

# SOCIAL MEDIA METRICS, TOOLS & ANALYTICS

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**Abstract** *In recent years the use of Social Media has increased to hundreds of millions of users all around the world who are participating in the “Social computing revolution” by using social networking sites, micro-blogging and photo sharing websites, location-based and cloud services. A direct consequence of the social media revolution is the rapid increase in social data. The emerging field of Social Media Analytics is concerned with making social data meaningful and actionable for various brands and enterprises. When used properly, social media can be a great tool to help businesses reach out to the new potential customers and engage with the existing customers to promote, facilitate, and support participation, collaboration and co-creation.*

*Social Media Analytics is a fairly new field. Thus, there are bound to be a lot of theories floating around. Theories that are applied in this domain are from various fields like Psychology, Sociology, Business Analytics, Data Intelligence and Communications too. Since the Social Media dimension is new and is still evolving, there is no defined set of rules to follow to get the best out of the social channels in organizational settings. As such, many operational issues and managerial challenges exist for social media in organizational settings. Social Media Analytics is a new field that seeks to address the operational issues and managerial challenges by providing metrics, techniques and tools for gaining insights from social data.*

*Given the dominance of Facebook globally, this paper will present a selective review of Social Media Analytics tools for Facebook.*

**Keywords:** *Social Media, Facebook.*

## 1. INTRODUCTION

*“Man is a social animal.”*

Aristotle

More than two millennia have passed and this quote still stands its ground even now. The only difference is in the way man socializes has changed. Technology has advanced rapidly, especially in the world of telecommunication. Right from the invention of the radio in the late 19<sup>th</sup> century to the invention of internet and various mobile devices supporting it in the late 20<sup>th</sup> century, we have been lucky to see such a quick transition especially in the last century.

Telecommunication specifically is the industry in the limelight here as it is the one of the industries that affects the way man socializes to a large extent. Right from the advent of mail to telephones and mobile phones, man experienced the change in the experience of communicating with his peers. If today was to be talked about the ‘Zeitgeist’ would probably be the Social Networks that exist, Facebook dominating the competition. In the past decade, these social networks have definitely changed the way people all around the world interact with each other. With over 500 million users, Facebook is now used by 1 in every 13 people on earth, with over 250 million of them (over 50%) who log in every day.

Before jumping ahead to what social networks are, and how do we analyze social networks let us understand what social computing stands for. Social Computing is the basis for every social network to exist. According to Communications of the ACM, Social Computing is defined as describing any type of computing application in which software serves as an intermediary or a focus for social relation. Social Networks have evolved from this very concept. Right from Friendster and MySpace in the early 2000s to Facebook and micro blogging sites like Twitter, each one of them have used this same principle but in different aspects. For example, Facebook started as an academic peer-group social network whereas MySpace was clearly targeted at teenagers and their music interests.

After understanding about the emergence and the concept behind the evolution of Social Networks, let’s understand the task at hand.

What we are trying to achieve here is that through these various tools of Social Media Analytics we are trying to develop meaningful and actionable insights which would eventually lead to a long-term Digital Marketing strategy for the firm. Since we are laying primary emphasis on Facebook hence this strategy will be formulated on the basis of analysis of past content on their Facebook page. The months of May,

June and July 2012 will be considered as a timeframe for the analysis unless specified otherwise. Various tools like CrowdBooster, All Facebook Stats, Facebook Insights etc. will be used to derive meaningful and actionable insights for the company. Primary emphasis would be on the page/post content and qualitative analysis will play a pivotal role in deducing results. If needed as a supplement to the primary concern i.e. the Facebook page, Twitter & YouTube will also be used to provide a more holistic approach to the Social Media strategy.

## 2. THEORETICAL FRAMEWORK

Social Media Analytics is a fairly new field. Thus, there are bound to be a lot of theories floating around. Theories that are applied in this domain are from various fields like Psychology, Sociology, Business Analytics, Data Intelligence and Communications too. But instead if we focus on the task at hand and what we wish to accomplish we should look deeper into theories more related to Social Media measurement, social media analysis, social media metrics and most importantly Social media Insights.

In order to accomplish this purpose, I wish to follow Chris Murdough’s model. According to Chris Murdough, the Social Media measurement process goes through the following stages

The Concept stage is mainly about focusing about what brands want to accomplish by the use of social media. The output of this stage will involve defining key performance indicators (KPI) and plotting final project goals. One can define their own KPIs by using the foundational measures as explained by John Lovett with the help of Eric T. Peterson.

The KPIs in web analytics like visits, visitors, page views etc. surely fail in the social media domain. Thus, we use the foundational measures for Social analytics for deeper insights. They are basically Interaction, Engagement, Influence, Advocates and Impact. Each one of them has a mathematical formula associated with it which you can find in Appendix A.

In the definition stage, these same objectives will be assigned some specific metrics and a framework will be created. For example, if the objective is to deepen the relationship with the customer, the number of likes and comments posted can be a metric to measure the same.

The third step in the process is Design. Design primarily deals with laying out specific tactics and long term strategy which is most helpful for a brand’s successful foray into Social Media. It will deal with a few other measurement activities like establishing data sources and methodologies for processing, specify tracking hooks and most importantly customize performance reporting tools to make sure that the desired performance is achieved. It is important to establish data sources for each KPI identified in the metrics framework to ensure all parties involved agree on a single version of the truth about program performance. So we can see that it will have a lot to deal with the tools a Social Media Analyst uses. The Design process will be explained more in detail in the next section of Methodology.

