Deconstruction and Reconstruction of Marketing System under the Background of Big Data

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Abstract. The continuous development of communication technology at this stage has brought many opportunities for mobile terminal equipment. In marketing, the whole construction of system optimization needs to use relationship chain as its starting point to establish a complete data analysis system. At present, the continuous application and development of Internet technology has brought about major changes in its environment. "Big data" has become an important part of the development of the times and has a direct impact on marketing management companies. Because there are certain differences and particularities in the data, it is necessary to pay attention to the analysis, management, and storage of the economy in the construction of the system.

1. INTRODUCTION

In order to effectively analyze the marketing system, relevant departments must clarify the application form in the design optimization. This article will first analyze "big data", then explore the applications that exist under the "big data" background, and finally focus on the reconstruction of the marketing system. At this stage, the application of information technology has become more extensive, and a series of changes have taken place in consumers' behavioral patterns. In the system design, the development form of the Internet of Things has certain development requirements, and the fixed design pattern is regarded as its research focus, so that it can adapt to the requirements of form changes (Abe & Kamba, 2000). From the point of view of the current marketing management system, the interference factors need to be continuously reduced in the optimization analysis and system design stage so that it can meet the requirements of the marketing management system. In the specific design, it is necessary to understand the requirements of the design form, and effectively embody the form used in the reconstruction system. However, the data size is not the main criterion for measuring whether it is big data. Big data has many characteristics such as large data types, huge data volume, and fast data processing. These characteristics are all that big data should have. The advent of the era of big data has made considerable progress in all areas of our country. Big data fully demonstrates the advantages of "overall is greater than the sum of parts," and is an important current development trend (Alexouda, 2005). There are still certain in the development system at this stage, and in the stage of design optimization, the actual application form should be effectively set out, and corresponding analysis should be carried out according to the fixed design form. Rational use of computers in the design of the system and the provision of a scientific design form to the audience in order to ensure the rationality of the application of the design. Its subjective design form can reflect the application effect of the overall design form, so that the exchange of information between consumers and producers can be very

harmonious. Therefore, marketing and data are inextricably linked. As long as the online system can be applied properly, the exchange of information and data can be realized, and it cannot be monitored.

Nowadays, the data operating system is more complex, and in the overall design, it is necessary to consider the interventions that exist in the influencing factors, and the differences make the interference factors in the competition mechanism to be effectively reduced. At present, in many areas of construction, the application forms of various data have slowly been infiltrated, and it has become a very important production factor in management. However, based on the differences among the entire factors, it is necessary to have a deep understanding of the survival rate at the design stage, to satisfy the essential requirements of the design program lock, and to effectively reflect the characteristics of the system design. In the optimization design stage, it is necessary to correctly interpret the background information (Cross & Savell, 1994). In the specific practice, if the laws in the physical symbol sequence are received, a clear understanding of all the symbols and the combination of meanings is required in order to obtain a set of correct data information. According to the differences existing in the application of data systems, relevant information needs to be collected in the design optimization to satisfy the requirements in behavior management. In accordance with the uniqueness of the system, it is necessary to start from the perspectives of institutional and stability, according to the specificity of the fixed design form, to separate the data reasonably so that the multi-dimensional development requirements are effectively met. In the design optimization, the online design method can be fully applied, and the operator machine mining form can be fully used to gradually transform the data into knowledge and information (Zemanian, 1977). On the basis of constant change and development of information technology, fixed development points and design methods need to be regarded as important goals, and the application effects presented in the technical system must be effectively reflected.

2. MARKING SYSTEM RECONSTRUCTION STRATEGY

2.1. Sampling methods

In the optimization of the system, it is necessary to optimize and analyse the application system so that the entire system can meet the requirements of the marketing management system. In the whole design stage, the information and content in the database need to be further analysed, and the strength of its development should be continuously improved so that it can meet specific design requirements. In the optimization design, the relevant staff should establish a systematic database and information processing system, set the research focus to a fixed decision management mechanism, and reflect all the requirements in the optimization design. In the optimization design also need to establish a CSP mode, this mode is a computer mode. Mainly to help plan the effective formulation, in order to correspond with the effectiveness of advertising, and the actual design patterns and specific applications also have a greater connection. In the optimization phase of construction, the application of data needs to be clearly defined to promote the emergence of new research tools and business scope. Because there are certain differences in data applications, statistical information must be analysed in depth. In the system optimization phase, all audiences need to understand the factors of intervention, and organize and test information technology in time. The relevant staff members need to strengthen the data collation and collection in the specific construction process, and make it compatible with all the requirements in the application system. If necessary, the system can be rebuilt. Its system needs to increase the overall effect of marketing and advertising in the design, so as to provide a successful example for all media marketing reference.

