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AN EMPIRICAL INVESTIGATION OF HOW TO INCREASE USER ENGAGEMENT ON FACEBOOK BUSINESS PAGES

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ABSTRACT
With the raging trend of networking on social networking sites such as Facebook, almost all businesses are trying to reach their consumers using the social networking site. One way of promoting a company's products and services is by increasing the number of its Facebook page followers. We have studied DeLone & McLean’s model of IS success and have adapted it to the scenario of social networking sites, focusing particularly on Facebook. We have taken into consideration the dimensions of information quality and service quality and have studied their impact on consumer engagement and brand advocacy i.e. word of mouth. The proposed model provides quality dimensions that are hypothesized to influence consumer behavior in terms of their engagement and opinion giving. Results show that dimensions of information quality and service quality are important factors in molding consumer behavior accordingly and they partially effect consumer engagement which leads to brand advocacy.

Keywords
Social Networking, Social Media Marketing, Facebook, Consumer Engagement, Consumer Behavior

INTRODUCTION
With the introduction of social networking sites (SNSs) in 2007 with SixDegrees.com, they have attracted billions of users all over the world and have sprung up in all forms from video sharing sites such as YouTube to photo sharing sites such as Instagram. Facebook (FB), remains the most widely used social networking site existing currently. The interconnectivity on SNSs among users creates a complex social network, where they are sharing opinions, commenting or discussing millions of issues such as politics, social issues, weather, shopping etc. These SNSs which have turned into huge databases of interacting users who are consumers of various brands and products, pose as an excellent platform for business marketers to carry out their brand publicity. FB allows businesses to create their business profile referred to as a ‘page’. It contains the business name, location, contact details and an about section managed by an admin which in most cases is an employee of the respective firm. An admin is able to post ‘updates’ on the page about the various products/services which the brand offers, new offerings, sales and any other related information. Individual users of FB can ‘like’ the business page and become its ‘fan’ or ‘follower’. They are then able to comment on the posts and interact with the brand. This results in existing or potential consumers discussing the brands products and services, sharing their opinions and experiences with the brand and thus indulging in word of mouth activities. What these consumers say about the brand is of immense importance to the business since a positive word can help the business acquire more consumers and a negative word can result in lost customers. Profit making is the ultimate goal of businesses, and thus businesses strive to interact with and engage consumers positively on their pages to increase their fan following, increase in product/services sales and ultimately a higher return on investment. It is important to set down certain key performance indicators that impact the consumer behavior on FB pages and lead to an increased consumer engagement and positive word of mouth. This can help the businesses in effectively carrying out their marketing activities on their FB pages and build a good online reputation. This paper discusses various factors leading to the success of social media marketing particularly on Facebook, DeLone and McLean (D&M) (1992) proposed a comprehensive model for measuring information systems (IS) success in 1992 and updated it 10 years later. Ever since its formulation, numerous other studies have validated the model and others have recommended enhancements to its original form. It proposes six dimensions for information systems success namely; system quality, information quality, service quality, usage, user satisfaction and net benefits. The model captures the interdependent and multidimensional nature of information systems success. Business operations are being heavily impacted by advancement in internet and information technology. That is why companies are heavily investing in having a presence on social media websites especially FB. They face the dilemma of evaluating the success of their activities on social media in terms of increased consumer traffic and consequently their sales. IS research is more inclined towards e-commerce systems development, testing and measuring their success. Likewise, D&M (2003) model of IS success, which is basically built on communications systems, was developed to measure success of e-commerce websites. With the advent of social media websites, and firms increasing use of SNS for information dissemination, marketing and customer services etc., there is a need of evaluation for an effective use of SNS.
Talking in terms of marketing activities carried out through FB pages, the main focus is on customers who are the basic users of the website. They frequently make buying decisions and carry out business transactions. These electronic activities of decision making and executing transactions in turn impact other individual FB users, brands, organizations and industries. The six success dimensions of D&M (2003) are a perfect fit for the communications and commerce process. User Generated Content (UGC) holds an astounding value in the purchase market where the potential consumers are seeking advice or recommendation from a family member, a friend or anyone not directly linked to the firm. Thus, a positive word of mouth or brand advocacy ranks high when it comes to making purchase decisions. A positive word of mouth thus leads to generation or high consumer traffic and more sales. According to DeLone and McLean (2003), system quality refers to the measurement of technical quality of the information system under consideration. In the context of evaluating FB pages it refers to Facebook’s website where a brand has setup its page; its ease of usage and navigation. Since, social media websites such as FB, Twitter etc. are quality certified websites with uniform operating standards for all pages, we propose that including this dimension is not appropriate. Considering that system quality will be available in a standardized manner to all the organizations equally, having a presence on social media, this dimension of evaluating success of social media activities is not considered because of its uniformity.