The fourth stage of the Social Media Measurement process is the Deployment stage. This is the stage where you need to implement all that you have worked for and planned for. Keeping the process dynamic also might help to remove glitches or ‘bugs’ that are found on the path of implementation. The final stage ‘Optimization’ also goes hand-in-hand with

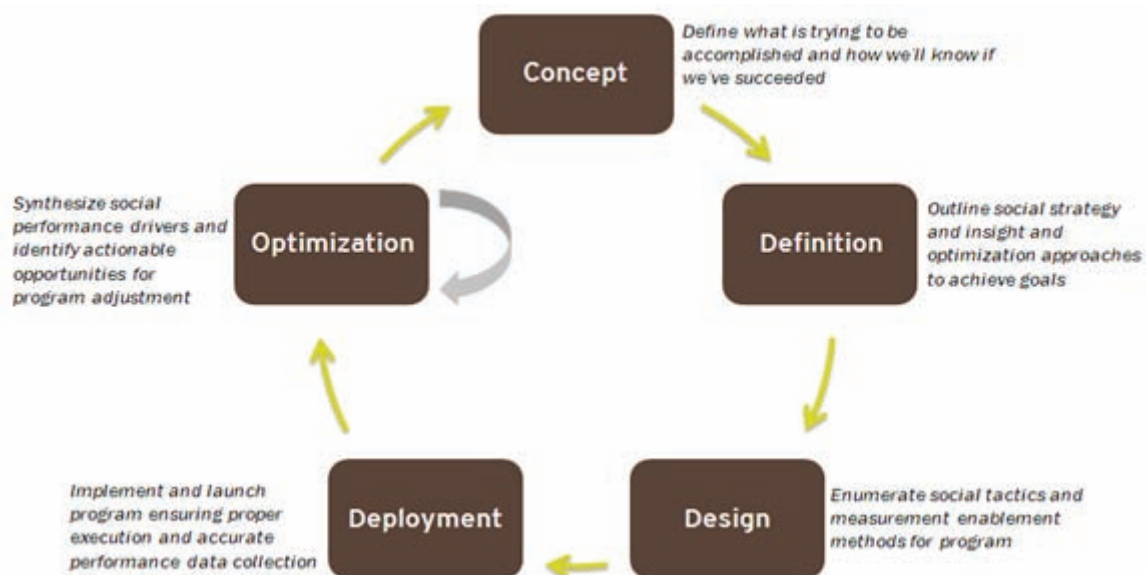


Fig. 1: Social Media Measurement process

the fourth stage especially where the reporting and analysis of performance is concerned. Optimization phase is where all the work done in the previous four steps comes together in the form of reporting and insight to evaluate the social program performance against the KPIs determined in the Concept phase, diagnose drivers of performance to date according to the Definition phase, and identify opportunities for social program enhancement by developing a holistic picture of social activities and their impact (Design and Deployment phases).

We shall follow this theoretical framework and model designed by Chris Murdough, as it is a systematic and holistic approach to do Social Media Measurement. Jim Sterne is called the Godfather of Web Analytics and in his book he says that there are only three true business goals: raising revenue, lowering costs and increasing customer satisfaction. Now keeping in mind these principles and the above model we would want to recommend a strategy that would give them meaningful and actionable insights which they could use to fulfill these true business goals.

### 3. METHODOLOGY

Before describing the methodology of my study let us first know a little more about the company on whom we are basing this study. After getting in touch with the Brand Manager concerned who oversees the Social Media Engagement we posed certain questions to her and together we recognized the problem the company is facing in the social domain. Here are some relevant excerpts of the interview:

*“Our current web presence is majorly on the Economic Times website where we have a tab for ET NOW. Here we give live market and business news updates and also we have a live feed of the channel running on the website 24×7.”*

*“The social media presence of the channel is strong and it is active on various domains like Facebook, Twitter, LinkedIn, Google+, YouTube, DailyMotion (first and only business news channel to have a page on DailyMotion).”*

“Social Media Engagement is strong especially on Facebook where we have a following of more than 230,000 fans and on an average about 40,000 video views a week on our YouTube Channel. Our Social Media engagement is the best amongst our competition and we consider CNBC TV18 to be our true competition. We do conduct Social Media monitoring on a weekly basis and we have a dedicated employee and an intern on the job. We are still exploring the use of Social Media metrics and Social Media analytics tools as they are relatively a new domain. But at the same time in our future plans for Social Media, these metrics and analytical tools will play a big part.”

In the picture above, all the various tools or third party applications used by Social Media Analysts and by me too are given. After going through their functions I realized that there is no perfect tool that is devised as of now. Every tool is good in a certain specific way. For example, **Skyttle Friends** is excellent to do a sentimental analysis whereas **Facebook Insights** is one of the better ways to do demographics and to analyze page generated and user generated content.

**CrowdBooster** is a great application through which you can recognize your top fans. Also it helps you identify fan growth and which of your posts performed the best in any duration of time. This is done by a graph of impressions v/s likes for each and every post thus you can compare content as well. Also CrowdBooster has a separate recommendations tab in which it recommends an executable and actionable insight for the page.

**Page Analyzer** (not mentioned in the picture above) gives you an IPM (interactions per mille) score which you can compare with your competitor to recognize which page has a better interaction with its fans. It also helps to find out how dedicated your fans are towards your page by considering comments, likes and posts made by the fans along with the total number of fans. Its basic principle is similar to the foundational measure of ‘Interaction’ for Social Analytics as described by John Lovett in his books Social Media Metrics Secrets.



Fig. 2: Various Social Media Analysis tools.

**All Facebook Stats** is primarily a tool through which one can compare a page with their competition and benchmark the page for certain metrics against the other. All Facebook Stats is also a very handy tool when it comes to working with KPI like people talking about you, reach, virality even when you don't have the admin rights to the Facebook page.

**Social Bakers** is another useful and the almost perfect tool in this toolkit one can say. It gives you detailed insights of the page engagement rate, activity monitor for different metrics and most importantly content optimization. If competitors are launching more engaging content, attempt to emulate their posts to increase your own engagement rates and visibility. Content specific optimization is one of the key highlights of this tool.

One of the major drawbacks of all these tools is that most of them cannot be used in the timeframe I want to fit them in i.e. May-July 2012. All of them give the analysis and insights for the data only for the past month since the date the tool was most recently used. So at best it will highlight the data only in the month of July 2012.

Keeping the above barrier in mind & researching about these various tools, made me realize how we would want to use them in formulating a successful strategy for content of ET NOW's Facebook page. All the tools described above and their main highlights have been mentioned keeping in mind the application for this specific project only. These tools have variety of different applications and give various graphs but concentrating on page content, user interaction and some visualizations of KPI (metrics), using the following tools made most sense:

1. Facebook Insights for content specific insights and combining it with Microsoft Excel statistical tools for raw data analysis to start with.
2. CrowdBooster for top fans recognition and recommendations provided by the tool. Post

performance also can be gauged on the impressions v/s likes graph.

