Segmentation of Social Media Users for Better Promotional Campaign

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Abstract

This paper is an attempt to develop and validate the social media involvement scale in order to segment the users of social media, using both qualitative and quantitative approaches. The Qualitative approach uses netnography technique to examine the Facebook community. Survey was carried out for 1290 respondents from current students and faculties of an Engineering college, Arts College and 3 B-Schools. The study gathered information on user characteristics and factors affecting the purpose of using Facebook. The screening question was asked to clarify the unit of analysis in order to make sure that they have only one Facebook account. Cluster analysis used to identify the groups of similar people in terms of how they respond to Facebook fundamental hooks like Social networking, Killing time, Personal sharing, Information sharing, seeking, Reading, Watching, Business Networking and Amusement indicated the presence of three significant segments in Facebook: Entertainers, Social Searchers and Business Networkers. This article would help marketers to understand different kinds of users of social media and help brand(s) to communicate effectively with customers and to provide appropriate features, targeting ads, developing apps and attracting social media users.

Keywords: social media; segmentation; promotion; entertainers; social searchers; business networkers

1. Introduction

The word “Social Media” refers to the extensive array of Internet-based and mobile services that permit users to share exchange and contribute user-created content, or join online communities. These include Blogs, Social bookmarking, social networking sites, and virtual world content, and status update services. The most popular social networking sites are Facebook, Twitter, LinkedIn, Google plus, pin
interest and so on. Social media and human beings are almost inseparable in today’s scenario. Social media is a source of interacting or communicating with the outside world. It has become one of the fastest ways of communication in today world. Social media has also become a huge platform for the youngsters to showcase their talents to the outside world. Social media has become an important stage to share information, feeling, achievement, show support or protest. In social media everyone can find new people, meet their friends and can communicate with their loved ones easily. It may possibly at all times be a amusing and creative method of doing business because it not just allows employees to converse and share ideas, ask questions, and share links but it minimize the use of promotion to businesses and also improves organizations reputations. It also creates a more capable and reliable business. When promoting campaigns and ideas, it allows people from the different geographical location to express and share their views and meet in a particular point as well as promoting worldwide products. Now a day’s social media has become an important factor for many firms marketing. Instead of spending millions of dollars on mass marketing that consumers continue to block out, marketers should focus mainly on adapted messages and relationship building with customers.

Marketing is an essence of any successful organization. Marketing is the process of creating, communicating and delivering value to the customers, in order to meet customer needs. The production concept was the belief that when goods are widely available and inexpensive, people will buy them. Even though the marketing concept and holistic marketing concept are more widely accepted by the organization, the selling concept is what more commonly seen or least perceived by the customers. Although marketers started to target the niche, it is important to stand out from all the media clutter to identify their niche. Niche is a narrowly defined customer group seeking a distinctive mix of benefits (Keller & Kotler, 2009). In order to identify the niche market/target customers the marketers must segment the market by defining customers who share similar values. Segmenting the market appropriately allows marketers to reach their target customers. Facebook has been not only used as marketing tool but also social networking can remake the society and brand of an organization, which in turn can lead to better employee productivity and satisfaction (Bennett K, Pitt, M., Owers, M., 2010). Social networks drive internal communication and improve employee engagement (Eunjung Lee, 2013). To understand the different users’ personality, social media websites-commerce retailers can present the information such that users will be more interested, For example the presentation of facebook ads can be adjusted according to their preference (Jennifer Golbeck, Robles and Turner, 2011). All the facebook users will not use the site in a same way they may be motivated by different proposition. Understanding the different types of facebook users is the first and foremost step to communicate with them effectively and provide appropriate features.
The aim of the study was to identify the usage pattern and purpose of using social media by individuals. In the light of the domain for research identified so far, this will address itself to the following objectives. 1. To design and validate an instrument to measure the social media involvement Scale and 2. To Segment the Facebook users; which will help marketers to design the marketing plan appropriately.

