



Teaching Analysis of Digital Marketing Mode Under the Influence of Big Data

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Abstract. With the rapid development of the global Internet, online shopping and online shopping has become a fashion. At the same time, network Huina is a new model suitable for the era of big data in the new era. Next, this paper first analyzes the basic concepts of big data and digital marketing, and then analyzes the methods and Strategies of digital marketing mode in the era of big data for reference.

Keywords: Big data · Network marketing · Ant colony algorithm

1 Introduction

With the advent of the era of big data, all enterprises begin to implement the snow sale mode on the network, and regard the network snow sales mode as the mode of enterprise sales development. The establishment of the network snow sales mode under the data is the precondition for some enterprises to carry out the network sales business [1]. The network is updated every moment, which also makes the network snow sales mode in enterprises constantly change and update. Because some decision makers don't pay enough attention to network marketing, they can't choose their own marketing strategy. For example, China's Alibaba bought part of the shares of sina Weibo, which to a large extent shows a very important battle Luo plan of Alibaba's sales. Therefore, a comprehensive understanding of the network marketing model is now an important topic for many enterprises.

2 Big Data and Network Marketing Mode

2.1 Big Data

Big data literally means a large amount of data. Its real meaning is to use modern advanced computer technology to deal with a large amount of data which is difficult to be processed by human or conventional processing technology. It is very difficult to make effective statistics of these resources for the traditional technology processing, and thus become useless resources. Due to the accelerating process of modernization, a large number of data are produced every day. With the passage of time, the data will be more

and more large. According to statistics, there are 40zb data generated by the Internet every day.

In the modern network marketing, many enterprises in the process of marketing do not lack of data resources, the most important problem is that too much data, many times difficult to deal with. Enterprises in the economic business, need to carry out statistics on all aspects, but also on the customer, market data centralized statistical analysis, these data statistics together formed a large number of data, how the enterprise carries on the comprehensive and effective management and utilization of such large data, for many enterprises, there is no doubt that it is a very big problem and challenge. In the era of Internet, network marketing needs a lot of data, and makes use of big data to make a choice for internal marketing. Therefore, computer big data processing technology is very important.

2.2 Analysis of Big Data Density Peak Clustering Algorithm

In the density peak clustering algorithm, each point has two attributes, one is the density attribute, the other is the exclusion attribute. The higher the density, the more clustered the data at this point, and the possible density center of the data. The larger the exclusive group value is, the more likely it is to be a new cluster. For the points distributed in the center of the database, clusters and clusters are mostly distinguished by low density [2]. In short, the larger the exclusion value, the greater the probability of forming new data clustering. In the data set to be clustered by big data processing, the calculation formula of local density ρ_i is as follows:

$$\rho_i = \sum x(d_j \cdot d_c) \quad (1)$$

$$x(x) = \begin{cases} 1 \\ 0 \end{cases} (x_1 + x_2) \quad (2)$$

3 Research on Network Marketing Mode Under Big Data

With the development of science and technology, computer technology has been applied in the network marketing mode, which can summarize a large number of useful information and make it a big data network marketing model. In the big data network marketing mode in the Internet era, we need to constantly explore new network marketing mode if we want the marketing to run normally.

3.1 Product Association Mining Marketing

Commodity association mining marketing has great promotion value. There are many successful examples of this kind of marketing in network marketing, such as the classic examples at home and abroad, beer and diapers. The sellers sell the goods to the supermarkets, and the supermarket operators put the beer and diapers together. This practice can make the sales of the two commodities exceed the expectation to a great extent. Many people don't think that there is a great correlation between the two commodities, but a careful study shows that there is a great correlation. Because most of the American women are housewives, they have no time to go out to buy things. They have to wait for their lovers to pick them up after work. Their children use a lot of diapers every day, Many people buy beer when they buy diapers. In this case, diapers and beer form a certain relationship. Therefore, in this marketing model, we need to use big data as the mining basis to discover the association between individual data. No matter how much single data, no matter how high the value is, there is no correlation between them. Therefore, it is necessary to analyze the original data and establish the relationship between the data.