3. Skyttle Friends can be used for competition analysis, to find out user behavior and for sentiment analysis which is unique to it. Also another thing we could Skyttle Friends is for finding out the best time of the day to make posts.
4. Page Analyzer (Komfo) will be used for the IPM (interactions per mille) index and the insights derived from it.
5. All Facebook Stats will be used for in-depth analysis of content, competition analysis and also for the metrics assigned to the objectives defined in the 'Concept' stage of the Social Media Measurement process. It will majorly help to find out interactions metrics and user post metrics.
6. Social Bakers will be used to identify the most engaging content (cross check with raw data from the excel sheet), gain competitive insights and improve performance of page by increasing engagement rates.

### 3.1. Results

#### 3.1.1. Facebook Insights

Starting the analysis with Facebook Insights, here we can see for the timeframe of May to July 2012, people talking about you and the viral reach. Now after the case company interview I realized that probably the most important metric for the company was 'People talking about you' because it is a direct indication that the Facebook page is doing well. Here we see and by analyzing raw data people talking about you is at a healthy average of 7990. Viral reach is very important too because it is a direct parameter against which number of shares can be measured, and it shows how good (viral) your content is.

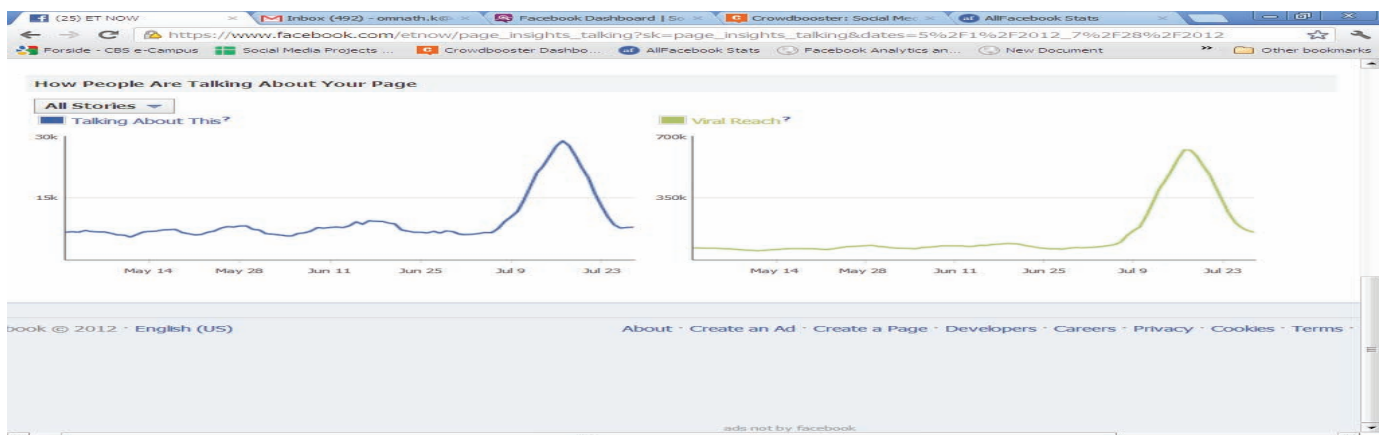
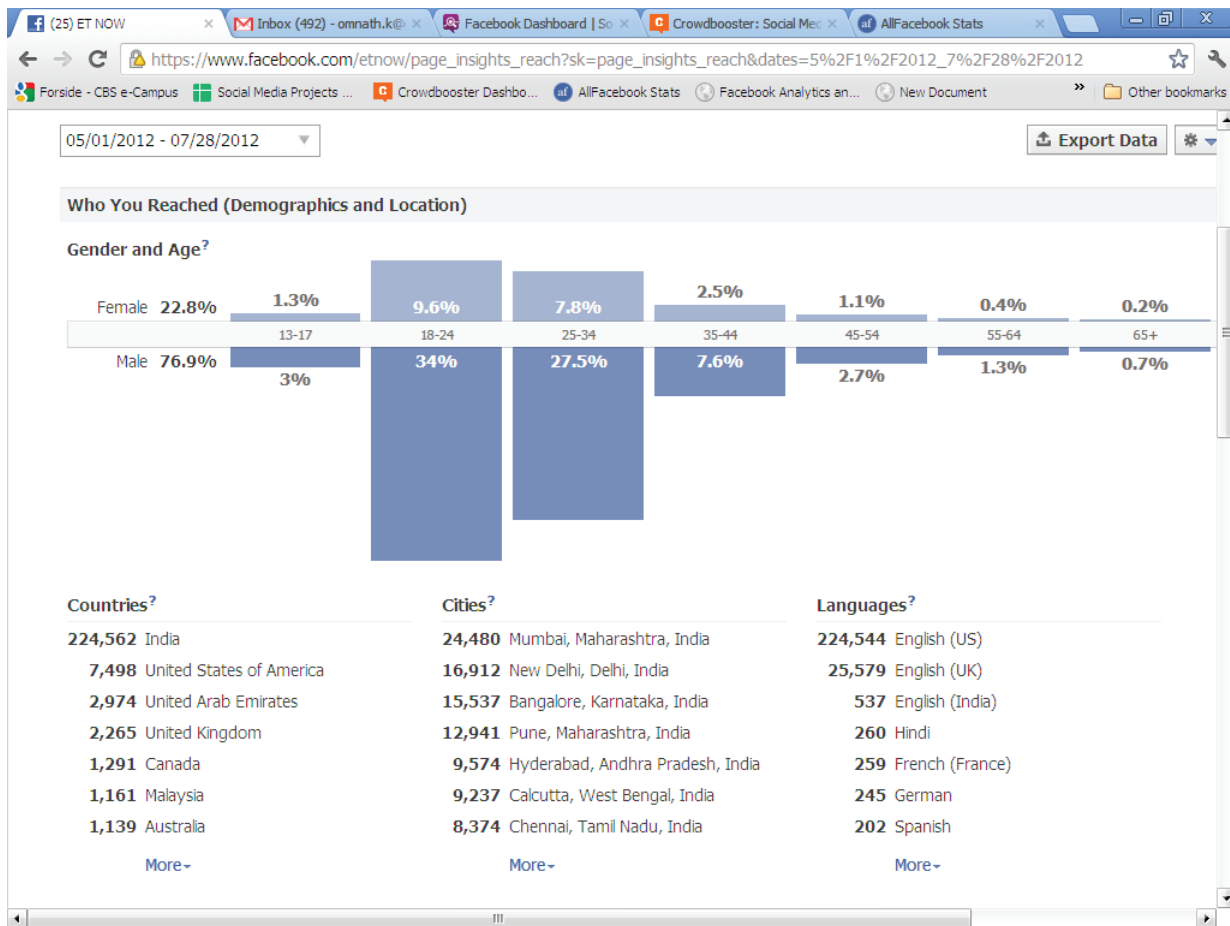