2. Literature Review

Many articles examined what motivates people to use Facebook. Author’s opinion varied in their focus and methodology. Ellison (2006) found that students use Facebook for fun and killing time to have contact with old friends and maintaining relationship is a strong motivation for using Facebook. Viswanath, Mislove, Cha, Gummadi (2009) investigated the ways Facebook users interact and how different types of interaction affect the overall structure. Here more than half of the infrequently interacting user can be directly attributed to Facebook’s birthday reminder feature. Amalia E.Maulana, Stella Tjen (2012) study seeks to give great insight understanding for the segmentation in terms of social media types. Identified social media user segments the results indicated six significant segments in social media. Vinerean, Cetina, Dumitrescu, Tichindelean (2013) investigated regarding online activities of social media users and he used linear model to examine how different predictors related to social networking sites have positive impact on perception of online advertisements. Marc (2010) study aimed to provide information to a higher education institution about the use of social media by students as networking platform, information source and communication tools. Malin & Alem (2011) found that social media in their marketing communication helps the customers to create communication with each other easily and this helps to strengthen the corporate identity to build confidence and create relationship. Christine (2008) found that community platforms seek to differentiate their services in order to attract new members seeking to participate in the networks. Juho (2012) analyzed online marketing importance in tourist industry and social media can be segmented as ten segments and these ten segments differ from each other in which online buying behavior and some socio-demographic factors. Brandtzæg & Heim (2011) identified and described the various ways in which people use social media and he segmented five types of users like sporadic, lurkers, socialisers, debaters and actives. Foster (2011) stated that there is a great participation in social media the researcher find the homogeneous on the segment of dimension. The study provided the deeper understanding of social media technologies. Alarcon (2011) identified the individual behavior in social networking sites and found four segments they were introvert and novel users are more occasional and the versatile users will perform differently and expert communicator perform great variety of activities with a high frequency.
3. Methodology

This research conducted the survey for 1290 respondents from current students and faculties from an Engineering college, Arts College and 3 Business schools in Tamil Nadu. The study gathers information on user characteristics and factors affecting purpose of using facebook. The screening question was asked to clarify the unit of analysis in order to make sure that they have only one facebook account. This is because the people who have more than one account may use each account for different purpose and not really shown their own self in the way of using that facebook account. The researcher conducted the survey for six months i.e., from March 2013 to July 2014.

The instrument of this study has two parts: the first section of the instrument consisted of forced-choice questions about demographic characteristics-gender, marital status, age, occupation, living with. The second section variables chosen for this study in order to measure the purpose of using facebook by individuals dimension contains of 49 items and characterized into Nine sub scales : (a) Social Networking (items 1 to 6), (b) Killing time (items 7 to 14), (c) Personal Sharing (items 15 to 18) ,(d) Information sharing (items 19 to 20), (e) Seeking (items 21 to 22), (f) Reading (items 23 to 24 , (g) Watching (item 25 to 26) , (h) Business networking (item 27 to 28) (l) Amusement (item 29 to 31)). The Social media involvement scale dimensions 31 items are evaluated on a five-point Likert scale (5=strongly agree, 4=agree, 3=Neutral, 2=Disagree, 1= Strongly disagree).

