From the Angels to the Screamers: User Segmentation and e-WOM in Social Media

Amalia E. Maulana, Ph.D [1+], Stella Tjen [2]

[1] BINUS University Jakarta, Indonesia

[2] The London School of Public Relation Jakarta, Indonesia

Abstract. Social media have attained a rather prominent presence in consumer lives; however, few studies have conducted detailed examinations of social media user segmentation and explained the roles of these users in electronic word-of-mouth (e-WOM). The current study objective is to help identify social media user segments and investigate the intentions of these segments to discuss brands during their daily social media communications. To produce comprehensive results, this study used a combination of qualitative and quantitative methodologies. The qualitative study methodology included netnography, usability interviews and contextual in-depth interviews, whereas the quantitative methods of this study involved the administration of an online survey. The findings from this study were analyzed, and these results indicated the presence of six significant segments in social media: The Angels, The Active Learners, The Passive Learners, The Social Networkers, The Journalist-Narcissists, and The Screamers. Only two segments, The Active Learners and The Journalist-Narcissists, were found to have significant potential for e-WOM.

Keywords: e-WOM, Social Media, User segmentation, Netnography

1. Study Background

The advent of the Internet has expanded consumers' abilities to gather unbiased product information from other consumers and has provided opportunities for consumers to offer their own consumption-related advice by engaging in electronic word-of-mouth (e-WOM). Given the distinctive characteristics of Internet communications (for instance, these communications may be directed to multiple individuals, are available to other consumers for an indefinite period of time, and remain anonymous), e-WOM deserves the serious attention of marketing researchers and managers

This e-WOM is communicated through various types of media, including discussion forums, electronic bulletin boards, newsletters, blogs, and diverse channels of social networking media, such as Facebook, Twitter, MySpace, Friendster and Foursquare, among others.

Social media provide one of the fastest growing types of communication. The presence of social media in consumer lives has altered the roles of mass and paid media as product information sources. Consumers rely more on electronic word-of-mouth (e-WOM) communications. The reliance of e-WOM on other parties, such as opinion leaders in the community, provides implications regarding the ways in which brand managers allocate their media budgets.

To obtain an understanding of which groups of social media users are the most effective entities for promulgating brand messages, brand owners must obtain a clear understanding of the characteristics of social media user segments. Unfortunately, little is known with respect to user segmentation in the context of social media. Therefore, the objective of the current study is to facilitate the identification of social media user segments and the roles of these segments in e-WOM communications.

This study seeks to provide greater insight and understanding regarding the segmentation and characterization of consumers in terms of social media types. This understanding will permit more detailed explorations and identifications of the differences among social media user segments and will facilitate explanations of which of these segments has the highest tendency to engage in e-WOM.

2. Literature Review

[+] Corresponding author. Tel.: +6221 7450958

E-mail address: amalia@etnomark.com

According to Katz and Lazarsfeld [1], WOM is the most powerful determinant of purchases of consumer goods, such as household items and food. Consumer behaviors are much more efficiently influenced by WOM than by mass media (newspaper, magazine, and radio advertising) or by personal selling [2]-[3].

The effectiveness of WOM demonstrates that consumers trust acquaintances more than they trust communications from marketers [4]. Strauss [5] defines e-WOM as any statement from consumers that is distributed to many parties via Internet-based media channels; this definition includes not only statements from past, present, and potential future consumers of a product but also both positive and negative e-WOM.

Study results have invariably indicated that WOM (and e-WOM) are more effective than messages that are distributed by brand owners [4], [6].

Word-of-mouth marketing, which encompasses a variety of subcategories including but not limited to buzz, blog, viral, grassroots, influencer, consumer-generated, and social media marketing, can be highly valued by product marketers. Because of the personal nature of the communications between individuals, product information that is communicated via WOM may possess an additional layer of credibility.

Godes and Mayzlin [8] explained that e-WOM is computable, as comments on a product are written and easily accessible through websites. Thus, e-WOM can conquer a major limitation of traditional WOM [4].

Jansen et al. stated that the essence of e-WOM communicating and customer relationship management is knowing the statements that customers and latent customers are expressing about the brand of interest [9].