2.2. Laws and regulations need to be constantly improved

At the present stage, under the background of big data collected by all-media marketing, the re-construction of the marketing system requires companies to regard each link in the marketing system as their object and expand the development space. Not only that, the different types of companies lead to significant differences in the reconstruction of the marketing system, but there is no change in the requirements for data application and digging forces. To sum up, at this stage, the network information

is closely linked, so as to accumulate massive audience data that can be communicated and updated, and thus form a "small gold mine" that is gathered from data information. The application of big data technology makes this gold mine work smoothly. In the design of the entire system technology, the fixed design must first be taken as an important goal, and the corresponding optimization and analysis should be carried out according to the design. Because of the great differences in the integrity of data and the technology of excavation, the relevant characteristics of marketing theory must be reflected to ensure the integrity and balance of the entire system.

In the system design, some scientific application systems need to be developed and fully optimized to ensure the integrity of the entire marketing system. The continuous development of communication technology at this stage has brought many opportunities for mobile terminal equipment. In marketing, the entire construction of system optimization requires the relationship chain as its starting point to establish a complete data analysis system. At present, the continuous application and development of Internet technology has brought about major changes in its environment. "Big data" has become an important part of the development of the times and has a direct impact on marketing management companies. Because there are certain differences and particularities in the data, it is necessary to pay attention to the analysis, management, and storage of the economy in the construction of the system. In order to effectively analyse the marketing system, relevant departments must clarify the application form in the design optimization. This article will first analyse "big data", then explore the applications that exist under the "big data" background, and finally focus on the reconstruction of the marketing system.
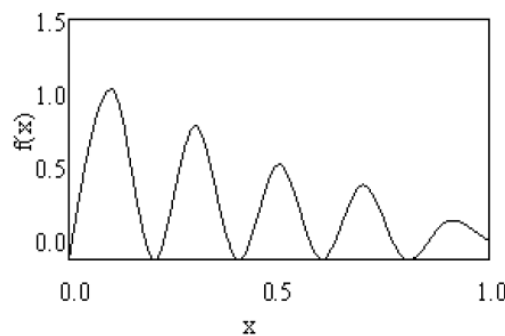

Figure 1. Variable multivariate point function

3. MARKETING SYSTEM OVERVIEW

3.1. The development of the era of big data

At this stage, the application of information technology has become more extensive, and a series of changes have taken place in consumers' behavioral patterns. In the system design, the development form of the Internet of Things has certain development requirements, and the fixed design pattern is regarded as its research focus, so that it can adapt to the requirements of form changes. From the point of view of the current marketing management system, the interference factors need to be continuously reduced in the optimization analysis and system design stage so that it can meet the requirements of the marketing management system. In the specific design, it is necessary to understand the requirements of the design form, and effectively embody the form used in the reconstruction system. Marketing is an art. If you want to sell products and ideas to target people, you need to accurately grasp the needs of the target group. Under the impact of the new social situation, the company's marketing system has gradually emerged its internal structure and reconstructed according to the actual work situation.
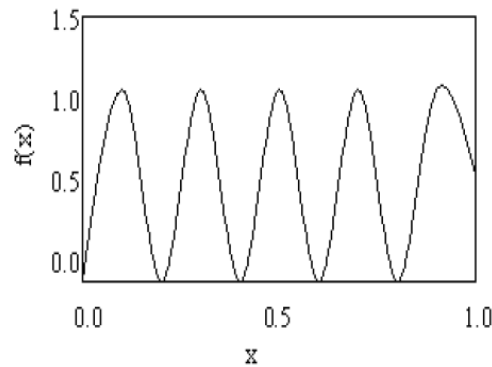
Figure 2. Multivariate point functions with equal peaks

In the context of "big data", the reconstruction of the marketing system needs to adopt appropriate strategies so that we can make full use of the advantages of big data and gain more benefits for the company's product marketing. For enterprises, they need to use scientific marketing strategies and means to be able to occupy a favorable position in the fierce market. The establishment of a scientific marketing strategy requires the collection of data and information at first. The greater the amount of data, the more reliable the data analysis results obtained during the analysis of consumer demographic data. In the era of big data, companies can obtain numerous data information through certain means.

