blog that mentions about corporate interactions in its content.

Result 4: A blog content that mentions about the interaction with the corporate in the content has a higher impact in attracting a reasonable amount of user engagement.

v. Regression analysis of contains names of persons and user engagement:

Variables Entered/Removed^a

Model	Variables	Variables	Method
	Entered	Removed	
1	contains names of the persons ^b		Enter

- a. Dependent Variable: User Engagement
- b. All requested variables entered.

ANOVA^a

M	Iodel	Sum of Squares	df	Mean Square	F	Sig.
	Regression	1497.351	1	1497.351	32.416	.000 ^b
1	Residual	1062.409	23	46.192		
	Total	2559.760	24			

a. Dependent Variable: User Engagement

Coefficients^a

Mod	el	Unstandardized Coefficien		Standardized Coefficients	t	Sig.
		В	Std. Error	Beta		
1	(Constant)	.909	2.049		.444	.661
1	contains names of the persons	15.591	2.738	.765	5.694	.000

a. Dependent Variable: User Engagement

Explanation: The R value in the model summary table is 0.765, which indicates a higher degree of correlation. The R^2 value of 58.5% can be explained, as slightly more than half for the user engagement. In the coefficients table, the unstandardized slope of 15.59 tells us that the user engagement changes by about 16 points for a blog that contains names of persons in its content.

Result 5: A blog content that mentions about the names of persons in the content has a high impact in attracting a reasonable amount of user engagement towards the blog.

vi. Regression analysis of recent current issues and user engagement:

Variables Entered/Removeda

Model	Variables	Variables	Method
	Entered	Removed	
1	recent current issues ^b		Enter

a. Dependent Variable: User Engagement

 $ANOVA^{a} \\$

Mod	el	Sum of Squares	df	Mean Square	F	Sig.
	Regression	71.864	1	71.864	.664	.423 ^b
1	Residual	2487.896	23	108.169		
	Total	2559.760	24			

a. Dependent Variable: User Engagement

b. Predictors: (Constant), contains names of the persons

b. All requested variables entered.

b. Predictors: (Constant), recent current issues

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	В	Std. Error	Beta		
(Constant)	7.727	3.136		2.464	.022
recent current issues	3.416	4.190	.168	.815	.423

a. Dependent Variable: User Engagement

Explanation: The R value in the model summary table is 0.168, which indicates a low degree of correlation. The R^2 value of 2.8% depicts very low user engagement. In the coefficients table, the unstandardized slope of 3.41 tells us that the user engagement changes by about 3.4 points for a blog that is written about recent current issues.

Result 6: A blog with a content written on current recent issues does not attract adequate user engagement.

vii. Regression analysis of contains tags and user engagement:

Variables Entered/Removed^a

Model	Variables	Variables	Method
	Entered	Removed	
1	contains tags ^b		Enter

- a. Dependent Variable: User Engagement
- b. All requested variables entered.

ANOVA^a

М	odel	Sum of Squares	df	Mean Square	F	Sig.
	Regression	316.805	1	316.805	3.249	.085 ^b
1	Residual	2242.955	23	97.520		
	Total	2559.760	24			

a. Dependent Variable: User Engagement

Coefficients^a

Mod	del	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		В	Std. Error	Beta		
1	(Constant)	1.021E-013	5.701		.000	1.000
1	contains tags	10.955	6.078	.352	1.802	.085

a. Dependent Variable: User Engagement

Explanation: The R value in the model summary table is 0.352, indicates a low degree of correlation. The R^2 value of 1.24% indicates too low of user engagement. In the coefficients table, the unstandardized slope of 10.95 tells us that the user engagement changes by about 11 points for a blog that is written about recent issues Result 7: A blog written on current issues does not attract much user engagement.

viii. Regression analysis of achievements and user engagement:

b. Predictors: (Constant), contains tags

Variables Entered/Removeda

Model	Variables	Variables	Method
	Entered	Removed	
1	achievement ^b		Enter

- a. Dependent Variable: User Engagement
- b. All requested variables entered.