TOTAL DATA QUALITY MANAGEMENT (DERIVATIVE OF INFORMATION QUALITY):

The information quality or content quality ensures that the information shared on brands’ social media profile is relevant, complete, personalized and easy to understand. Keeping a strong check on content quality is very important for drawing visitors’ attention towards a company’s social media profile. Consumers tend to like, comment and interact more with companies whom they feel familiar with. Giving out detailed information about products, services and offers increases the information base of readers about the company and then they will naturally be in a better position to talk about that particular company and discuss its products and offers. Manufacturing industries have long been using the concept of total quality management (TQM). TQM incorporates methodologies, tools and concepts with the aim of keeping a quality check in all operations and functions of an organization (Fisher, Lauria, & Chengalur-Smith, 2012). Information quality (IQ) experts, adopting the phenomenon define information manufacturing system as the producer of information that develops raw data and creates information product (IP) that provides value for information consumers (Wang, 1998). As information is a product of information manufacturing system, IQ professionals have adopted the TQM methodologies and have formulated an IQ theory known as Total Data Quality Management (TDQM) (Fisher et al., 2012). To confront the challenges brought forth by social media, the information quality approach should be adopted and a process of TDQM should be implemented. The terms information quality (IQ) and data quality (DQ) are used interchangeably in the world of information systems. ‘Fitness for use’ is the definition of data quality provided by Tayi and Ballou (1998). Different measures for measuring the data quality of an information system are relevance, accuracy, usefulness, and format of the information as described by various researchers in literature (Lee, Strong, Kahn, & Wang, 2002; Strong, Lee, & Wang, 1997). These factors affect the participation level of the users of the system in other words, in context of social media, these determinants effect consumer engagement (Jennex, Olfman, Panhwai, & Park, 1998). Studying the impacts of information quality on consumer engagement on social media sites, we propose that timeliness, completeness and relevancy are the most important information quality dimensions which we will study and test further in the research. Furthermore, adapting the D&M IS success model (2003) and deriving from it, we propose that information quality has a direct positive effect on use or consumer engagement. Users tend to engage more on social media platform that provides high information quality. This brings us to our first hypothesis which states that total data quality management results in increased consumer engagement

**H1: Total data quality management leads to an increase in positive consumer engagement**

Relevancy is defined Bailey (1983; p. 542) as: “...the degree of congruence between what the user wants or requires and what is provided by the information system. It is concerned with issues such as relevancy, clearness and goodness of information” It is important in any setting; be it a corporate environment, e-commerce or social media engagement, to receive the relevant information in order to perform the required tasks with precision. If the information shared by the company’ FB page helps the user in gaining new insights, knowing about coming promotions or any other relevant information, he/she is more likely to engage with this information. This engagement can be in the form of “Like”, “Comment” or “Sharing”. Therefore, we argue, if relevant information is posted by the administrators of Facebook pages, they are more likely to draw consumers to this page. This leads to the derivation of following sub-hypothesis:

**H1a: Relevancy of information on Facebook business pages leads to significant positive consumer engagement**

Wand and Wang (1996; p. 92) define completeness of information as: "A set of data is complete with respect to a given purpose if the set contains all the relevant data and all mandatory attributes should be non-null". Also, "All values for a certain variable are recorded". Deriving from this definition, a given set of information on a social media site for example of
FB would be complete or useful if it contains all the necessary information needed to fulfill the purpose of the user, be it getting product information, making a purchase decision, knowing about the payment procedure or making comparisons among different products etc. The more complete a set of data would be, the more useful it will be for the user to carry out his purpose. Deriving from all the above researches, we propose that higher the completeness of the information in respect to its increased usefulness for the user to complete his purpose, the more the user will be satisfied and higher will be his engagement.