4. Analysis and Discussion

The Statistical Package for the Social Science (SPSS) for Microsoft Windows 20.0 was used to analyze the collected data. Firstly exploratory factor analysis was performed to detect structure in the relationships between variables and also reduce the number of Variables. Hair, Black, Babin and Anderson (2010) suggests that Bartlett’s test of sphericity must be presented to indicate the presence of correlations among the variables. Moreover, Kaiser-Meyer-Olkin measure of Sampling Adequacy (KMO) value must exceed 0.6 to quantify the degree of inter-correlations among the variables and the appropriateness of exploratory factor analysis. For communality, the value of variables must be higher than 0.5 for including in factor analysis. Initially, 74 Social media usage factors were identified and it is deducted into 31 statements; the factor analysis is performed with principal component analysis and varimax rotation. 9 components were extracted with 76% of total variance explained. The results indicates that Bartlett’s test of sphericity is (sig. < 0.05) and the value of KMO of 0.688. It confirms that 31 variables of facebook constructs are appropriate for conducting the exploratory factor analysis. The communalities range from 0.575 to 0.801. The Bartlett’s test of sphericity is
significant at 0.05 (sig. = 0.000) and also indicate that there are correlations among these 31 variables. The value of KMO is 0.688 which indicate good sampling adequacy. Furthermore, there are 9 components can be extracted with 76% of total variance explained.

**Component 1 has factor loadings ranges from 0.553 to 0.830. This suggests that factor 1 is a combination of these 6 original variables, which are:**

- I read product reviews in social media before purchase
- I search information about my education
- I search information about general Knowledge in Social media
- I Often update personal blogs
- I follow celebrities in twitter
- When I am unhappy, I share my feelings on twitter

At this point the researcher’s task is to find suitable phrase, which captures the essence of the original variable, which continues to form the underlying concept. In this factor 1 can be named as “Social Networking”.

**Component 2 has factor loadings ranges from 0.519 to 0.693 and can be renamed as “Killing time.”**

- I use facebook to let other people know my personal opinions about books
- I use facebook to let other people know my personal opinions about Music
- I use FB to know about local places
- I use face book to chat with friends
- Facebook game is a stress-reliever
- Facebook game improves my hand-eye coordination
- Facebook game helps me to express my personality
- I use facebook to let other people know my personal opinions about, celebrities& movies

**Component 3 has factor loadings ranges from 0.725 to 0.868 and can be renamed as “Personal Sharing.”**

- When I am happy, I post that news on FB
- When I am unhappy, I share my feelings on FB
- I Join in facebook group to get information about off campus events
- I write articles and post them in social media
Component 4 has factor loadings ranges from 0.862 to 0.887 and can be renamed as “Information sharing,”
- I use facebook to let other people know my personal opinions about current events
- I share information of sports or hobby in social media

Component 5 has factor loadings ranges from 0.718 to 0.818 and can be renamed as “Seeking”
- Frequently use FB to learn about clothing /Fashion.
- I listen to podcasts

Component 6 is named as “Reading” and factor loading range from 0.759 to 0.788.
- Frequently use FB to learn about movies/Celebrities
- I read online forums

The component 7 factor loading ranges from 0.812 to 0.861
- Frequently use FB to learn about religious.
- I watch video from other users

At this point the researcher’s task is to find suitable phrase, which captures the essence of the original variable, which continues to form the underlying concept. In this factor 7 can be named as “Watching”.

Component 8 factor loading ranges from 0.676 to 0.732 and is named as “Business networking”
- I am only a member of FB for business purposes
- I read weblogs

Component 9 factor loading ranges from 0.519 to 0.838,
- I use FB to know friends more closely
- I like the fun and excitement while playing facebook game
- When I am happy, I post that news on twitter

At this point the researcher’s task is to find suitable phrase, which captures the essence of the original variable, which continues to form the underlying concept. In this factor 9 can be named as “Amusement”.
Therefore, nine new variables for social media were created. Secondly, cluster analysis was performed to segment the personality of Facebook users. Hair et al. (2010) described that there are two types of clustering techniques viz. Hierarchical Clustering and K–means Clustering. In this research, Hierarchical Clustering & K-means clustering is used. Hierarchical clustering is a method which seeks to construct a hierarchy of clusters. Strategies for hierarchical clustering generally fall into two types: Agglomerative and Divisive. Agglomerative is a “bottom up” approach each observation starts in its own cluster, and pairs of clusters are merged as one moves up the hierarchy and Divisive is a “top down” approach all observations start in one cluster, and splits are performed recursively as one moves down the hierarchy. The results of hierarchical clustering are usually presented in dendogram. The result revealed that the appropriate number of clusters is 8.

