Marketing Sports Products on Facebook: The Effect of Social Influence

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\textbf{ABSTRACT}

There has been an increase in the use of social network sites as a marketing medium for commercial products and services. The aim of this paper is to examine the effectiveness of social network sites in influencing both consumer perception of quality of sports products and consumer intention to purchase sports products. A Facebook page of a fictitious brand of sports shoes was set up. The control group (n=57) was exposed to a page with only minimal information about sports shoes while the experimental group (n=59) was presented with additional information on the wall page consisting of ‘likes’ votes and positive comments about sports shoes. The findings suggest that online social influence not only can affect consumer perception of quality of a sports brand but also consumer buying intention. However, the effect that social influence has on purchase intention is limited to consumers with a low level of sports involvement and participation.

\textbf{KEYWORDS}

social influence, purchase intention, perception of quality, social network sites, sports products

\textbf{Introduction}

Social networking sites have been growing in popularity in recent years. Boyd and Ellison (2008) define social network sites as web-based services that enable individuals to construct a public profile within a bounded system, articulate a list of other users with whom they share a connection, and view and traverse their list of connections. While social network sites differ from one another, all of them allow users to articulate their social networks and communicate online with other users within their networks.

The popularity of social network sites is most clearly observed among young adults. Most young adults have at least one social network account, with many of them logging on to their social network site at least once a day (Gangadharbatla, 2008; Raacke & Bonds-Raacke, 2008). They access social network sites to maintain relationships with their existing network of friends by exchanging information with each other (Bonds-Raacke & Raacke, 2010; Boyd & Ellison, 2008; Gangadharbatla, 2008). For young adults, where a sense of belonging and demonstration of knowledge are considered important, the social media also allow them to express their identity, build their social network and convey their views to their peers (O'Reilly, Berger, Hernandez, Parent, & Seguin, 2012).

Recent technical advances offering new functions such as offline messages, direct chatting, virtual gifts, online games and posting of pictures have continued to drive interest among young adults on social network sites. These advances allow young adults a wider range of tools to exchange information, express
themselves, and demonstrate their domain knowledge. As such, many companies see social network sites as an exciting new medium, as they allow easy access to this market segment.

While many studies concerning social network sites exist, they generally focus on social issues. These include studies on the management of identities on social network sites, the maintenance of relationships, and the maintenance of privacy among users. Comparatively, there are fewer studies on the managerial and marketing aspects of social network sites (Boyd & Ellison, 2008; Cha, 2009; Kelly, Kerr, & Drennan, 2010).

As social network sites encourage the exchange of information, it follows that through such social network sites, members can influence each other on consumption choices. This is similar to social influence in offline contexts. The aim of this study is to examine how social influence on social network sites can affect both the perception of quality of sports products and the intention to purchase sports products.

**Literature review**

Social network sites can be attractive channels for marketing activities, as they are organized around people and their relationships. They allow consumers to engage in some form of social interaction via comments and sharing. Through such communication, consumers voluntarily display their preference and potentially influence brand awareness and brand image. Hence, members on social network sites can create and disseminate brand-related information to their social networks composed of friends and other acquaintances (Ridings, Gefen, & Arinze, 2002).

On social network sites, consumers are given the power to filter, choose, and exchange information with one another or with the company (Deighton & Kornfeld, 2009; Dumitrescu, Stanciu, Tichindelean, & Vinerean, 2011). As a result of this participatory media, the audience is not simply a receiver of media content but also a simultaneous creator of content. Consumers have as much power as the advertiser in determining the marketing message and the cultural meaning of the brand (Deighton & Kornfeld, 2009; Kozinets, De Valck, Wojnicki, & Wilner, 2010).

This source of social influence can affect consumer purchasing decisions. Individuals are susceptible to social influence because humans learn to rely on others’ perceptions and judgments as sources of evidence (Deutsch & Gerard, 1955). Bearden, Netemeyer, and Teel (1989) suggest that susceptibility to social influence arises from the tendency to learn about products through seeking information from others, conforming to others’ expectations to receive rewards or avoid punishments, and identifying one’s image with others through the acquisition of certain products or brands.

Social influences can be categorized into two types: informational social influence and normative social influence. Informational influence occurs when a person accepts information from others as evidence of reality. This influence only works when the individual regards the behavior of reference group members as potentially useful information. When a consumer knows little about a certain product, the information from the reference group is perceived to be credible and thus more likely to be accepted. Normative influence is the tendency to conform to the positive expectations of others. It is defined as the belief as to whether significant others approve of the behavior and the extent to which the individual is motivated to comply with them (Deutsch & Gerard, 1955).