3.2 Social Network Marketing of Big Data

The data generated by the network marketing mode of social data is relatively large, such as network friends, QQ friends and twitter, etc. these information are used for social network marketing. For example, Mengniu yogurt is combined with the network resources of renren.com, plus the star effect, and "sour milk music dream" is taken as the theme in various places and colleges, At the same time, the young people in Colleges and universities are striving for their dreams and vigorously promoting Mengniu, so that people can drink Mengniu milk and enjoy high-quality life [3]. For example, the red rice machine advertising in the QQ space to forward and vigorously promote, so that the sales of red rice greatly increased, exceeding the pre-sales expected sales; and last year's popular network "where the object is strongly sought after by netizens and so on. These seemingly simple things are actually the media and propaganda of social network marketing by the initiators using big data.

3.3 Big Data User Behavior Analysis Marketing

Big data user behavior analysis marketing mode. This marketing mode is mainly to record and objectively analyze the user's online data, analyze the valuable customers, and then carry out reasonable marketing plan, for example, cloud letter, a social tool developed in marketing. This kind of social tool has a strong ability of self analysis. It can analyze consumers' attitude towards products according to consumers' evaluation of products and social history, then establish a model of consumers' purchase desire, and conduct systematic analysis on it. Then, according to the results of analysis, targeted customers can be selected to provide reliable customers for future online marketing.

3.4 Personalized Recommendation Marketing of Big Data

Big data personalized recommendation marketing is also a very important mode in network marketing. In many social activities, some large-scale social platforms, such as

forums, communities and microblogs, allow users to build their own social circle and establish their own circle of friends. In their own circle of friends, they can freely publish the information they want to publish. This information has great value for advertising enterprises, through which the psychological needs of consumers can be analyzed. This personalized marketing model makes use of the speed of network communication and huge social groups. This form is a very important part of online sales. Therefore, some analysts are constantly appearing in our field of vision. This kind of analysis tool is different from ordinary analysis tools. It mainly carries out targeted marketing through personalized algorithm.

3.5 Big Data Analysis Marketing of Modern Communication

Modern communication data analysis marketing application is also very extensive, for example, Taobao quantum constant channel statistics. Quantum constant channel statistics mainly includes two aspects in different functions: quantum constant channel website statistics and quantum constant channel store statistics. Quantum Hengdao website statistics is mainly for users and third-party data and some specific statistics of content, such as blog visits and third-party statistics users. To carry out comprehensive data monitoring and system analysis. Using the statistical analysis of data in the Internet to analyze the rules of users' use in the network, and use the analysis results to adjust the corresponding network marketing plan. The shop statistics of quantum Hengdao is generally used in Taobao stores for real-time data statistics.

4 Micro Blog Marketing Case Analysis Based on Big Data

Now the marketing of micro blog is very hot, which is due to the rise of micro blog. There are tens of thousands of users in microblog, and there are a large number of common good people gathered together. Therefore, advertising dissemination is very easy, and the strength of dissemination is very wide. In this circle, advertising data publicity is very important. Each character in microblog represents a meaning. For example, a small circle represents a user, a small red circle represents a big V user in the microblog, and a green small circle represents a core data hole user, while a small blue country is a combination of green small country and red small circle. If in a certain star circle, there is a "big customer's remarks will be transmitted in the star circle through various ways. For example, if the star wants to promote a kind of "cosmetics", then the star will carry out a big advertisement on the" big "and get a very good effect [4]. However, if you want to further promote the "cosmetics" to other circles, then it needs "core structure hole" users to connect with each other in two different circles, so as to promote the advertisement to each circle and achieve the purpose of network marketing [5]. The following Fig. 1 shows the micro blog marketing simulation.