Fig. 3: People Talking about you and Viral Reach of ET NOW's Facebook page



**Fig. 4: Demographics and Location of ET NOW's fans**

In both these graphs there is a simultaneous and exponential jump from the timeframe of 9<sup>th</sup> July 2012 to 22<sup>nd</sup> July 2012 which can be looked deeper into for insights. For this specific timeframe you can find a graph in Appendix B which can be used to study this particular trend closely.

So going deeper into understanding what made the Facebook page perform so well in that specific timeframe, I studied raw data provided by Facebook Insights (post level data). Also, if we see the Virality Index of various posts we realize that there is this one particular type of photo (picture of famous personality with a quote embedded in the picture) that is uploaded which not only gives maximum interactions but a very high number of shares which lead to a massive rise in the viral reach (and subsequently total reach) of the page. The rate of virality was as high as 23% which implies that every one out of four people who saw the photo/post made a unique story out of it. You can check the Facebook Insights page for these specific posts and other details about them too in Appendix C. After verifying this fact with other tools like Social Bakers and All Facebook Stats I realized that this content will lead to great numbers.

Here we can understand that the majority of fans of this page are Indian Male from the age-group of 18 to 34, living in the major metro cities of India like New Delhi, Mumbai, Bangalore and Pune. Since we don't get much of a deeper insight about their habits and behavior we cannot be sure if these are the same people that are the target audience for the business news channel ET NOW. So treating these likers or fans separately we need to develop content that will appeal more to the above majority keeping the essence of the business news channel as an undercurrent.

### 3.1.2. CrowdBooster

CrowdBooster will be primarily used for top fans recognition. Exploring the recommendations provided by the tool will also be a smart way to go about things. Also we can see if we can use the post performance graph of impressions v/s likes in our content building strategy. Referring to Appendix D, we can see that the CrowdBooster graph highlights the best performing posts and they are coherent with the posts shown by Facebook Insights.