Past studies have shown that social influence has an effect on consumer behavior. Social influence plays a role in purchase decisions, with informational influence having a stronger impact than normative influence. Other studies have found that being exposed to information from other participants prior to decision making affected participants’ evaluation of the quality of products, such as coffee, with positive information leading to more favorable behavior (Burnkrant & Cousineau, 1975; Pincus & Waters, 1977).

Consumers are more likely to trust the opinions of people in their immediate social network, including friends and family members. Similarly, as members of social network sites are likely to know each other, there is a high level of trust between members on a social network site (Ridings, et al., 2002). Hence,
positive information on an advertised brand on a social network site between such members is likely to be translated into positive word-of-mouth advertisement. Conversely, negative information on an advertised brand on a social network site can be translated into negative word-of-mouth advertisement. Due to negativity bias, a negative review garners more attention than a positive review (Sen & Lerman, 2007).

However, many "Friends" on social network sites are outside this immediate social network. “Friends” are added because they share a mutual friend or common interest, rather than because they know each other. In such instances, a source’s intention in providing information is a significant determinant of the receiver’s perception towards the trustworthiness of the information. Word-of-mouth is perceived to be more credible, as the motivation for sharing the information lies in wanting to help fellow consumers in making a choice (Kozinets, et al., 2010). Hence, comments posted by social network sites members are likely to be perceived as reliable because the information providers are consumers who are merely voicing their opinions rather than marketing the product. This stands in contrast advertisements that carry the intention of encouraging people to buy the product. As such, even opinions from such "Friends" can have a larger effect on an individuals' buying behavior when compared to advertisements. This underlines the extent of the effect of social network sites in influencing consumption choice.

The above review suggests that social influence can affect the perception of the quality of a product. There are, however, few studies on the marketing of sports-related products and services on social network sites. A recent study examined the use of social network sites as a brand management tool to cultivate long-term relationships with members (Wallace, Wilson, & Miloch, 2011). Without evidence to the contrary, it is hypothesized that social influence can also affect the perception of the quality of a sports product.

H1: Social influence on social network sites has an effect on the perception of quality of a sports product.

The second hypothesis extends from the first hypothesis and examines whether social influence has an effect on purchase intention. This is as follows:

H2: Social influence on social network sites has an effect on purchase intention towards the sports product.

Consumers who lead a sedentary lifestyle and are less involved in sports are likely to be less knowledgeable about sports products. Hence, they may perceive information provided by reference groups as useful and credible. However, consumers who are involved and participate regularly in sports are more likely to be knowledgeable about sport products and thus rely less on the opinions of others. This is especially true when consumers already have a preferred sports brand. They are more likely to be resistant towards brand-switching behavior due to the perceived importance of the quality of the brand in their sports performance (Leng, Ngiam, & Kuo, 2008).

Involvement and participation in sports are considered as different variables in this study. Adapting from the definition of domain involvement by Gwinner and Swanson (2003), sport involvement means the love of and bond with sports. While sport involvement is considered the cognitive affiliation towards sports, sport participation measures the actual behavior in sports. Different instruments will need to be used to measure these two variables. The hypothesis is as follows:

H3: Social influence on social network sites on the perception of quality and purchase intention is affected by the level of sport involvement and participation.

Methodology

Studies examining the effect of social influence have generally examined the differences between a control and an experimental group. The control group is not exposed to any social influence while the experimental group is subjected to social influence. For this study, a similar method will be used to examine the effect of social influence on social network sites.
Facebook was selected as the medium for the study, as it is the most popular social network site among teenagers and young adults. Facebook also allows commercial organisations to set up pages or fan groups. As such commercially based pages are already common on Facebook, the selection of this social network site is expected to be realistic to the respondents.

A Facebook page for a fictitious sports brand was set up. The control group was only exposed to a wall page consisting of minimal information provided by the fictitious commercial organization on the product. This included the year that the company was founded, a description of the company’s scope of business, and its mission statement.

The experimental group was exposed to the same wall page as the control group: minimal information provided by the fictitious commercial company. To test for social influence, the experimental group was additionally shown positive comments for the fictitious sports brand from fictitious members of the social network site. These included comments like “Design looks good and it seems like everyone likes it” and “I’ve bought it and it fits good and looks nice. Good pair of shoes!”. These comments were similar to comments found in real Facebook accounts. “Like” votes were also added to the comments for realism.