H1b: Completeness of information on Facebook business pages leads to significant positive consumer engagement

Nelson and Todd (2005; p. 203) defined timeliness as: “… the degree to which information is up-to-date or the degree to which the information precisely reflects the current state of the world that it represents”. Timeliness has been recognized as an integral factor in the contextual IQ by various researchers and is known to effect the use and user engagement directly and positively (Bhatti, Baile, & Yasin, 2013; Ives, Olson, & Baroudi, 1983). On social media, particularly FB, the information provided by the FB page admins is required to be current and up-to-date. A fan follower of an FB page would be expecting timely information such as details of new products or services launch, news of sales or promotions etc. In time information about these developments will add to the usefulness of the information provided for performing the required task by the user such as timely getting benefit of the sale and purchasing a product the user has been wishing for. Thus consumer engagement with the FB page increases with the increase in consumer satisfaction as a result of a positive interaction with the FB page. Therefore, a third sub-hypothesis is derived as following:

H1c: Timeliness of information on Facebook business pages leads to significant positive consumer engagement

CUSTOMER RELATIONSHIP MANAGEMENT (SERVICE QUALITY):

In e-commerce activities carried out through social media, the main focus is on customers. It is now very important to provide these customers with proper service quality and support. Poor user support can prove to be disastrous for the business and may result in lost customers and poor sales. Service quality, according to early research is thought of as intangible which is an obscure construct difficult to comprehend (Parasuraman, Zeithaml, & Berry, 1988). By sensing the need to measure service quality a SERVQUAL model was proposed by Parasuraman et al. (1988). Thus, Swaid and Wigand (2009) suggested the following to be the key dimensions of electronic service quality: information quality, website design, responsiveness, reliability, assurance and personalization to fit the exclusive setting of e-stores. In this study, we are adopting their suggested key dimensions to measure service quality of FB pages. Website design and personalization does not apply in our case as we are researching the customer service quality on FB pages which are standard for all. Zeithaml et al. (1996) used the term customer loyalty to indicate towards the intentions of customers to involve in more business activities with the retailer and also to recommend that retailer to friends and family i.e. increase his own engagement with the retailer and indulge in word of mouth activities. They further proposed that one of the ways to increase customer loyalty is by giving superior service quality. Since, service quality is something that is typically wanted and valued by customers, providing high levels of service quality should increase the willingness of the consumers to do more business and increase their engagement with the retailer. This leads to our second hypothesis as:

H2: Customer relationship management on FB leads to a significant increase in positive consumer engagement

Parasuraman et al (1988; p. 23) defined assurance as: “Knowledge and courtesy of employees and their ability to inspire trust and confidence”. Dealing with an FB page admin, a consumer would feel assured if he feels confident that the admin will provide correct information, will have the consumer’s best interest at heart and is courteous to the consumer. For example, a consumer would be more satisfied and eager to engage with a particular FB page, if he knows that the representative is truthful and give will complete information about the products and services including the drawbacks and defects, if present. Feeling highly assured of the FB page representative services and having gone through a positive experience with the information or purchase process, the consumer is very likely to engage with the FB page again and thus we propose our sub-hypothesis:

H2a: Assurance in CRM on Facebook leads to a significant increase in positive consumer engagement.

Responsiveness is defined by Parasuraman et el. (1988; p.23) as:“Willingsness to help customers and provide prompt service”. Responsiveness of a customer service representative of a social media page is termed as quickly responsive and the ability and willingness to help customers if there is a problem or a question. While FB page admins deal with page followers, responsiveness is perceived as the ability of the admin to be quick and timely in responding to consumer query and problems, is knowledgeable enough to deal with different kinds of situations, and is quick in fulfilling order requirements and providing prompt service. If consumers have to wait a long while for the purchase information of products from the FB page admin, they might switch to other dealers if there is a deadline to the purchase. A swift response with a solution to a problem of the
consumer will also incorporate feelings of satisfaction and hence an engagement with the FB page again. Thus we derive our next sub-hypothesis:

H2b: Responsiveness in CRM on Facebook leads to a significant increase in positive consumer engagement.