ANOVA^a

Mo	odel	Sum of Squares	df	Mean Square	F	Sig.
	Regression	1560.364	1	1560.364	35.910	.000 ^b
1	Residual	999.396	23	43.452		
	Total	2559.760	24			

- a. Dependent Variable: User Engagement
- b. Predictors: (Constant), achievement

Coefficients^a

Mod	del	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		В	Std. Error	Beta		
1	(Constant)	.727	1.988		.366	.718
1	achievement	15.916	2.656	.781	5.992	.000

a. Dependent Variable: User Engagement

Explanation: The R value in the model summary table is 0.781, which indicates a high degree of correlation. The R² value of 61.4% indicates more than 50% for the *user engagement*. In the coefficients table, the unstandardized slope of 15.91 tells us that the user engagement changes by about 16 points for a blog that mentions about achievements in its content.

Result 8: A blog mentioning about any kind of achievements by an academic institution has a significant impact in attracting user engagement for the blog.

From the Result 2 above, the hypotheses H1a and H1b are accepted and proved that there exists a strong impact on when the blog is written and the immediacy i.e. whether the blog is written post or prior to an event to the corresponding engagement of the user. So for an academic institution if a blog is written prior to or post an event then the blog is bound to attract a higher user engagement.

Similarly from the Result 3, Result 4 and Result 8 the hypothesis H1c (why the blog is written) is proved that the reason for writing a blog like mentioning about corporate collaborations or achievements, or a blog embedded with social media attracts more user engagement.

The result 5 indicates that a blog containing names of persons mentioned in its content attracts more users towards the blog. Thus the hypothesis H1d (for whom) is proved.

However a weak correlation was seen in the variables *length of the blog, recent current issues and contains tags* with the *user engagement* variable. Nonetheless, these variables also constitute to the content of a blog and hence contribute towards attracting user engagement for the blog. Hence from the Result 1 to Result 8 we can also prove the hypothesis H1 which says that the content of a blog contains many elements which make a blog more visible and in turn attracts more users towards the blog. There were some variables like *proximity to an event, mention about corporate collaborations* which contribute more towards user engagement. Thus H1 (content) is proved and accepted.

VI. RECOMMENDATIONS

In our research we figured that there are a few factors crucial towards forming the content of the blog which has a strong influence over the other content factors.

Through our study and analysis, we recommend that for an academic institution, in order to increase the user engagement and increase the reach and visibility of the institution a blog can be a prominent medium. However the content of the blog is most important element in the blog being successful and in turn attracting more number of users for the blog. For a particular blog, academic institutions can stress more on the content of the blog with respect to the following factors:

- 1. Mention of the event in the blog content which is immediately prior to an event or post an event.
- 2. A blog should be embedded with social media for better reach and attract more user engagement.
- 3. The blog content mentioning about corporate names and corporate relations and collaborations is bound to attract more users.
- 4. A blog content containing names of individuals attracts more users.

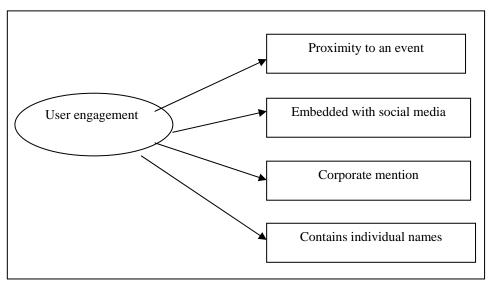


Fig 1.3 Influencing factors for a blog.

Mention about current recent issues in the blog, or length of the blog might not attract much user engagement however these also form the content of the blog and hence contribute towards attracting if not large but at least some user engagement for the blog.

VII. FUTURE SCOPE

Though the scope of the current research was limited to the factors constituting content of a blog and the corresponding user engagement related to a particular blog, the future scope of work can be to carry out a detailed factor analysis to find out hidden factors or going further to create a structural equation model fit for better analysis and understanding.