Respondents from both groups were then asked to complete a survey consisting of a total of 12 questions. To test for perception of the quality of a product, a single 15-point Likert scale item ranging from extremely low quality to extremely high quality was used. This item was adapted from earlier studies in examining the effect of social influence in offline contexts (Burnkrant & Cousineau, 1975; Pincus & Waters, 1977).

A participant’s buying intention was tested by using a 4-item instrument with a 7-point Likert scale adapted from earlier studies (Coyle & Thorson, 2001; Prendergast, Ko, & Yuen, 2010). The scale was found to be reliable in earlier studies, where Cronbach’s alpha coefficient was reported at 0.81 (Prendergast, et al., 2010) and 0.83 (Coyle & Thorson, 2001). For this study, the scale was also found to be reliable with a Cronbach’s alpha coefficient of 0.86. The items in the 4-item instrument are as follows.

a) It is very likely that I will buy the product,
b) I will purchase the product the next time I need a product,
c) I will definitely try the product,
d) Suppose that a friend called you last night to get your advice in his/her search for a product. Would you have recommended for him/her to buy the product?

Sport involvement was measured using a 3-item, 7-point Likert scale adapted from the instrument used by Gwinner and Swanson (2003) to assess domain involvement. The scale was found to be reliable in the earlier study with Cronbach’s alpha coefficient reported at 0.87 (Gwinner & Swanson, 2003). For this study, the scale was also found to be reliable with a Cronbach’s alpha coefficient of 0.87. The items in the 3-item instrument are as follows.

a) Sports are very important to me,
b) I think about sports all the time,
c) I watch sporting events whenever I can.

To calculate the level of sports participation, respondents were asked their frequency of exercise per week and the duration for each exercise period. The sports participation level is calculated as the product of the two responses. The last two questions were the demographic variables age and gender.

A convenient sample of 168 respondents was drawn from the researchers’ network of friends on Facebook. The respondents were randomly separated into either the experimental or control group. The survey was distributed via email; 117 respondents returned the survey. One survey was incomplete and was removed from analysis. The effective response rate was 69%.

The respondents were aged between 19 to 28 years with a mean age of 22.6 years. The experimental group had 59 respondents of which 30 respondents were males. The control group had 57 participants of which 29 respondents were male.
Two-tail independent sample t-tests were conducted to compare the means between the control and experimental groups for both the perception of the quality and buying intention for the fictitious sports brand. Results of sport involvement and participation were split into two groups, respectively, by their scale midpoint and mean score, such that the t-test could be used to determine the effect of mediating factors on impact of social influence on buying behavior. To establish the magnitude of the differences between the groups, eta squared was used to calculate the effect size on the variables (Cohen, 1988; Kotrlik & Williams, 2003; Pallant, 2010).

Results

To test for hypothesis H1, an independent-samples t-test was conducted to compare the perception towards quality of product scores between the control and experimental groups. The experimental group (M = 10.05, SD = 2.01) scored higher in their perception towards quality of product compared to the control group (M = 7.70, SD = 1.43), t(105) = -7.27, p<0.001. The eta squared statistic (0.32) indicated a large effect size (Cohen, 1988). Hypothesis H1 was supported: social influence on social network sites has a significant effect on perception towards quality of sport product, with 32% of the variance explained by the exposure to social influence on social network sites.

Table 1. Perception towards quality of product

<table>
<thead>
<tr>
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<th>Mean</th>
<th>SD</th>
<th>Maximum</th>
<th>Minimum</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Controla</td>
<td>7.70</td>
<td>1.43</td>
<td>11</td>
<td>3</td>
<td>-7.27*</td>
</tr>
<tr>
<td>Experimentalb</td>
<td>10.05</td>
<td>2.01</td>
<td>15</td>
<td>7</td>
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</table>

To test for Hypothesis H2, an independent-samples t-test was conducted to compare the buying intention scores for the control and experimental groups. The experimental group (M = 3.22, SD = 0.88) scored significantly higher in their buying intention compared to control group (M = 2.80, SD = 0.97), t(112) = -2.40, p<0.05. However, the eta squared statistic (0.05) indicated a small effect size (Cohen, 1988). While the findings supported H2 – that social influence on social network sites has a significant effect on buying intention – only 5% of the variance in buying intention is explained by the exposure to the social influence on social network sites.