The last dimension of CRM taken into consideration is reliability which is defined as: “Ability to perform the promised service dependably and accurately” (Parasuraman et al., 1988; p. 23). While evaluating customer service on social media sites, reliability of the service is fulfillment of the services by the customer service representatives, as promised which may include having the items in stock which are labeled as available items, delivering what has been ordered, on time delivery, correct billing, sufficient product information and solutions. FB page admins can be perceived to be reliable if they are instantly available to respond to a consumer’s query in the working hours, are quick and prompt in giving product information or solving problems, take correct order information, keep customer record, and arrange to have the items delivered timely and correctly. The consumer will be more confident dealing with the FB page again after having gone through a successful purchase process of correct information received, accurate order noted by the FB page admin, hassle free transaction and timely delivery. The consumers will be satisfied with the services of FB page admin, and are very likely to engage with the FB page again.

H2c: Reliability in CRM on Facebook leads to a significant increase in positive consumer engagement.

CONSUMER ENGAGEMENT

A social media platform is mostly characterized by user-generated content (UGC). The amount of its usage by the consumers is one of the most important factor in measuring its success. UGC can be in the form of comments, discussions and reviews that are provoked as a result of data sharing by the firm on its social media sites and good experiences with the firms customer service. DeLone and McLean (1992) have explained consumer engagement as ‘USE’ of the system by the user in terms of measuring success of information systems. They have defined use as a term that measures the site visit, its navigation, information retrieval from the site and execution of a transaction. Consumer engagement includes frequency of visits to the particular social media site such as a FB page, number of users visiting that page, the frequency of comments, likes, shares, feedbacks and reviews the posts/products of that page are receiving. The construct is measured by asking questions to determine the level of willingness of the respondents to give their comments, feedback, review, like, share the posts of the page. According to Mangold and Faulds (2009), consumers can be creatively stimulated to engage with the social media marketers on social media platforms and consumers who are engaged with a service, idea or a product are more likely to communicate it through word of mouth. EBay, a well-known website is known to have reduced the expenses of attracting new consumers by a similar referral system (Reichheld & Sasser, 1990). Therefore, the following hypothesis is formulated

H3: Consumer engagement on Facebook is a cause of generating word of mouth communication

BRAND ADOVACY (WORD OF MOUTH)

Word of mouth is an act of spreading marketing information among customers, which plays an important role in influencing consumers’ behavior and attitude towards services and products (Katz & Lazarsfeld, 1970). Word of mouth is more popular as it is often delivered by a trustworthy source such as a friend or family member and is not a company generated message to persuade consumers to make a purchase (Lawrence F Feick, 1987). Henning-Thurau, Gwinner, Walsh and Gremler (2004; p. 39) defined word of mouth as: “Any positive or negative statement made by potential, actual, or former customers about a product or company, which is made available to a multitude of people and institutions via the Internet”. Word of mouth on social media occurs when customers search for or provide information or advice about different products through the applications of social media sites. On FB, for example, consumers become associated with brands by liking their FB business page. Consumers do this because they are looking for ways to communicate with brands and other consumers and social media provides a truly interactive platform for word of mouth to spread. Another uniqueness of social media is that it promotes collaboration among friends and family in the form of social network and contacts on social media sites. Consumers existing friends and networks are more credible and trustworthy for them, which is a cause of social networking sites to become an important foundation of product related information and enormously accelerates word of mouth (Chu, 2009). Bearden et al. (1989) discussed the concept of ‘interpersonal influence’, the influence a person takes from the advice and experiences of friends and family. He suggested that word of mouth may become the most important source of information when customers are inclined towards interpersonal influence. The inclination to get information from others having the knowledge and to be guided in terms of products, purchase decisions, stores and brand search is known as informational influence (Robert E Burnkrant, 1975). Users who are inclined towards informational influence are expected to show higher need to get guidance and information from their other knowledgeable contacts while they are searching for a
product to buy or are completing a purchase process. To measure the impact of word of mouth on consumer purchase behavior, we have adopted the dimension ‘opinion giving’ from the study of Chu (2009) that can help us evaluate the impact of word of mouth on consumer purchase decisions. The following research model (See Figure 1) is proposed to evaluate FB business pages:

![Proposed research model](image)

**Figue 1: Proposed research model**

### RESULTS

The study was conducted among the English speaking users of Facebook. A web based survey using Google Docs was created adapted from existing measurement scales from the past literature. Survey included questions built on Likert scale. A total of 221 responses were received, out of which 218 were useable. Of all the respondents 30% were males and 70% were females. 80% of our respondents were in the age group of 21 to 30 years. Scales were subjected to validity and reliability analysis before proceeding into hypotheses testing. Scale testing included convergent validity verifying the uni-dimensionalility of constructs, and also discriminant validity for multi-dimensional concepts, followed by reliability analysis which was confirmed by Cronbach’s Alpha (all values > 0.75). Factor scores were saved to proceed for hypotheses testing by Path Analysis using structural equation modeling (SEM). An optimal model (See Figure 2) was conserved by retaining all the significant paths (See Table1) and removing insignificant paths. The model fit indices obtained in SEM were acceptable (GFI: 0.992; AGFI: 0.958; RMSEA: 0.052; RMR: 0.027; CFI: 0.995; NFI: 0.988; TLI: 0.985; IFI: 0.995).

### Table 1: Regression weights from path analysis

<table>
<thead>
<tr>
<th>Relationship</th>
<th>Estimate</th>
<th>SE</th>
<th>CR</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONEG ← COMPT</td>
<td>.317</td>
<td>.075</td>
<td>4.239</td>
<td>***</td>
</tr>
<tr>
<td>CONEG ← TIME</td>
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<td>.064</td>
<td>-.355</td>
<td>.722</td>
</tr>
<tr>
<td>CONEG ← ASSU</td>
<td>-.063</td>
<td>.078</td>
<td>-.805</td>
<td>.421</td>
</tr>
<tr>
<td>CONEG ← REL</td>
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<td>.075</td>
<td>2.930</td>
<td>.033</td>
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<tr>
<td>OPGVG ← CONEG</td>
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<td>.054</td>
<td>8.145</td>
<td>***</td>
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<tr>
<td>OPGVG ← ASSU</td>
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<td>6.810</td>
<td>***</td>
</tr>
<tr>
<td>OPGVG ← REL</td>
<td>.083</td>
<td>.067</td>
<td>1.231</td>
<td>.218</td>
</tr>
</tbody>
</table>

### Table 2: Optimal model after deletion of insignificant paths

The above Table 1 shows the results of hypotheses testing, therefore hypothesis H1 was partially accepted since H1a is accepted while H1b and H1c were rejected. Similarly, H2 was also partially accepted while H3 was accepted. We found out the most important factor related to information quality is completeness of information while timeliness and relevancy were not found to be significant. A complete information in which a page follower can take a decision provokes him/her to indulge and communicate with respective posts. Furthermore, a reliable service by admin of FB pages makes user engage in the form of comments perhaps because users like pages to respond to their comments in person. Pages with reliable service where admins are keen to resolve users’ problems in a timely manner are expected to get higher user engagement. In addition, those pages are more likely to get user engagement which are successful in developing trust and assurance with the customers in terms of their problem solving and service etc. Known brands generally are considered more trustworthy, therefore, it makes sense they have more user engagement on their social media pages. If smaller businesses want to have a similar engagement, they must develop a relationship of trust with their followers. This could also involve not using their personal details for other purposes such as selling to marketers or spamming them. We found out that as users engage more with a page, they tend to give opinion about those pages. This might be because of two reasons (i) because they would love to talk about their interactions with the page and give a positive impression to other about the page, (ii) as users engage with the page,
according to Facebook newsfeed mechanism, it is shown to their connection and hence act as a social word of mouth which is definitely as positive marketing for a brand since one the primary purpose of brands to be on social media is reach a greater number of audience.

LIMITATIONS

The research has its limitations in from both theoretical and methodological perspectives. Firstly, the involvement of people from different cultures as FB users changes its perceptions and hence generalizability is not possible. Self reported data is another limitation though Herman’s one factor test is used to check non existence of common method bias. A longitudinal study in the can better present the involvement of FB users with business’ pages.

REFERENCES