The fitness function is:

$$f(H,t) = \frac{1}{|H \cap P(t)|} \sum_{x \in H \cap P(t)} f(x) \tag{1}$$

The average fitness value of mode H:

$$\overline{f}(t) = \sum_{x \in P(t)} f(x) / N \tag{2}$$

Since the genetic algorithm uses a selection strategy according to the proportion of fitness values:

$$E[H \cap P(t+1)|] \geq |H \cap P(t)| \bullet \frac{f(H,t)}{\overline{f}(t)} \bullet [1 - P_c \frac{\delta(H)}{l-1} - o(H)P_m] \tag{3}$$

The number of expectations in the population increases exponentially:

$$|H \cap P(t)| \bullet \frac{f(H,t)}{\overline{f}(t)} \bullet [1 - P_c \frac{\delta(H)}{l-1} - o(H)P_m] \tag{4}$$

According to their corresponding fitness size is arranged as:

$$\begin{cases} Q_{ij1} = \{s_{j_11}, s_{j_12}, \wedge, s_{j_1M}\} \\ Q_{ij2} = \{s_{j_21}, s_{j_22}, \wedge, s_{j_2M}\} \end{cases} \tag{5}$$

Populations with low fitness may be transferred to populations with high or equal fitness:

$$P_{ij,k} \begin{cases} > 0 & k \leq i \\ = 0 & k > i \end{cases} \tag{6}$$

The probability that all the genes in the gene position will become the same gene after being inverted is:

$$\begin{cases} P("0") = (1 - P_m)^{n1} P_m^{n2} \neq 0 \\ P("1") = (1 - P_m)^{n2} P_m^{n1} \neq 0 \end{cases} \tag{7}$$

Select binary encoding strategy:

$$x_i = a_i + (b_i - a_i) \bullet \sum_{j=1}^{L} (g_j^i \bullet 2^i) / (2^{L+1} - 1) \tag{8}$$

Based on the properties of the eigenvalues and eigenvectors described above, we can get:

$$\alpha^t = A^t \alpha_0 = A^t(3\eta_1 - 2\eta_2) = 3A^t\eta_1 - 2A^t\eta_2$$

$$= 3\lambda_1^t\eta_1 - 2\lambda_2^t\eta_2 = 3\cdot4^t\begin{pmatrix}1\\1\end{pmatrix} - 2\cdot1^t\begin{pmatrix}1\\-2\end{pmatrix} = \begin{pmatrix}3\cdot4^t - 2\\3\cdot4^t + 4\end{pmatrix} \tag{9}$$

Written in the form of a matrix:

$$\begin{aligned}
\alpha_1 &= A\alpha_0 \\
\alpha_2 &= A\alpha_1 = A^2\alpha_0 \\
\alpha_3 &= A\alpha_2 = A^3\alpha_0 \\
&\cdots \\
\alpha_t &= A\alpha_{t-1} = \cdots = A^t\alpha_0
\end{aligned} \tag{10}$$

Then you can write the model as:

$$\begin{cases} x_t = 3x_{t-1} + y_{t-1} \\ y_t = 2x_{t-1} + 2y_{t-1} \end{cases} \quad (t = 1, 2, \cdots, k) \tag{11}$$

1) Physical education learning evaluation criteria: through analysis and processing of data, they can grasp customer needs and formulate marketing strategies for enterprises. It is undeniable that under the background of "big data", existing marketing systems have undergone some new changes and gradually formed a new type of marketing. Facing the deconstruction of the marketing system, it is necessary to reconstruct the system according to the actual situation and better serve the development of the enterprise. Many of these advertising companies cannot accurately target consumer groups based on existing data. In the new situation, advertising marketing activities have become more diversified, many advertising marketing models can be reused, and the targeted target population is more accurate.

2) Learning evaluation of physical education: one obvious manifestation of the existing marketing system structure is the failure of the traditional advertising marketing system. The development of corporate marketing cannot be separated from advertising, after a long period of development, a relatively stable advertising marketing system has gradually formed in the industry. But now it is being impacted by the era of big data. Many marketing agencies and consulting companies have started to build their own information and data systems, and then according to their own information, help companies to carry out advertising marketing activities. In the traditional advertising marketing system, related companies make advertising programs based on market information, and then target the target audience to achieve marketing goals.