VIII. CONCLUSION

The common inference in our research which we identified through the statistical analysis done for a blog data for an academic institution between the content of the blog and the user engagement were:

- 1. if there exists a mention of the corporate collaboration in the content of the blog then has a significant impact on the user engagement in the form of likes, shares, votes and comments.
- 2. If the blog is written with reference to a proximity to an event (before the event occurs of immediately after the event) the user engagement was more in the form of shares, likes, comments etc.
- 3. If the blog is embedded with social media and contains some search tags then there was a significant user engagement seen.
- 4. We found that the results depicted that the content on the blog which mentioned about recent issues or achievements and the corresponding length of the blog did not attract more user engagement. However, these also constitute to the content of the blog and hence play an important role in making the content visible and attract more user engagement.

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REFERENCES

- [1] A. Z. Mansor "The Use of Blog in Decision Making Skills Course", in Procedia Social and Behavioral Sciences, 2011, Volume 18, Pages 491-500
- A Nair and J Sidhu. (2009). Social media for B2B marketing based on "A2/M2 three Screen Report." Nielsen/ Netratings, online available: http://www.b2bento.com/whitepaper/Social Media B2B.pdf.
- (2008). "Origins of "Blog" and "Blogger". [Online]. available: http://listserv.linguistlist.org/cgibin/wa?A2=ind0804C&L=ADS-L&P=R16795&I=-3
- [4] (2011). "BlogPulse". The Nielsen Company. Retrieved on 2011-02-17. [Online]. Available: http://en.wikipedia.org/wiki/BlogPulse
- R Blood. (2000). "Weblogs: A History And Perspective" [online] available: http://www.rebeccablood.net/essays/weblog_history.html
- B. Bolander, "Disagreements and agreements in personal/diary blogs: A closer look at responsiveness". Journal of Pragmatics, Vol. 44, Issue 12, Pages 1607-1622, 2012.
- [7] B. Rich, (2012) 3 Ways to Create Highly Valuable Blog Content, [online]. Available: http://www.socialmediaexaminer.com/blog-
- [8] C. Fred. (2008) Social Media Landscape http://www.fredcavazza.net/2013/04/17/social-media-landscape-2008/
- C. White, J. Biggs, "Bloggers Boot Camp Learning How to Build, Write, and Run a Successful Blog", Focal Press 2011
- [10] M. Chau, J. Xu, "Business intelligence in Blogs: Understanding consumer interactions and communities", MIS Quarterly, Vol. 36, Issue 4, 1189-1216, 2012
- [11] C. Bill (2013), IBM, Bill Chamberlin site. Top Social Media Disasters. [Online]. available: http://www.telecommerce.nl/uploadedFiles/Telecommerce/Nieuws/Nieuwsitems/2013/02 -_februari/Top_Social_Media_Disasters_(and_how_to_avoid_them)_FINAL.pdf
- [12] C. George "Branding in the post internet era", Marketing theory Vol. 9, no.1 141-144, 2009
- (2013) 7 Tips for Making Your Blog a Content Marketing [13] H. Cohen, Magnet, [online] available: http://www.socialmediaexaminer.com/7-tips-for-making-your-blog-a-content-marketing-magnet/
- [14] T. Daugherty, M. S. Eastin, L. Bright, , exploring consumer motivations for creating user-generated content", Journal of Interactive Advertising, Vol 8 No 2 pp. 16-25. Spring 2008.
- [15] Dominic Jones,(2005) Board room blogging the corporate blogging
- [16] (2013) E-marketer, "Brands Leverage Influencers' reach on blogs", [online]. Available: http://hispanicprpro.com/2013/02/28/brandsleverage-influencers-reach-on-blogs-socia1/
- [17] A. Gaudeul and P Chiara, "Reciprocal Attention and norm of reciprocity in blogging networks" Economics Bulletins, Vol. 30(3) pp.2230-2248, 2010.
- [18] Glen (2012) ViperChill web page, [online]. Available, http://www.viperchill.com/important-blogging- analysis/
 [19] A. Gruzd, K Staves, A Wilk, "Connected scholars: Examining the role of social media in research practices of faculty using the UTAUT model", Computers in Human Behavior, Volume 28, Issue 6, , Pages 2340-2350 Nov. 2012.
