

A Summative & Directed Content Analysis using Two-Step Cluster Analysis: Branding and Fan Interaction Facebook Strategies in the National Football League

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Facebook interaction between sport fans and sport brands have increased, and is becoming one of the main online communication outlets utilized. As with any communication tool, the types of use, management techniques, and consumer behavior are appropriate to study to determine patterns in coverage and user preferences. Specifically, this investigation will examine brand attributes portrayed via Facebook content, and provide sound recommendations for sport brand managers when utilizing social media to enhance brand management as a component of an integrated marketing plan.

The promotion and evaluation of various types of motives to consume sport reveal many benefits for sport marketers (Ross, Russell, & Bang, 2008). Although product related attributes offer specific consumption benefits, Bauer and colleagues (2008) established that non-product related attributes (i.e. logo, stadium, tradition) elicited stronger brand specific attitudes and loyalty outcomes. Satisfaction of these highly identified customers builds retention and maximizes the long-term revenue generation opportunities through long-term relationship cultivation (Madrigal, 1995; McDaniel & Moore, 2005). Furthermore, the unique branded experience should provide desirable consumption experiences and facilitate a favorable group identity (Wann, Grieve, Zapalac, & Pease, 2008). Sport organizations elicit more control over the product related than non-product related attributes as they can strategically hire or fire athletes to cultivate the desirable brand image (Ross et al., 2008). The performances of these individuals are unpredictable as success in sports is largely determined through on-field competition and the win-loss record of the team. Proper management of these product related attributes determine the long-term associations offered by the brand. Ultimately, brand managers should identify product-related attributes that influence consumer behavior and determine ways to leverage these components (Kapferer, 1992). The tangible and intangible features provide many opportunities for sport consumption through media, TV, video gaming and the Internet (Oates, 2009). Sports organizations have an ability to design unique promotions targeting the specific product or non-product related attributes to further brand image (Ross et al., 2008). These opportunities increase brand awareness and strengthen brand associations through repeated and enjoyable experiences (Kim & Ross, 2006).

The purpose of this study was to examine content posted by NFL teams during the 2010-2011 season using a summative and directed content analysis design. The study consisted of 2148 content items from a constructed week from each season time period (i.e. preseason, regular season, and post season). The text only content item material was copied and pasted into a data-mining file for the SPSS Modeler 14.1. SPSS Modeler 14.1 extracted 5000 concepts using the Text Analytic feature. Prior to researcher directed data mining, SPSS Modeler developed categories using linguistics to group similar concepts. These SPSS Modeler generated categories were downloaded into an excel file and reviewed for theoretical and practical analysis. Then, data mining procedures were conducted.

The brand attributes cluster model was examined using product related and non-product related brand attributes categories (Bauer et al., 2008; Gladden & Funk, 2002; Kaynak et al., 2008). The Pearson product-moment coefficients comparing the product related and non-product related brand attribute categories were significant ($p < .05$) but displayed very little negative collinearity ($r = -.044$, $n = 2148$). The brand attribute measures were retained based on their theoretical importance. Using SPSS version 19, a two-step cluster analysis was used to determine the appropriate number of clusters to examine. As the numbers of clusters are exploratory by nature, Bayesian Information Criterion (BIC) was the algorithm method used to determine the number of clusters to use rather than the a priori method. The silhouette coefficient was examined with a 25% noise reduction and without a noise reduction to examine the validity. A four-cluster model and a two-cluster model with noise reduction displayed a silhouette coefficient equal to one. The four-cluster model was determined to be descriptive and practically applicable. Thus, the four-cluster model was used for analysis. Next, the data distributions across clusters were evaluated to examine meaningful practical and theoretical interpretation of the data.

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Cluster one represents a group of data that cannot be categorized into either product or non-product brand attribute categories (n = 168; 7.8%). Cluster two represents the largest group of data with product related attributes only (n = 1087; 50.5%). Cluster three represents the smallest group of data with non-product related attributes only (n = 148; 6.9%). Cluster four represents a group of data with both product and non-product related attributes (n = 745; 34.7%).

The clusters were further examined by the season time period and the brand attribute clusters. A chi-square test of independence indicated significant association ($\chi^2(6) = 28.075, p < .01$). Cramer's V was significant ($p < .01$) and the value was .081 indicating a weak association between the clusters and time of season. When the clusters are examined by time of season, a similarity of use between the clusters indicated that the type and amount of brand attributes are consistent across the year. The team content level was used to examine the brand attribute clusters. A chi-square test of independence indicated significant association $\chi^2(6) = 43.787, p < .01$, with an expected value of 22.94. Cramer's V was significant ($p < .01$) and the value was .101 indicating a weak association between the clusters and team content level. These results indicated that a similarity exists between the amount of coverage a team uploads and the brand attributes clusters.

The analysis of brand attributes revealed consistently larger product-related attribute coverage. The results indicate that there was a disproportional coverage of brand attributes, and that the coverage was consistent across all seasons. These results reveal that product related brand attributes maybe more easily as well as frequently utilized using the Facebook content. The frequency of brand attribute coverage demonstrated that teams are using Facebook to further the brand image byway of product-related content items. These findings support that Facebook users may potentially be introduced to these items on a more frequent basis, thus reinforcing the experience and the increase subsequent consumption of product-related attributes (Bowden, 2009).

Both studies indicated that the product related attributes were utilized more frequently during each time of season than non-product related attributes. The summative content analysis indicated that the four-cluster brand attribute model was associated with the time of season. Although the post season resulted in more product related content items than non-product, the results indicate that the post season received proportionally less product related coverage and more non-product related attributes when compared to the preseason or regular season. The post season consisted of twice as many product-related content items than non-product. Product related attributes were most frequently utilized during each time of season. The type of brand attribute coverage indicated by both methodologies provide strong support that product related attributes were most frequently utilized on Facebook content items. NFL team's strategically portrayed and emphasized the core game experience through Facebook content items. Specifically, the perceived benefits associated with a sport brand change in proportion to the consumption experience (Kaynak et al., 2008). These results suggested NFL teams utilized brand attribution factors differently over the seasons.

NFL teams may benefit from proportional brand attribute coverage or an increase in non-product related content items. Furthermore, product related attribute items tend to cultivate a short-term consumer relationship with brand performance, whereas, non-product related attributes focuses on long-term brand loyalty (Kaynak et al., 2008). Gladden & Funk (2002) summarized that non-product related attributes were more effective at generating brand associations with familiar or past consumers, because of the established familiarity or experience with brand. Similarly, brand awareness is generally accepted as a precursor to the effective formation of brand associations (Keller, 1993; Ross et al., 2008). Keller (1998) concluded that consumers would engage with a brand for a longer duration in an environment that offered tangible or intangible consumption benefits. These previous studies provide strong support for NFL Teams to provide proportional or additional coverage to non-product related brand attributes in future seasons.

In addition, the results from the directed content analysis indicated that fan interaction was higher in product related content items. The frequent coverage of product related content facilitated and promoted fan interaction, essentially relying on short-term relationship management techniques. In the future, NFL teams should strategically cultivate Facebook fan interaction using non-product brand attributes. The increased non-product coverage would theoretically cultivate long-term relationship management and increase brand identity (Bauer et al., 2008).