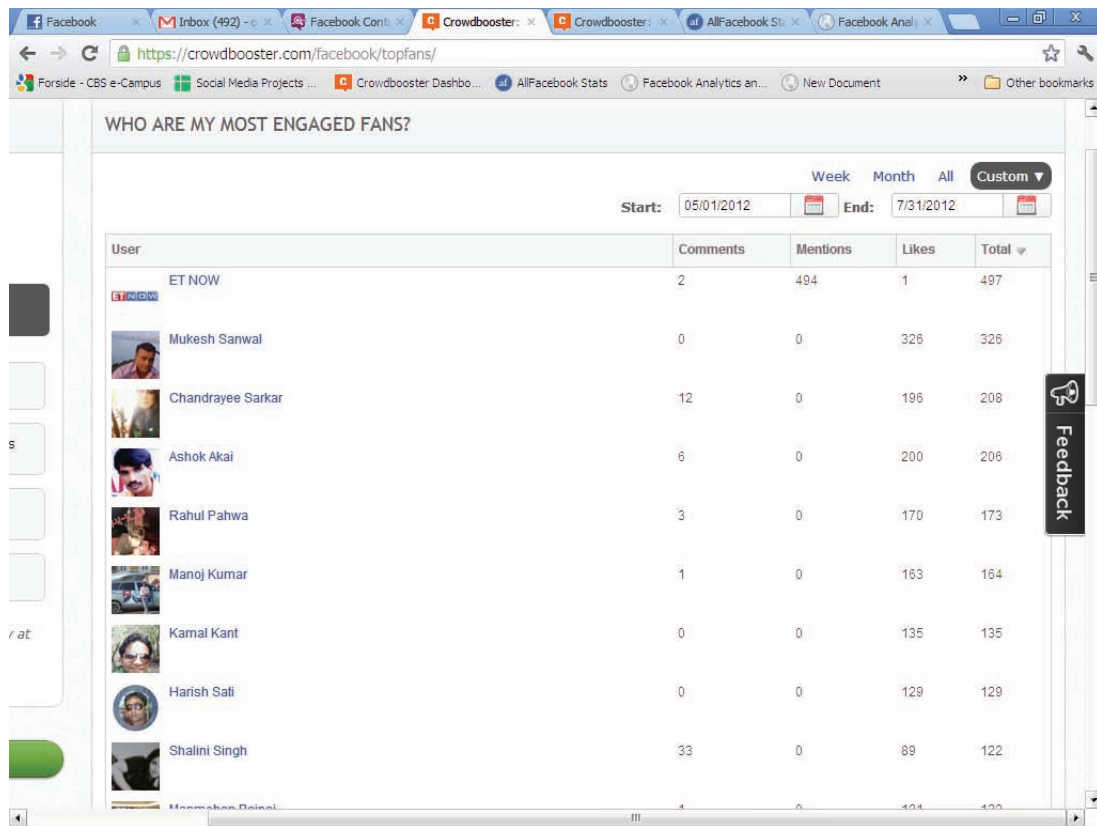


Fig 5: Most Engaged fans of ET NOW

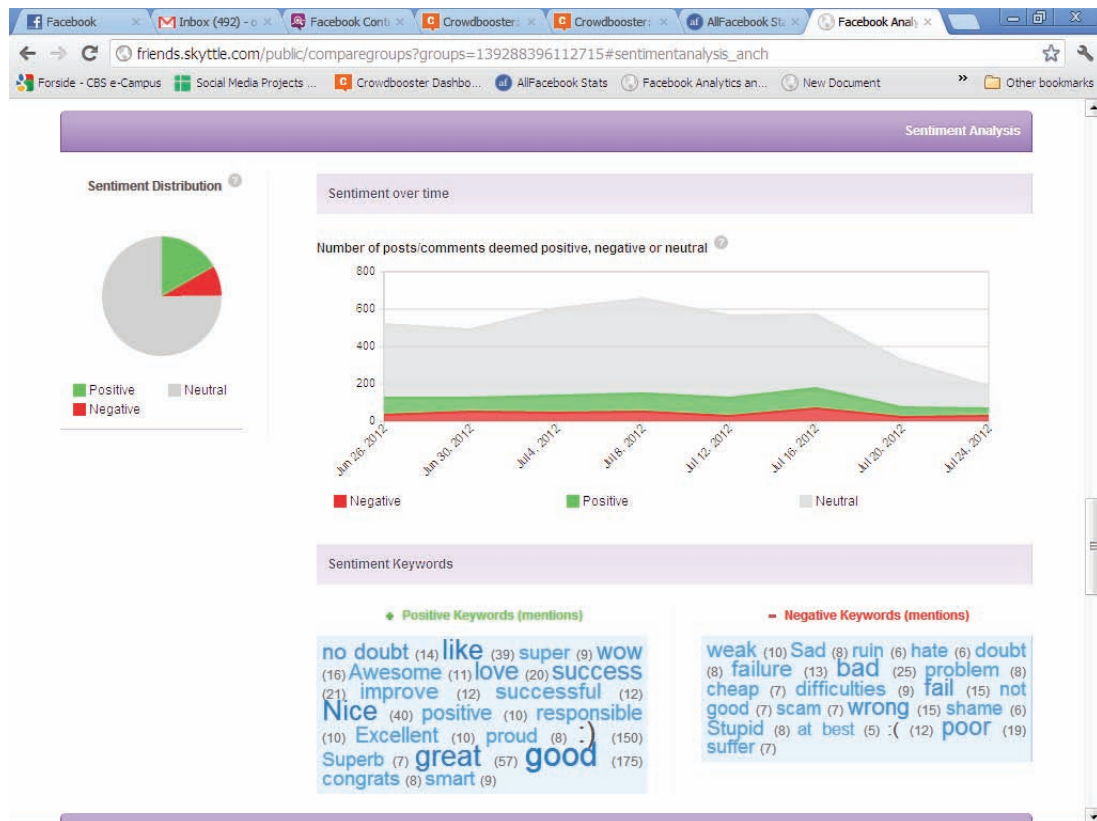


Fig 6: Sentiment Analysis for ET NOW

A little appreciation always goes a long way especially to the people who are very loyal to your brand. CrowdBooster helps you recognize these users who have maximum interactions on your page and in various ways (which will be discussed in the next section) the page can appreciate these users.

### 3.2 Skyttle Friends

Skyttle Friends is an excellent tool to gauge sentiment analysis. In the figure below we can see for the month of July what are the sentiments users have been focusing on and over the period of time how does content affect the sentiment of the fans. This means that if there is a post which is a bearer of good news like for example rise of the Sensex or the win of the Indian Cricket team or a prestigious award bestowed to an Indian businessman, there is a direct effect on positive sentiment. This is clearly seen during the period of July 12<sup>th</sup> to July 16<sup>th</sup> in the figure.

Also Skyttle Friends is used for linguistic analysis and the results clearly lead to words like ‘Sensex’, ‘Business’, ‘points’, ‘Infosys’ being at the top of the charts. This was expected from a business news channel page.

### 3.3 Page Analyzer – Komfo

Page Analyzer gives you an IPM (interactions per mille) score which you can compare with your competitor to recognize which page has a better interaction with its fans. It also helps to find out how dedicated your fans are towards your page by considering comments, likes and posts made by the fans along with the total number of fans. In the picture below you can see the IPM of ET NOW and its competitor CNBC TV18.

Here one can easily make out that ET NOW has almost three times the likes and comments as CNBC TV18 and has a healthy IPM score of 0.95. This proves that the page is doing good work in the social media engagement department.

## 4. DISCUSSION

All Facebook Stats is mentioned in this section as it is one of most complete tools for analyzing metrics it is out there. In Appendix E you can see a competitor analysis. The interactions distribution of ET NOW has a higher percentage of shares (leading to higher viral reach) and also in the user posts by time of day graph, CNBC TV18 does not score any points. This proves that ET NOW in the past month has



Fig 7: IPM score for ET NOW and CNBC TV18 by Komfo

done better in terms of social media engagement. Another very important parameter which is widely used is the people talking about you / total fans (%). After benchmarking in the industry and theorizing, 3% is acceptable average which CNBC TV18 fails to reach whereas ET NOW surpasses the 7% good barrier and 11% excellent benchmark too for a certain period.

Going through Social Bakers and its ability to chalk out engagement rates and picking out content for best performing posts, I cross checked it with the results found from Facebook Insights and CrowdBooster it basically gave the same result of the particular type of photo to be uploaded with a famous personalities face and a quote from him or her embedded in the picture. This picture lead to a lot of users sharing it thus increasing the viral reach which affected the total reach to touch high figures of 790,000 and eventually the most important metric (for the company) , people talking about you went to an all-time high of 27,000.

Skyttle Friends also helped with identifying user behavior of the page.. It said 2430 fans were actively involved in the conversation and a highly active core of 559 fans is responsible for the 47.22 of the comments (Refer Appendix F). This combined with CrowdBooster function of finding out the most engaging fans, fan appreciation exercises and fan engagement will be highly facilitated.

Thus after going through all these insights, results and discussion it comes down to the point of finding some meaningful and actionable insights out of these. After asking the 'so what' question to these results I've come to a conclusion and tried to develop some content based strategy that can be executed by ET NOW. I've tried to make it as concise as possible and it is explained and concluded below:

Combining the insights of Facebook Insights, Social Bakers and CrowdBooster we can see that the **photo post of the famous personality with the quote** embedded does work. An example is shown in Appendix G. But the real question is how many times and at what time? CrowdBooster recommendations come in handy here as they recommend 8AM, 11AM and 3PM for maximum interaction. So one or two such quotes in a day would lead to good numbers for the page.