Microblogging provides a nearly real-time platform that reveals how customers truly feel about a brand and its competitors and allows for direct connections to be created with these customers; these connections can create and improve customer relationships [9].

With respect to e-WOM, several investigations have explored the topic of user segmentation. For instance, Java et al. [10] divided social media users into the following primary categories: users who provide information (Information Sources), users who attempt to find information (Information Seekers), and users who predominantly search for acquaintances (Friends).

A 2007 study by Hennig-Thurau et al. provides a more concrete illustration of the motivations of social media users. These researchers mention at least 6 motives underlying e-WOM behavior: a desire for social interaction, a desire for economic incentives, a concern for other consumers, advice seeking, social benefits, and the potential to enhance their own self-worth [11].

The most recent study that has addressed social media is an examination of user segmentation in the context of the Foursquare social media network [12]. This investigation identified several motivations for performing check ins at particular locations or venues. In particular, at least 6 user segments of Foursquare were found: The Existence, The Gamers, The Mayor, The Show-off, The Need Help, and The Angels.

There has been abundant research on WOM, and specific studies of e-WOM have commenced; however, few investigations have conducted in-depth assessments of the behavior differences of each social media user segment with respect to the intention to post a branded message. The current study focuses on addressing this gap in the extant literature.

3. Methodology

The qualitative approach that was chosen for this study uses the netnography technique to examine the Facebook and Twitter social media communities. Netnography is a contemporary research methodology that adapts ethnographic techniques to the study of emerging cultures and communities through Internet media communications [13], [14]. This exploration is conducted through the analysis of hundreds of posts on Facebook and Twitter. To provide supporting data, usability interviews, cluster discussions, and contextual, in-depth interviews were also employed; in particular, these interviews involved 31 respondents.

From the netnography results, the different characteristics of each social media segment may be clearly envisioned. However, to ensure that the variables that distinguish these segments are appropriately tested, we perform data triangulation to extend the qualitative study through the use of usability interviews and contextual in-depth interviews. Usability interviews are an apt choice for this study because certain information can only be obtained through the direct observation of user behavior during interactions with

technology products; these behaviors clearly illustrate the concrete differences among the identified user segments.

The results from the various qualitative explorations were eventually condensed into a quantitative study. In this phase, an online survey was administered. The online survey respondents were reached by transmitting a chained message through the social media channels of Facebook and Twitter. This process generated 223 responses, which were subsequently filtered into 165 responses that can be utilized for analysis.

4. Result, Analysis and Conclusion

This study mapped the types of social media users based on the motivations/goals that these users posted in their "Status Update" for both Facebook and Twitter. Compared with the findings of a previous study [12], this investigation generated several similarities and differences with respect to both terminology and content, as presented in Table I. These differences can be classified into two categories based on whether distinctions reflect alternate naming conventions or the diverse characteristics of social media channels. For instance, an example of a naming difference is that the previously identified user segment called The Show-off is very similar in content to The Narcissists, a user segment that was identified in the current study. The Angels segment was identified in both the current and previous investigations. Differences that reflect inherent and unique characteristics of a social media channel include the segment known as The Major, which was identified in a previous study but not the present analysis because it reflects a status that can only be found in the Foursquare context.

The categorization of users is not indicative of differences in age, gender, income, or even hobbies. Instead, the clusters that have been identified in this study are more homogenized and contextual, reflecting the interaction of individuals with social media channels.

Table 1: CURRENT VS PREVIOUS STUDY FINDINGS

Study	Type of Social media		User Typology
Sonata and Maulana (2010)	Foursquare	6	The Existence, The Gamers, The Mayor, The Show-off, The Need Help, The Angels.
Current study	Facebook and Twitter	7	The Angels, The Learners, The Social Networkers, The Journalists, The Observers, The Narcistic, The Screamer

The research result further reveals that out of the many series of posts by each user segment, only certain segments tend to post status updates that contain brand names (branded postings). In particular, out of the seven segment types, only 4 segments post content that demonstrate potential for brand e-WOM contributions: The Angels, The Learners, The Journalists and The Social Networkers. Meanwhile, the other three segments of The Screamers, The Narcissists and The Observers generate no significant contribution to brand communications among social media users.