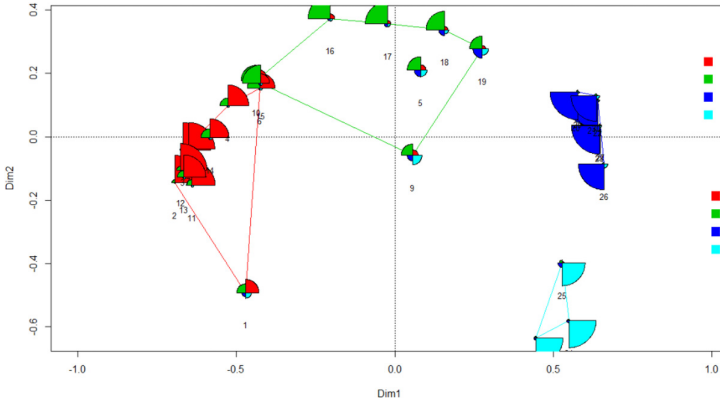


Fig. 1. Simulation of Micro blog marketing

5 BF Network Marketing Strategy and Planning in the Era of Big Data

5.1 Marketing Strategy of BF Network in the Era of Big Data

Keeping up with the development trend of Internet and mobile Internet, BF network aims to improve its own operation ability, explore innovative marketing mode, and provide precision marketing services for brands and customers. BF network has transformed from the traditional website construction into a diversified online news release platform, including website, mobile official website, mobile client, official microblog and wechat of media. It also fully integrates offline activities and services, links resources, and carries out o2o closed-loop marketing mode of online and offline combination, that is, fully invoking online resources of Internet and mobile internet terminal, Effective combination of landing activities and offline services enables users to obtain information online, participate in interaction, and experience the marketing of brand merchants in the o2o closed-loop mode of personal participation offline [6].

BF network is not only a network media, but also a fourth media news website affiliated to the Propaganda Department of the municipal Party committee. As a news website, it has its own incomparable characteristics - strong government background and social credibility and influence, which is the incomparable advantage of commercial websites. As a local news portal, news has become one of the important ways to obtain social credibility and influence [7]. It is not only the mission of news websites to stick to the position of public opinion, but also one of the important chips to occupy more market share and better market resources with commercial websites in the market environment. Combined with the news website's own government resources and social influence, we can better transform the credibility and influence into marketing driving force and marketing conversion rate; we can better play our own advantages and create a high-quality brand marketing service system. With the rapid development of the Internet and mobile Internet, and the arrival of the era of big data, BF network has been transformed into a new media group to build an all media matrix. With the influence and credibility of BF network as the core, BF network has been established in websites, microblogs,

wechat and clients. The website has BF, its channels and frontier client sites. BF and its channels have their own microblog corporate accounts and wechat public accounts, forming a three-dimensional social new media matrix. The mobile terminal has BF mobile phone official website, BF app client and frontier client, In the era of all media, BF network has constructed a necessary for the development of media convergence - the four carriages (namely website, microblog, wechat, client) pattern. All of these contribute to the diversification and three-dimensional development of BF's marketing system. From the previous online publicity on the Internet, combined with the planning and implementation of offline activities, the online and offline activities can interact effectively, and the resources of different channels can be combined and integrated. In the process of obtaining news and information, netizens can extend to news and information services and marketing services, and participate in offline activities, With a sense of experience and interaction, and a sense of participation and sharing effect in the process, the marketing mode of BF network is more abundant, and the audience can obtain marketing service and marketing experience in different experiences [8, 9].

5.2 The Marketing Mode of “Media + Activities”

“Media + The marketing mode of “activities””, It is one of the most important manifestations of O2O marketing mode, With a long marketing time, online and offline marketing effect, Precisely achieve the characteristics of the target population: It can integrate multi platform and cross platform resources, And we can get more effective information from users through offline activities, Let users increase the sense of experience, belonging and interaction, To achieve precision marketing. BF network develops a new mode of network interaction, Using network channel to build personalized interactive platform, By organizing colorful activities, While sharing the network feast with tens of millions of netizens, it also creates unlimited business opportunities for brand businesses. The marketing mode of “media + activities” is shown in Fig. 2.