Table 2. Buying Intention

<table>
<thead>
<tr>
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<th>Mean</th>
<th>SD</th>
<th>Maximum</th>
<th>Minimum</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Controla</td>
<td>2.80</td>
<td>0.97</td>
<td>5</td>
<td>1</td>
<td>-2.40*</td>
</tr>
<tr>
<td>Experimentalb</td>
<td>3.22</td>
<td>0.88</td>
<td>6.75</td>
<td>1.75</td>
<td></td>
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</tbody>
</table>

A Pearson correlation test of the results showed that there is a medium level of correlation (r = 0.38) between perception and buying intention. The coefficient of determination R2 is 0.14 which indicates that 14% of the variation in buying intention is explained by the perception of the quality of the product. This suggests that besides the quality of the product, there are other factors in determining the purchase intention for sports products.

In order to examine whether sport involvement and sports participation rate affects the extent of social influence on the perception of quality and purchase intention, respondents in both experimental and control groups were further categorized into groups with differing levels of sport involvement and participation. Statistical tests were then repeated to examine the differences between the experimental and control groups in the different categories.
Respondents in general had a low level of sport involvement (M = 3.85, SD = 1.32). In total, 59 respondents obtained an average sport involvement score of less than 4; these were categorized into the low sport involvement group. The remaining 57 respondents were categorized into the high sport involvement group.

In the low sport involvement group, the experimental group (M = 9.74, SD = 1.65) scored significantly higher in their perception towards quality of product compared to the control group (M = 7.54, SD = 1.26), t(56) = -5.80, p<0.001. The eta squared statistic (0.37) indicated a large effect size (Cohen, 1988). The experimental group (M = 3.21, SD = 0.75) also scored significantly higher in their buying intention compared to the control group (M = 2.84, SD = 0.89), t(53) = -1.72, p<0.10. The eta squared statistic (0.05), however, indicated a small effect size (Cohen, 1988).

For the high sport involvement group, the experimental group (M = 10.39, SD = 2.33) scored significantly higher in their perception towards quality of product compared to control group (M = 7.86, SD = 1.58), t(47) = -4.79, p<0.001. The eta squared statistic (0.40) indicated a large effect size (Cohen, 1988). The experimental group (M = 3.22, SD = 1.01) also scored higher in their buying intention compared to the control group (M = 2.77, SD = 1.07). This difference, however, was not significant, t(55) = -1.66, p>0.10.

Table 3. Effect of Sport Involvement on online social influence

<table>
<thead>
<tr>
<th></th>
<th>Control</th>
<th>Experimental</th>
<th>t-value</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
</tr>
<tr>
<td>Perception</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low Sports Involvement</td>
<td>7.54</td>
<td>1.26</td>
<td>9.74</td>
</tr>
<tr>
<td>High Sports Involvement</td>
<td>7.86</td>
<td>1.58</td>
<td>10.39</td>
</tr>
<tr>
<td>Buying Intention</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low Sports Involvement</td>
<td>2.84</td>
<td>0.89</td>
<td>3.21</td>
</tr>
<tr>
<td>High Sports Involvement</td>
<td>2.77</td>
<td>1.07</td>
<td>3.22</td>
</tr>
</tbody>
</table>


For both groups with low and high levels of sports involvement, the differences in the perception of quality of the product between control and experimental groups were significant. This suggests that online social influence has an effect on the perception of quality regardless of the sport involvement level. However, online social influence has only a small effect on the buying intentions of respondents who are low in sports involvement and no effect on respondents who are high in sports involvement. This suggests partial support for H3. Consumers who are high in sport involvement are resistant to the effect of social influence on purchase intention.

On average, respondents participated in sport for approximately 90 minutes in a week. Respondents were categorized into the high or low sport participation group depending on whether their sport participation scores were higher or lower than the average sport participation rate. A total of 52 respondents participated in sports for a shorter duration than the average sport participation rate and were categorized into the low sport participation group. The remaining 64 respondents were categorized into the high sport participation group.

In the low sport participation group, the experimental group (M = 10.04, SD = 1.65) scored significantly higher in their perception towards quality of product compared to control group (M = 7.68, SD = 1.31), t(39) = -5.01, p<0.001. The eta squared statistic (0.46) indicated a large effect size (Cohen, 1988). The experimental group (M = 3.34, SD = 0.85) also scored significantly higher in their buying intention.
compared to the control group \((M = 2.71, SD = 1.00)\), \(t(50) = -2.50, p<0.05\). The eta squared statistic \((0.05)\), however, indicated a moderate effect size (Cohen, 1988).

For the group of respondents with high sport participation scores, the experimental group \((M = 10.06, SD = 2.07)\) scored significantly higher in their perception towards quality of product compared to control group \((M = 7.72, SD = 1.56)\), \(t(61) = -5.14, p<0.001\). The eta squared statistic \((0.30)\) indicated a large effect size (Cohen, 1988). The experimental group \((M = 3.13, SD = 0.90)\) also scored higher in their buying intention compared to the control group \((M = 2.90, SD = 0.96)\). However, the difference was not significant.