The qualitative findings above were reinvestigated through an online survey. From the total of 165 survey respondents that were selected based on face validity, 16 outliers were found and excluded from the cluster analysis.

The results from clustering the social media users are in accordance with the qualitative results. However, instead of 7 segments, the hierarchical and k-means clustering methods suggest the presence of only 6 user segments after 2 iterations of cluster analysis. Based on the cluster analysis (Table II), we may identify the following clusters:

- **The Angels**: A segment of individuals who demonstrate a fondness for both business networking and sharing advice, information and knowledge. This sharing is performed in an attempt to develop their personal brand as an expert.

- **The Active Learners**: This segment consists of respondents who learn actively and share their knowledge.

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- **The Passive Learners**: This segment of social media users enjoy gaining knowledge from social media but rarely share their own knowledge.

- **The Social Networkers**: These users always look to extend their networks, including through the sharing of the opinions of other users. These individuals are often attracted by opinions in forum discussions.

- **The Journalist-Narcissists**: This cluster represents social media users who enjoy sharing their achievements, revealing their deliberations regarding their daily activities and devoting their leisure time to the social network. These individuals are attention seekers who must be present in each discussion and frequently post content that includes pictures. Their focus is generally oriented towards themselves or their own world.

- **The Screamers**: These users are often impulsive, sharing everything that they encounter and experience. Their posts are sometimes interpreted as tangential content that provides no significant meaning to their community.

Table 2: CLUSTER ANALYSIS RESULT

	1 (n = 31)	2 (n = 39)	3 (n = 20)	4 (n = 21)	5 (n =13)	6 (n = 25)
	Angels	Active Learners	Passive Learners	Social Networkers	Journalists Narcistic	Screamers
Factor 1 Sharing, Branding	.44	.51	-.24	.08	.19	-1.34
Factor 2 Business networking	.51	.06	-.28	.02	.30	-.12
Factor 3 Social networking	-.51	.10	-1.15	.49	.17	.38
Factor 4 Learning	-1.03	.47	.63	.21	.32	-.24
Factor 5 Reporting	.44	.13	-.65	-1.00	.61	.35
Factor 6 Humoring	.22	-.01	-.13	.74	-.84	.05
Factor 7 Screaming	-.30	.96	-.55	.10	-.64	.40
Factor 8 Killing time	-.03	-.28	-.59	.97	1.42	-.20

4.1. e-WOM: Branded Posting Intention

From the six attained segments, the question to be answered is which segment has the highest intention of engaging in branded postings. Attitudes towards branded posting were generated by conducting factor analysis of the responses to several questions that addressed branded posting. One factor resulted from this analysis, with a KMO value of 0.628.

Table 3: INTER-SEGMENT DIFFERENCE OF INTENTION TO POST BRANDED MESSAGE

Segment	Count	Mean	Min	Max	Std Dev
Angels	31	0.01	-1.92	1.84	0.90
Active Learners	39	0.24	-2.12	2.14	0.99
Passive Learners	20	-0.35	-2.30	1.19	0.98
Social Networkers	21	0.04	-2.12	2.14	1.16
Journalists Narcisstic	13	0.31	-1.51	1.55	0.73
Screamers	25	-0.31	-2.00	1.78	1.04

The segments of Journalist-Narcissists and Active Learners are segments of users who have high intentions of engaging in branded postings during their daily social media activities. Passive Learners and Screamers are among the individuals who oppose (as indicated by the negative mean values) branded postings in their daily social media activities. The Angels and Social Networkers have neutral attitudes regarding branded postings during their daily social media activities.

In Table III, "count" represents the number of respondents who belong to each segment and the size of each segment in society. The "mean" value represents the extent to which the respondents intend to engage

in branded posting during their daily social media activities; positive means indicate positive attitudes towards branded postings, whereas negative means indicate negative attitudes towards branded postings.

This study presents two advantages at once. In the academic realm, the findings from this study extend the available knowledge regarding e-WOM and social media. With respect to practical purposes, a sharper segmentation identification could allow brand owners to be more focused on targeting social media user segments that will generate more e-WOM, resulting in the much greater impact of e-WOM marketing efforts.

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