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Social media metrics and sentiment analysis to evaluate the effectiveness of social media posts

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Abstract

The present paper presents the results of an analysis of indicators underlying successful self-marketing techniques on social media. The participants included YouTube gamers. We focus on the content of their communication on Facebook to identify significant differences in terms of their user-generated Facebook metrics and commentary sentiments. Methodologically, ANOVA and sentiment analysis were applied. ANOVA of the classified post categories revealed that re-posted YouTube videos gained significantly fewer likes, comments, and shares from the audience. On the other hand, photos tended to show significantly more follower-generated actions compared to other post types in the sample. Sentiment analysis revealed underlying follower negativity when user-generated activity tended to be relatively low, offering valuable complementary results to the mere analysis of other post indicators, such as the number of likes, comments, and shares. The results indicated the necessity to utilize natural language processing techniques to optimize brand communication on social media and highlighted the importance of considering the opinion of the masses for better understanding of consumer feedback.

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1. Introduction

The emergence of the Web 2.0 era and the birth of social networks opened a unique opportunity for individuals' self-representation and self-expression¹. YouTube became the market leader in video content sharing, and it did so by providing content creators with tools and self-marketing techniques² that allowed them to successfully gain monetary profits from viewing their content as well as possible worldwide recognition^{3,4,5}.

The birth of YouTube gaming and the increasing popularity of gaming channel owners have encouraged scientific researchers to conduct in-depth studies on the characteristics of self-marketing communication and its effectiveness, that is, on the content forms that grab user attention and those that lead to lack of follower activity. Thus, the present quantitative exploratory study introduces an approach to measure communication effectiveness of YouTube gamers by analyzing the content posted on their Facebook brand pages.

The goal of this paper is to identify the relationship of these content types with user-generated metrics on Facebook, such as the number of likes, comments, and shares, complementing these results with sentiment analysis of commentaries appearing below the sampled posts.

The results of this paper provide valuable information that may be utilized by self-marketed individuals or companies to better optimize brand communication on social media. Furthermore, by using this approach, independent game developers and actors of the ever-growing gaming industry can gain valuable insights about their customers' feedback for the enhancement of their future products.

2. Literature Review

The discussion and research on self-marketing as a form of advertising that applies traditional branding techniques to human beings^{1, 5}, began at the end of the 20th century⁶. Researchers are still discussing the terminology of this phenomenon. Terms such as "personal branding," "personal marketing," and "self-marketing" have been used interchangeably². Individuals as actors of this phenomenon are referred to as "human brands," "branded individuals," and "branded personas"^{2,7}. The extant literature in this domain focusses on the process of personal branding^{2,4,8,5} and aims to determine the underlying factors of success by branded persons.

Studies discussing the importance and role of sociocultural background in fruitful personal branding^{2,8,5} considered Bourdieu's field-theory⁹ and theses about the forms of capital¹⁰. YouTube functions as an organized field where YouTube gamers are actors (referred to as agents by Bourdieu⁹, each of whom hold cultural capital in the form of their educational qualifications and social capital defined by their acquaintances and social networks)⁹. Each channel owner has a unique habitus⁹ as well, which consists of attitudes and behavioral characteristics that are crucial to their self-representation, for example, in their YouTube videos.

YouTube gamers have been gaining in popularity^{1,5} in the last decade, and studies have pointed out numerous benefits of social media data analysis¹¹, indicating that the analysis of user-generated text commentary, or the online opinion-mining of the masses, has become one of the most pressing issues^{12, 13}.

The prediction of box office revenues for future movies¹⁴ and election outcomes¹⁵ became widely used applications of sentiment analysis. However, due to the relative infancy of this research domain, the determination of the most suitable methodology is still a subject of discussion among scientists.

We support the recently emerging studies that have argued for the complementary usage of sentiment analysis of social media¹³ along with its "traditional" retrievable metrics (i.e., number of likes, comments, shares of posted contents) to achieve a deeper understanding of audience reactions to communication forms of self-marketing on social media.

3. Method

The sampling and data collection methods as well as a classification of the retrieved posts and data analyses are presented in the following subsections.

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