Table 4. Effect of Sports Participation on online social influence

<table>
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<tr>
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<th>Experimental</th>
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<th>(t)-value</th>
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<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
<td>SD</td>
<td></td>
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<tr>
<td><strong>Perception</strong></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Low Sports</td>
<td>7.68(^a)</td>
<td>1.31</td>
<td>10.04(^b)</td>
<td>1.65</td>
<td>-5.01*</td>
</tr>
<tr>
<td>Participation</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High Sports</td>
<td>7.72(^c)</td>
<td>1.56</td>
<td>10.06(^d)</td>
<td>2.07</td>
<td>-5.14*</td>
</tr>
<tr>
<td>Participation</td>
<td></td>
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</tr>
<tr>
<td><strong>Buying</strong></td>
<td></td>
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</tr>
<tr>
<td>Intention</td>
<td>2.71(^a)</td>
<td>1.00</td>
<td>3.34(^b)</td>
<td>0.85</td>
<td>-2.50**</td>
</tr>
<tr>
<td>Low Sports</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Participation</td>
<td>2.90(^c)</td>
<td>0.96</td>
<td>3.13(^d)</td>
<td>0.90</td>
<td>-0.99</td>
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<tr>
<td>High Sports</td>
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<td>Participation</td>
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Note. \(^{a}n= 28.\) \(^{b}n= 24.\) \(^{c}n= 29.\) \(^{d}n= 35.\)

\(^{*}p<.001, **p<.05\)

For both groups of low and high levels of sports participation, the differences between control and experimental groups were significant, suggesting that online social influence has an effect on the perception of quality of sports product regardless of the level of sports participation. However, online social influence has only a moderate effect on the buying intentions of respondents who are low in sports participation and no effect on respondents who are high in sports participation.

This concurs with the above findings that H3 is partially supported. Online social influence affects the perception of quality regardless of the level of sports participation. However, for respondents who are high in sports participation, online social influence has no effect on purchase intention.

**Discussion and Conclusion**

Results showed that online social influence on social network sites has a significant impact on both perception of quality and buying intention. The experimental group that was exposed to positive comments from fellow members in the social network site scored higher in the perception of the quality and purchase intention of the fictitious sports brand. These findings support hypotheses H1 and H2.

On further examination, it is found that online social influence has a large effect on the perception of the quality but only a small effect on purchase intention. This suggests that while online social influence can affect the perception of the quality of a product, there are other factors that affect the purchase intention of consumers and thus limit the effect of online social influence.

Further analysis showed that social influence affects the perception of the quality of the product for all levels of sports involvement and participation. However, social influence has an effect on the purchase intention on only consumers with low levels of sport involvement or participation. Consumers who are high in sports involvement and participation are likely to be more knowledgeable about sports products. As such, they are less likely to rely on the opinions of others in influencing their purchase intention.
However, there are some limitations to this study. Firstly, the sample is limited to a convenience sample of young adults. Although the majority of members in social network sites are young adults, members belonging to different demographic groups are growing in number on social network sites. Individuals with different demographics may behave differently, and this warrants future study involving a more representative sample (Leng, 2013). Secondly, this study only examined the effect of positive social influence and its effect on the perception of quality and buying intention. Effect of negative comments by fellow social network sites users is not examined in this study and could be an area for future work. Thirdly, as this study was conducted using a fictitious sports product, it is unclear if the findings can be generalized to other non-sport product categories. Future studies on other product types need to be conducted before the findings can be generalized. Lastly, as the product used is a new product by a fictitious company, the study did not examine if social influence can change existing attitudes of existing brands or products. As consumers may have formed attitudes towards existing brands, the effect of online social influence may remain limited. This remains to be tested in future studies.

Findings from this study suggest that social network sites can be used by sports commercial organisations in influencing the perception of the quality of a product. To a lesser extent, social network sites can also influence the purchase intention of consumers, especially when consumers have little knowledge or experience with the sports product. This suggests that marketing on social network sites are more effective in targeting consumers who are new to sports or to the specific sports category.

Sports marketers should also be aware that marketing on social network sites is different from traditional marketing, as consumers create content rather than being passive receivers of information. As such, organisations must also ensure that their product or brand is able to generate positive comments from consumers so as to maximize the effectiveness of using social network sites in influencing consumers' purchase behavior.

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