**Fan of the Week** column needs to be started as there are a loyal set of fans (refer Appendix F and Fig. 5) who interact on a daily basis and show high levels of engagement. Appreciation at least in terms of a mention in a separate column or giving away a small gift would do wonders. CrowdBooster can be effectively used for this case.

After carefully studying the demographics and realizing that the audience on Social Media is totally different than the TG of the channel, I would recommend **monthly contests and competitions** to keep the interest and engagement of the fans at a high. These contests could be as simple as small quizzes or as complex as crowd-sourcing activities.

Demographics proves the high percentage of youth on ET NOW's Social Media pages and this section of the youth is interested about happenings in the current world. **Financial Literacy** is one area in which ET NOW as a business channel can leverage the social media platform in such a way that it could be a medium to impart education about the share market, Sensex and business world.

**YouTube** can also be used as an effective medium for uploading videos about financial education. **Google+ hangout** feature can also be utilized to arrange live video chats or lectures with bigwigs in the business world.

Since more than 45% of the users view ET NOW's Facebook page on their mobile devices, they could **develop an Application** for various platforms on the lines of the famous Moneycontrol.

Creating a **good Landing page** will lead to a rise in the rate of new fans / likers. Definitely a better way than Facebook Ads or Sponsored stories.

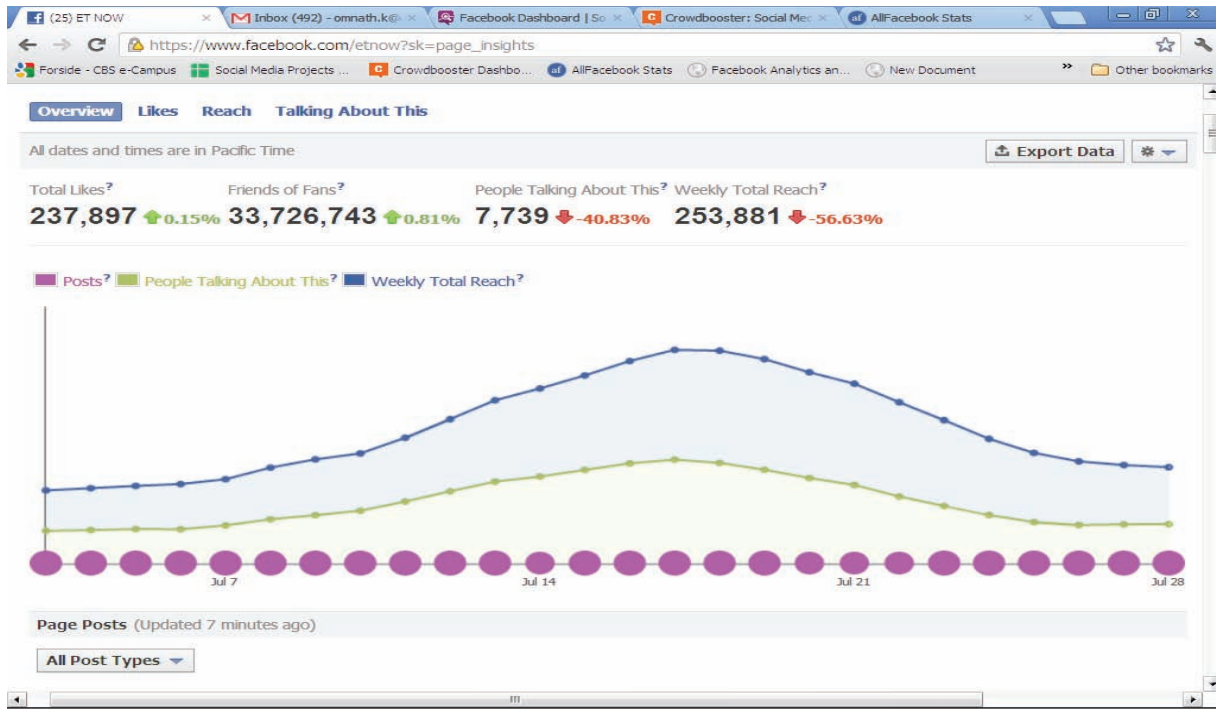
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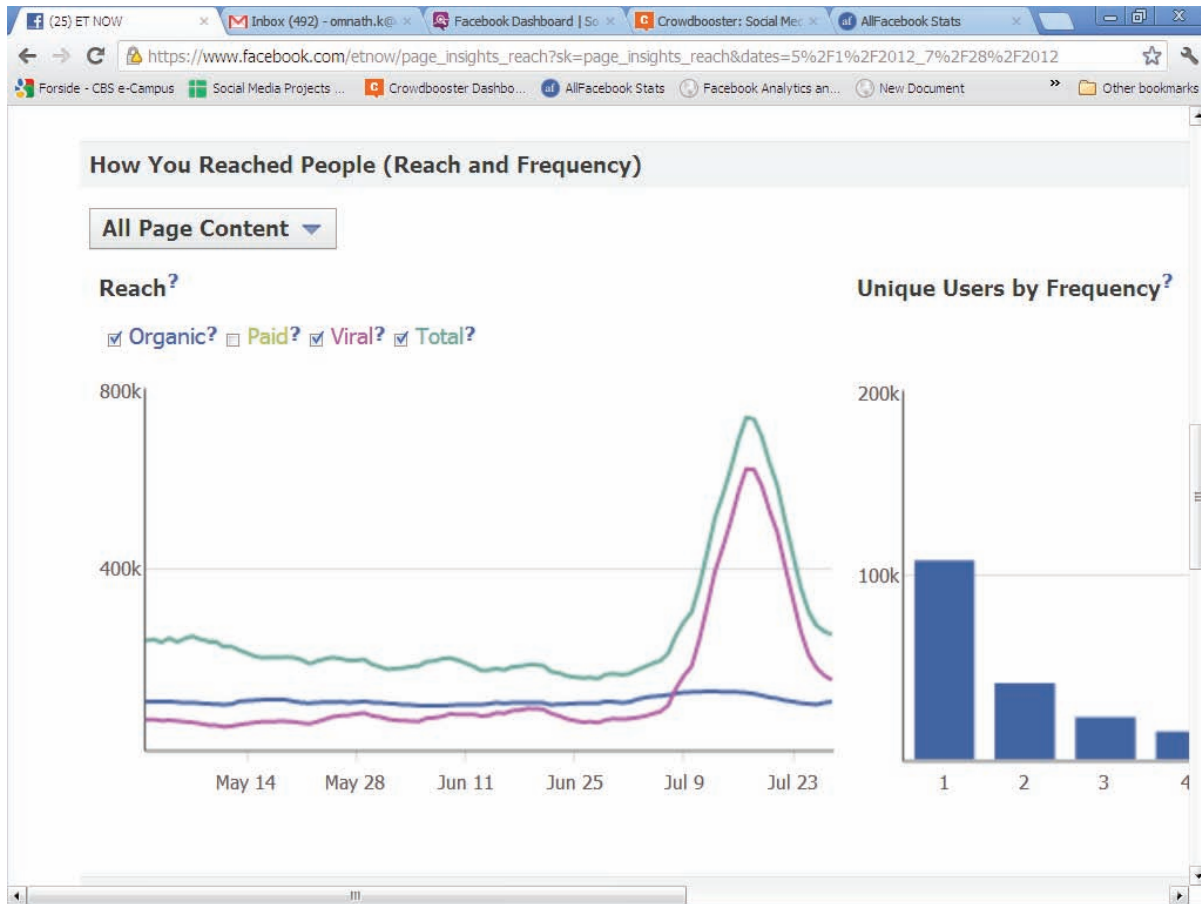
## 6. APPENDIX A