![Figure 1: Agglomeration Schedule](image)
The cluster analysis interpretation starts with an agglomeration schedule which provides the solution for every possible number of clusters from 1 to 8. Agglomeration schedule will help us to identify large differences in the coefficients. The agglomeration schedule from top to bottom (stage 1 to stage 8) indicates the sequence in which cases get combined with other means grouping of one cluster with other cluster. Until all cases are combined together in one cluster at the last stage. Therefore stage 8 represents a one cluster solution, stage 7 represents a two cluster solution, and stage 6 represents a three cluster solution and so on. Going up from the last row to first row helps to identify how many clusters in the data use the difference in the rows of coefficients. In the below table should be interpreted from the last row upwards to have lowest possible number of clusters for reasons of economy and easy of interpretation.

**Table: 1 Agglomeration Schedule**

<table>
<thead>
<tr>
<th>Stage</th>
<th>Cluster Combined</th>
<th>Coefficients</th>
<th>Stage Cluster First Appears</th>
<th>Next Stage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cluster 1</td>
<td>Cluster 2</td>
<td></td>
<td>Cluster 1</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>9</td>
<td>955.944</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>2</td>
<td>1048.696</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>5</td>
<td>7</td>
<td>1675.750</td>
<td>0</td>
</tr>
<tr>
<td>4</td>
<td>6</td>
<td>8</td>
<td>1908.000</td>
<td>0</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>6</td>
<td>2009.750</td>
<td>3</td>
</tr>
<tr>
<td>6</td>
<td>1</td>
<td>5</td>
<td>2150.445</td>
<td>2</td>
</tr>
<tr>
<td>7</td>
<td>1</td>
<td>4</td>
<td>3020.295</td>
<td>6</td>
</tr>
<tr>
<td>8</td>
<td>1</td>
<td>3</td>
<td>5348.782</td>
<td>7</td>
</tr>
</tbody>
</table>

The above table start at a difference of (5348.782 - 3020.295) in the coefficient between one cluster solution (stage 8) and the two cluster solution (stage 7) with a difference of 2,328.487. The next difference is (3020.295 - 2150.445) in the coefficient between stage 7 and stage 6, the difference is 869.85. The difference between (2150.445 - 2009.750) in the coefficient between stage 6 and stage 5, the difference is 140.695. The next difference is (2009.750 - 1908.000) in the coefficient between stage 5 and 4, the difference is 101.75. The next difference is (1908.000 - 1675.750) in the coefficient between stage 4 and 3, the difference is 232.25 and so on. Therefore the differences are smaller between subsequent rows of coefficients. A large difference in the coefficient values between any two rows indicates a solution pertaining to the number of clusters, which the lower row represents.
Figure: 2 Dendrogram
From looking at the Icicle plot or dendrogram for the information about cases linking up and sequence from clusters, the numbers in column 2 and column 3 of the agglomeration schedule also gives the same information. The dendrogram additionally provides a re-scale decision measure between various cluster combination at various stages. For instance for a cluster solution from the dendrogram, Cluster 1 would consist of case number 1, 9 & 2, Cluster 2 consist of 5 & 7 and cluster 3 consist of 6 & 8. Based on the cluster analysis we have identified the following clusters.