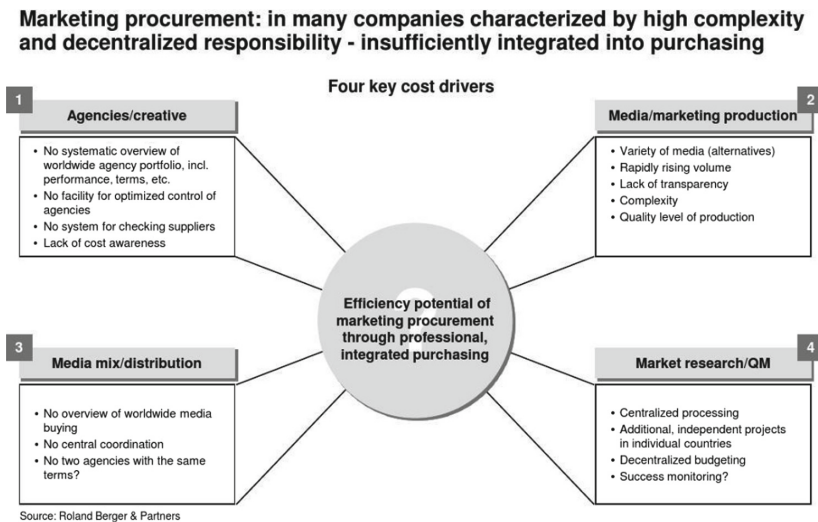


Fig. 2. The marketing mode of “media + activity”

5.3 The Marketing Mode of “Media + Service”

The marketing mode of “media + service” realizes one-stop marketing solution [10, 11]. For brand businesses, BF can help them establish official website and official media matrix (including official microblog, wechat and mobile client of mobile phone version) according to their needs, and realize personalized requirements of brand businesses with its own technical strength. For example, establish a brand official website and official media matrix for a brand, so that Internet users can find the information aggregation of the brand on the Internet and mobile Internet multi terminals, obtain all the brand information at the first time, and provide continuous information update, news maintenance and in-depth cooperation with news websites, so as to realize the transformation from news website users to brand users, Realize the transformation from news website to brand official website. The marketing mode of “media + service” can also be targeted at local government departments. With the implementation of government affairs activities with the help of the Internet, government departments urgently need safe and reliable partners to build government affairs Internet portals, establish Internet windows and enhance the government brand image. Government information release should also take into account the interaction with the people. BF network uses its own high-quality government background and resources to establish good cooperative relations with Tianjin Municipal People’s Congress, CPPCC, district and county Party committees and bureaus. It not only provides website construction and maintenance for government affairs in the form of services, but also promotes the development of Internet-based government affairs in new media, and creates and maintains official microblog, wechat public accounts, APP services and other services for the cooperative party and government departments, We should establish channels for the interaction between the government and the people. Through the form of “media + service”, not only the government resources, credibility and influence of the media are deepened and enlarged in the cooperation with the government, but also the income generating benefits of the media operation are realized. The marketing mode of “media + service” is shown in Fig. 3.