- [20] R. Hanna, A. Rohm, V. L. Crittenden, "We're all connected: The power of the social media ecosystem" Business Horizons, Vol. 54. Issue 3, pp. 265-273, 2011.
- [21] J. Haberman. "Analysis of the usage and value of Weblogs as a source of business news and information", Master's thesis. Information Science and Economics of the University of Applied Science Cologne, 2005.
- [22] H-J. Chen, Bloggers' Social Presence Framing and Blog Visitors' Responses, Eight IEEE/ACIS, 2009 International Conference on Computer and Information Science, Department of Information Management ISU Kaohsiung County, R.O.C. pp. 730-735
- [23] H. C.- Chi ,P. L. Kuoa, Szu-Chi Yanga, Shih-Han Lina, "Assessing blog-user satisfaction using the expectation and disconfirmation approach", Computers in Human Behavior, Vol. 26, Issue 6, , p. 1434-1444, Nov. 2010.
- [24] J. G. Lee, S. Moon, K. Salamatian, "Modeling and predicting the popularity of online contents with Cox proportional hazard regression model" Neurocomputing, Vol. 76/1, P. 134-145, Jan 2012.
- [25] J. Satow, "Attack of the blogs", Crains New York Business, Vol. 21, issue 42, 2005.
- [26] A. Kaplan and M. H. Michael, "Users of the world unite! The challenges and opportunities of social media", Business Horizons, Vol. 53, Issue 1 p 61, 2010.
- [27] K. Jacqueline, "Corporate Blogs: Handle with Care." BusinessWeek Online 200 p.6
- [28] B. Latané, "The psychology of social impact", American Psychologist, vol. 36, pp. 343-356, 1981.
- [29] L. Phang, "Consumer Evaluations of Brand Extensions: Can B2B brands be extended into the consumer", Master's Thesis, University of Maastritch, 2004.
- [30] L. Seung, H. Kim, S. Wook, P. Sunju, L. Joon Ho, "Determining Content power Users in a Blog Network: An Approach and its applications", IEEE Transactions on Systems, Man and Cybernetics: Part A, Vol.41, Issue 5, Pp. 853-862, 2011.
- [31] L. R. Men, W-H. Sunny Tsai, "Beyond liking or following: Understanding public engagement on social networking sites in China" Public Relations Review, Vol. 39, Issue 1, 2013.
- [32] Lisette de Vries, Sonja Gensler, Peter S.H. Leeflang (2012) Popularity of Brand Posts on Brand Fan Pages: An Investigation of the Effects of Social Media Marketing, Journal of Interactive Marketing, Volume 26, Issue 2, Pages,83-91
- [33] L. Ali, (2013) "26 Essentials for Blogging Success: What You Need to Know" [online]. available: http://www.socialmediaexaminer.com/26-essentials-for-blogging-success-what-you-need-to-know/
- [34] M. W. Glynn, D. J. Faulds, "Social media: The new hybrid element of the promotion mix", Business Horizons, Vol. 52, Issue 4, pp. 357-365, July-Aug. 2009.
- [35] M. Michael, "The News About the Internet". New York Review of Books Vol. 56/13 pp. 29-32, 2009.
- [36] M. Denis, McQuail's Mass Communication Theory, 4th ed. Thousand Oaks, CA: Sage Publications, 2000.
 [37] M. Nina, N. T. Siamagka, G. Christodoulides, "Usage, barriers and measurement of social media marketing: An exploratory investigation of small and medium B2B brands", Industrial Marketing Management, Vol. 40, Issue 7, Pp. 1153-1159 Oct. 2011
- [38] E. Moon and S. Han "A qualitative method to find influencers using similarity-based approach in the blogosphere" in IEEE International Conference on Social Computing, 978-0-7695-4211-9/10, DOI 10.1109/SocialCom.2010.39, 2010.
- [39] M. Dilip and W. Quing, "Consumer Generated Advertising in Blogs", in Neal M Burns, Terry Daugherty, Mathew S. Eastin (Eds) Handbook of Research on Digital Media and Advertising: User Generated Content Consumption (Vol 1) IGI Global 248-261, 2010.
- [40] M. Malik, S. Missen M. Boughanem and G Cabanac, "Opinion Detection in Blogs: What Is Still Missing?" in Proc. IEEE Explore, Advances in Social Networks Analysis and Mining (ASONAM), 2010 International Conference on ISBN: 978-0-7695-4138-9, pp. 270 - 275, 2011.
- [41] (2008) National Center for Technology in Education, Advice Sheet 35 [online]. available: http://www.ncte.ie/documents/advicesheets/16InteractiveWBs(June07).pdf