Table: 2 Cluster Result

<table>
<thead>
<tr>
<th></th>
<th>Cluster 1 Entertainers</th>
<th>Cluster 2 Social Searchers</th>
<th>Cluster 3 Business Networkers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social networking</td>
<td>2.48</td>
<td>2.68</td>
<td>3.78</td>
</tr>
<tr>
<td>Killing time</td>
<td>2.39</td>
<td>2.64</td>
<td>2.99</td>
</tr>
<tr>
<td>Personal sharing</td>
<td>2.69</td>
<td>4.87</td>
<td>4.84</td>
</tr>
<tr>
<td>Information sharing</td>
<td>2.95</td>
<td>3.56</td>
<td>3.91</td>
</tr>
<tr>
<td>Seeking</td>
<td>3.39</td>
<td>2.32</td>
<td>3.67</td>
</tr>
<tr>
<td>Reading</td>
<td>3.01</td>
<td>2.21</td>
<td>3.91</td>
</tr>
<tr>
<td>Watching</td>
<td>3.57</td>
<td>2.29</td>
<td>3.74</td>
</tr>
<tr>
<td>Business networking</td>
<td>2.80</td>
<td>1.92</td>
<td>3.40</td>
</tr>
<tr>
<td>Amusement</td>
<td>2.28</td>
<td>2.57</td>
<td>3.39</td>
</tr>
</tbody>
</table>

A. Entertainers

Entertainers play games and spent most of the time in facebook games, download applications. They would like to accept invitations to events they also seek coupons and deals. They are motivated by games, apps and coupons; they interact with strangers as often as acquaintances and though less in number they log the most time on facebook. They follow celebrities in twitter and update personal blogs. This cluster of social media user who like to share their achievement, post their daily activities and spent most of the time in facebook. This cluster individual likes to build a personal brand. They would like to maintain a positive online image. These users share videos & links and they also place great important on photo sharing and status commenting.
B. Social Searchers

They use social media to find new entertainment and would like to know about current affairs. They listen to podcasts and watch videos from other users. They show less interest in playing games and giving virtual gifts. Instead they search for information more like to know about education and what is happening around them. Mostly they rely upon internet.

C. Business Networkers

This cluster individuals shows a fondness for both business networking and sharing advice, information and knowledge. This segment users find new entertainment media and fashion information. They would like to know about books, blogs, travel ideas, recipe and current affairs. They join interest group based on politics, art and music and they often link their facebook account to other websites.

<table>
<thead>
<tr>
<th>Table:3 ANOVA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cluster</td>
</tr>
<tr>
<td></td>
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<tr>
<td>Watching</td>
</tr>
<tr>
<td>Business networking</td>
</tr>
<tr>
<td>Amusement</td>
</tr>
</tbody>
</table>

The F tests are used only for descriptive purposes because the clusters have been chosen to maximize the differences among cases in different clusters. The observed significance levels are not corrected for this and thus cannot be interpreted as tests of the hypothesis, that the cluster means are equal.

The ANOVA table explains which of the twelve variables are significantly different across the three clusters. Since there is a divided opinion about the utility of statistical testing in cluster analysis, researcher judgment is given priority in order to determine which variables are statistically significant. Based on the assumption that ANOVA is a valid test, the interpretation of clusters and difference across clusters were made on the basis of those variables, which were significantly different across clusters at 0.01 level.
5. Managerial Implications

This study has given a new face to marketing management in the area of Promotional Mix. It broken down the conventional media’s in-door and out-door media. Because due to the technological advancement network communication follows the user every where both in-door and out-door. This gives birth to the new media where the customers can be communicated all 24x7. This reached the targeted audience more perfectly than any other media.

6. Conclusion and Recommendations

From the study, it could be concluded that the social media users could be classified into three clusters namely Entertainers, Social Searchers and Business Networkers. Further, from the analysis it is understood that the three categories are homogeneous within the group and heterogeneous across the groups. The research findings indicate that social media is one of the effective promotional tool, which helps marketers to reach target audience with less cost. Hence it is recommended that companies can promote their products through social media and understand the groups to achieve desired results.

In future, the study can consider the demographic variables like Age, Educational Qualification, and Marital status etc. And, researchers can compare one social media with the other social media, so that the degree of acceptance and the differences can be studied. The influence of the media may be studied based on the purchase decision making. Further, predictive model could be built to identify segments, which have greater influence.

References