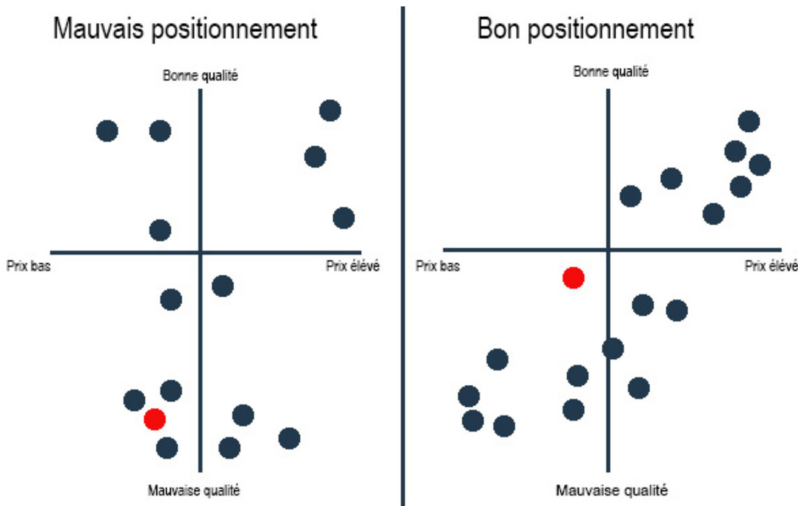


Fig. 3. The marketing mode of “media + activity”

6 Marketing Mode of Brand Promotion

The marketing mode of brand promotion usually uses “influence” marketing, also known as label and evaluation marketing. For the marketing mode of brand promotion, it is necessary to fully base on the advantages of localized resources, deeply tap localized resources and benchmarking enterprises, deeply cooperate with localized industry flagship, high-quality brands and excellent enterprises, enhance the influence of industries, enterprises and brands through the media’s own influence, and build a win-win marketing mechanism [12, 13]. Through the authority of news websites, we can improve the exposure and attention of brands, create added value of brand value, let media influence drive the influence of enterprises or brands, and bring value-added effect to enterprises or brands, so as to promote the marketing of their products and services. Through user feedback, it also helps brand businesses adjust their brand quality in time, pay attention to the direction of user needs, develop more effective and more accurate marketing methods, and make the most limited influence of localization the most valuable influence. For example, in cooperation with a certain brand, in addition to online advertising, special content marketing, or building an all media publicity platform for its official website through multi terminal brand businesses on the Internet and mobile Internet, we can also use bf.com to have a number of high-quality self-made columns, such as news reception hall, zero distance between the government and the people, the first scene, entrepreneurial life, to carry out column naming cooperation, So that the brand can not only be exposed on the Internet advertising, but also be fed back through the host’s oral broadcast of thanks, the film’s tail falling, and other feedback, such as recording background, computer back stickers, wheat logo and other materials will be displayed at the same time; in addition, it can also be selected in the BF 315 consumer trustworthy brand, through the support and feedback of Internet users, Use data to reflect the brand value and brand influence [14]. The shortlisted brands can not only obtain the honor of “most trusted brand” with influence, but also pay attention to the areas to be improved according to user feedback. The award of “the most trusted brand” can be used as brand goodwill to build up the reputation of the brand in the interaction of online and offline marketing promotion, so as to achieve better reputation marketing and attract the attention and transformation of more potential consumer groups at the same time of brand promotion [15].

Media has a strong attribute of information aggregation, and the marketing mode of “media + public opinion” can produce strong guidance and direction for marketing activities through market feedback and user attention. In the Internet era, information security is very important, whether it is government agencies or brand businesses, the demand for public opinion information is more and more urgent. To understand the concerned topics, hot events and audience feedback, all need to be applied through public opinion analysis [16]. The marketing mode of “media public opinion” is to deeply excavate public opinion information and attention guidance through the media’s keen insight and news perspective, so that brand businesses can make targeted marketing strategies and take the audience’s needs as the starting point of marketing strategies.

7 Conclusion

Extensive network marketing can greatly reduce the cost caused by advertising, so that enterprises can get better benefits and greater profits. Big data has penetrated into people's lives. To make full use of big data, enterprises should carry out reasonable marketing according to users' Internet habits and content. This not only makes the user's network data leak to a certain extent, but also reduces the user's security. Some network information contains the user's real information. Therefore, we should update the loopholes in technology to make up for the loopholes and protect the basic privacy of users. To a large extent, network maintainers are required to carry out comprehensive maintenance. This protection is not only a technical challenge, but also needs to be protected by relevant legal measures in reality. The behaviors of non-compliance on the network should be thoroughly checked and severely attacked.

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