1. Interaction = Conversions / Activity
2. Engagement = Visits \* Time \* Comments \* Shares
3. Influence = Volume of relevant content \* Comments \* Shares \* Reach
4. Advocates (Advocacy) = Influence \* Positive Sentiments
5. Impact = Outcomes / (Interactions + Engagement)

APPENDIX B



Month of July with high spike



Here you can see that the spike in total reach is due to the viral reach increasing tremendously but the organic reach stays almost constant.

Date ?	Post ?	Reach ?	Engaged Users ?	Talking About This ?	Virality ?
7/14/12	ET NOW added a new photo.	39,525	10,542	9,255	23.42%
7/10/12	ET NOW added a new photo.	52,057	9,053	7,663	14.72%
7/12/12	ET NOW added a new photo.	48,060	8,342	6,876	14.31%
7/15/12	ET NOW added a new photo.	36,409	5,244	4,532	12.45%
7/11/12	ET NOW added a new photo.	40,027	5,040	3,871	9.67%
7/7/12	ET NOW added a new photo.	43,617	4,631	3,612	8.28%
7/13/12	ET NOW added a new photo.	30,263	5,102	2,241	7.41%
7/22/12	Photos	13,950	925	650	4.66%
7/17/12	Photos	17,399	1,107	721	4.14%
7/6/12	ET NOW added a new photo.	28,334	1,918	1,152	4.07%
7/18/12	Bollywood's first 'Superstar' passed...	24,027	1,391	927	3.86%
7/16/12	ET NOW added a new photo.	27,708	1,438	1,053	3.8%

### APPENDIX C

In the above picture one can see that the first five posts (photos) sorted in descending order of Virality index are the ones that give the maximum reach, engaged users and people talking about this.

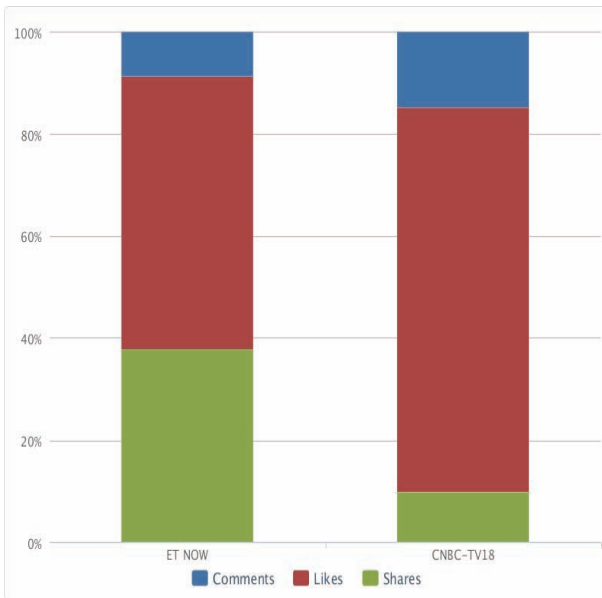
### APPENDIX D

CrowdBooster impressions v/s likes graph for posts

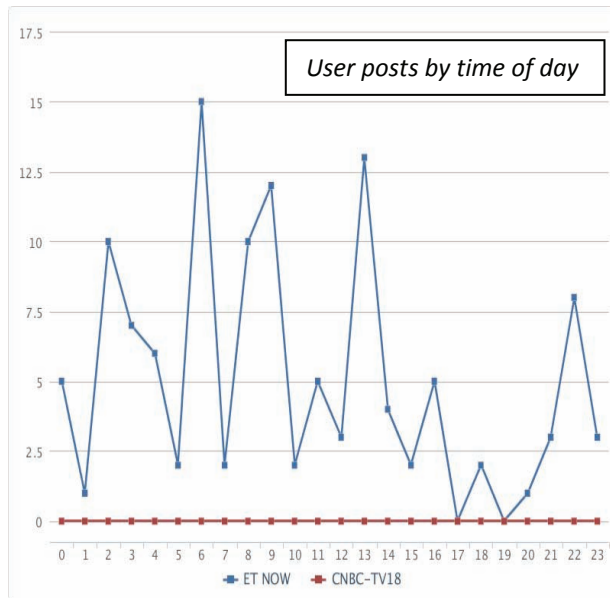
If we consider gauging which are our best performing posts, we should see the top right hand corner of the graph. In our top performing posts there are many that are quotes, questions, content pertaining to politics, sport and the entertainment world. At the same time, we can recognize our not so good performing posts and try to improve on their content. These posts are primarily posts of the share market and business news genre.