- [42] NBC news, 2012 "We can spent 230,060 Years on social media in one month", Nielson's annual Social Media Report. [online]. available: http://www.cnbc.com/id/100275798
- [43] N. Morgan, G. Jones and A. Hodges, (2012) "'Social media', The complete guide to Social Media from The Social Media Guys" [Online] available: http://www.thesocialmediaguys.co.uk/wp-content/uploads/downloads/2011/03/CompleteGuidetoSocialMedia.pdf
- [44] O Gihan, J. Hwee, L. Koh, "Understanding management students' reflective practice through blogging", The Internet and Higher Education, Volume 16, 2013
- [45] P. Obrien (2012) http://pamobriensblog.wordpress.com/2012/07/
- [46] P. Joe (2012) the ultimate guide to blogging, content marketing institute, [online] available: http://www.contentmarketinginstitute.com/wp-content/uploads/2012/04/CMI_Ultimate-Blogging-final.pdf
- [47] E. Ringmar, "Bloggers Manifesto: Free Speech and Censorship in the Age of the Internet", Anthem Press, 2007.
- [48] M. Sheridan (2012) 4 Ways to Create Content That Sells, [Online]. Available: http://www.socialmediaexaminer.com/how-to-create-content-that-sells/
- [49] R. M. Stelzner, "Social media marketing industry report: How Marketers Are Using Social Media to Grow Their Businesses", social media examiner, 2012.
- [50] T. K. Fan, C.H. Chang, 2011, "Blogger-Centric Contextual Advertising" Journal of Expert Systems with Applications, Vol. 38(3), 1777-1788, 2011.
- [51] S. R. Hiltz and M. Turoff, The Network Nation 2, Addison-Wesley, 1993.
- [52] W. He, S. Zha, L.Li, "Social media competitive analysis and text mining: A case study in the pizza industry", International Journal of Information Management, Vol. 33, Issue 3, P. 464–472, June 2013
- [53] Y. Batch, M. M. Yusof, S. A.Mohd Noah, T. P. Lee, "MTag: A model to enable collaborative medical tagging in medical blogs", *Proc. Computer Science*, 2011Volume 3, Pages 785-790,
- [54] A brief history of Social media, [online]. Available: http://www.uncp.edu/home/acurtis/NewMedia/SocialMedia/SocialMediaHistory.html
- [55] Social Media Tools 101 (From Blogs to Wikis) [online]. Available: http://www.interactiveinsightsgroup.com/blog1/socialmediabeginnersguide/social-media-tools-101/
- [56] (2005), www.technorati.com. [Online]. available: http://www.search.ask.com/web?l=dis&o=APN10374cr&qsrc=2869&gct=kwd&q=www.technorati.com:%2030th%20November%202005
- [57] http://www.telecommerce.nl/uploadedFiles/Telecommerce/Nieuws/Nieuwsitems/2013/02_-februari/Top_Social_Media_Disasters_%28and_how_to_avoid_them%29_FINAL.pdf