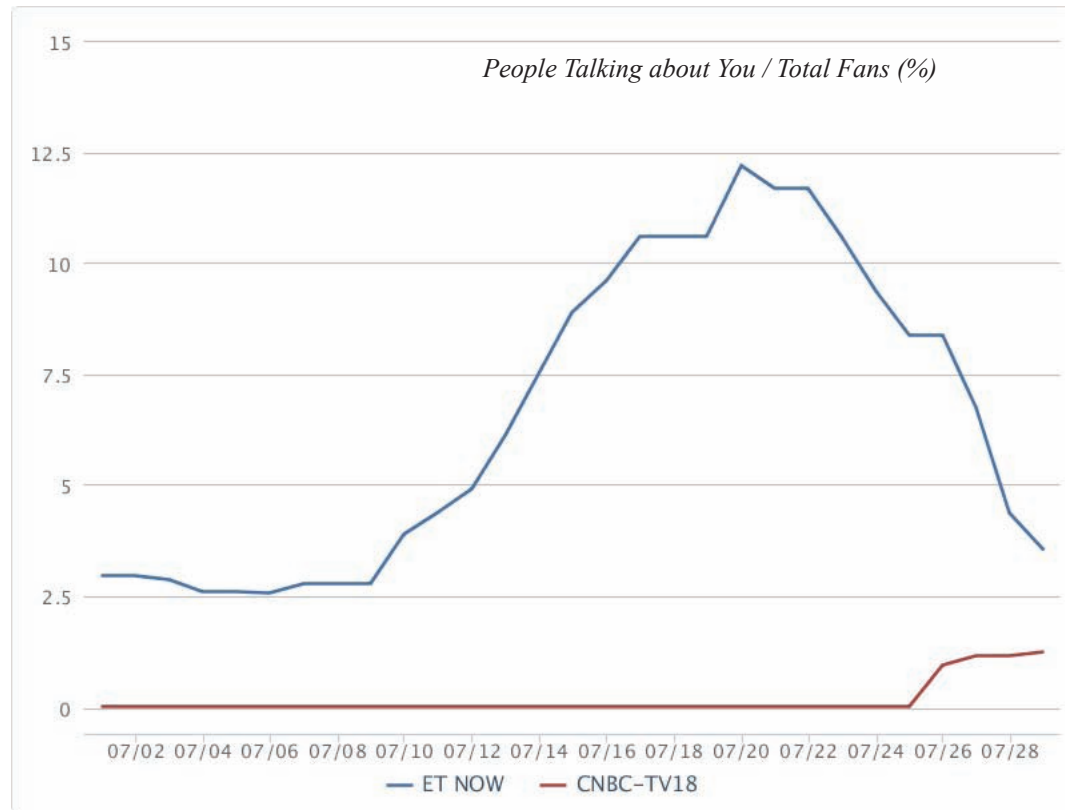


APPENDIX E

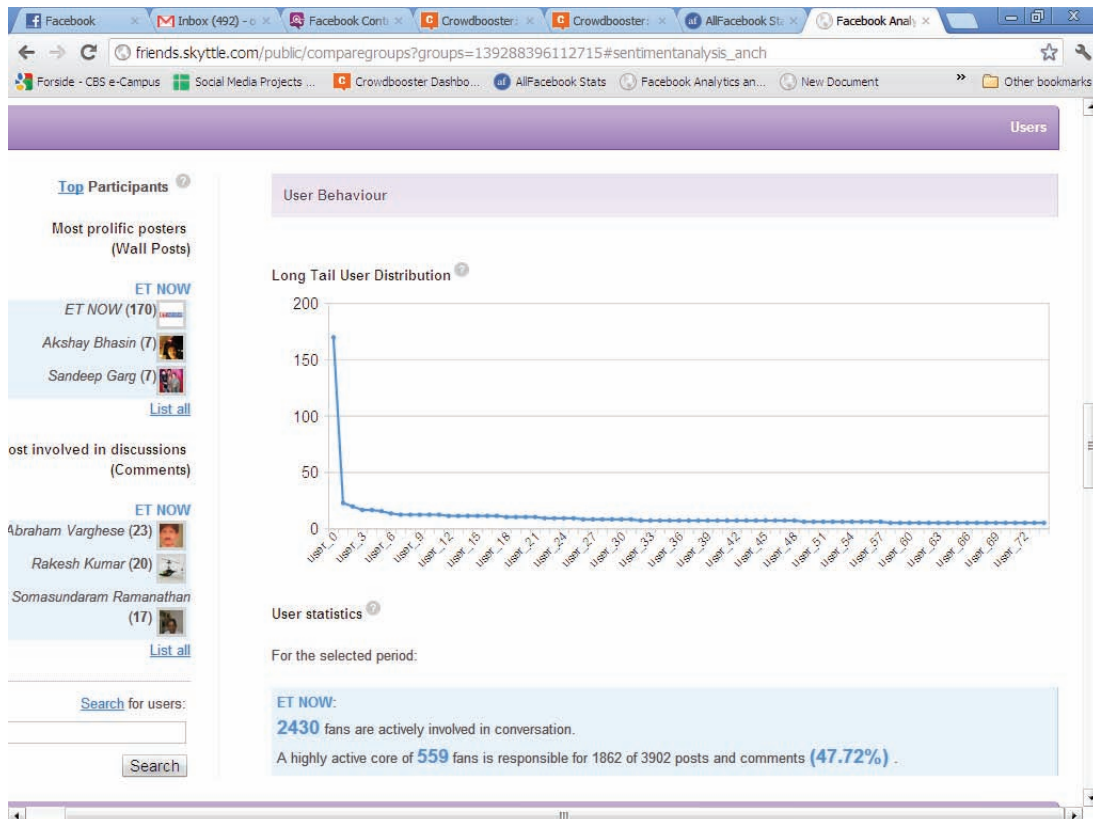


Interactions distribution





## APPENDIX F



## APPENDIX G