3.2. Research tools and methods

The background of big data is very comprehensive for the deconstruction of the entire marketing system. Today, the overall marketing media industry chain has slowly begun to disintegrate and has been reconstructed. In the all-media era, the overall media environment first changed, the number of media content producers surged, and the boundaries between communicators and recipients tended to blur. A huge network system can support people's output of content, and interactive marketing with consumers becomes a new way. It is critical to clarify the current situation of the marketing system. In the entire marketing system, not only companies, but also advertising companies, media, and data service companies. Specifically, in the context of big data, the following major changes have taken place in the marketing system: First, data is an important guarantee for the development of the media. Every operation data on the Internet will be recorded in a timely manner. Massive audience data is the basis for the formulation of marketing strategies. Therefore, mastering the data is more conducive to media marketing. The second is the emergence of numerous data service companies, many companies dedicated exclusively to mass data analysis to provide advertisers with accurate marketing planning directly. Third, many advertising marketing agencies also pay attention to the research of data and focus on improving the advertising effectiveness of marketing customers. In fact, under the new situation, as far as the marketing system is concerned, it faces more development opportunities. Effectively seizing the development space is an important direction for reconstructing the marketing system in the future.

3.3. Marketing media industry chain has been transformed

Using the information platform to communicate with customers is an important trend in the future development of the marketing system. The first is to identify the positioning of the marketing platform, increase the information platform propaganda, and attract more target groups to participate in platform exchanges. As long as the consumers are mastered, the market is mastered. Second, in terms of platform construction, it is necessary to focus on adopting appropriate means for product marketing, making full use of hot event marketing and creative marketing to fully attract consumers' attention. At the same time, they must also pay attention to feedback from consumers and continuously improve marketing quality. Third, in terms of platform construction, we must pay attention to the use of new technologies, pay attention to the updating of the platform system, and keep up with the times. In short, the deconstruction trend of the marketing system has emerged. To rebuild a new marketing system, we must constantly develop and change according to the new situation, so that we can reconstruct a completely new marketing system that is more adaptable to the development of the times.

4. EMPIRICAL ANALYSIS

4.1. Realize the transition from data information to data products

Marketing refers to a process in which a company discovers or taps consumer demand, promotes products from the overall atmosphere and the advantages and characteristics of its products. This process can be regarded as an art of communication and creativity. If you want to do scientific and reasonable marketing, you must rely on the collation and analysis of numerous data, and establish a systematic scientific database. We can even understand this way: The marketing process is actually a process of using data to deal with problems. Data processing has a direct impact on the effectiveness of marketing. In the actual marketing system, the information platform is the medium for data exchange. Sellers and buyers can communicate with each other on the information platform and understand each other's needs. In the construction of an information platform supported by a two-way network with interactive cable television, businesses must make good use of some information resources on the information exchange platform. In the context of the new information age, we emphasize the communication and interactive marketing methods conducted by buyers and sellers. In the context of the new information age, we should rationally use sample surveys to capture public demand and satisfy public demand.

Table 1. Simulation results

IGAs		Variable encoding length			
		12	14	16	20
BIG	20	7.78/3.56	23.60/5.65	29.28/7.12	35.64/8.96
	50	55.56/11.16	85.36/15.66	98.64/16.02	101.23/16.89
	80	203.65/26.34	259.87/29.78	298.86/35.48	332.12/39.44
	100	344.23/33.52	356.27/43.49	389.67/59.68	421.67/68.45

4.2. Database transformation to big data

Inspire the audience's desire to buy. Through sample surveys to grasp the market's development needs and meet the needs of the public. Make use of existing data analysis to organize the psychological needs of the audience. Now, we can use a sample survey to predict the psychological needs of the audience, rather than directly inferring. Therefore, its accuracy has also been greatly improved. The merchant's marketing terminal and information platform can be connected to further analyse the psychological needs of the audience. In the process of big data changing the entire marketing system, a new marketing model has also begun to develop. The main manifestation of this new marketing model is that data has become a commodity that can be purchased and used directly. According to some of the theories set forth above, under this convenient network condition, users can use the information the merchant has left on the Internet to learn about the product. The merchant can understand the customer's psychological

needs based on the information the customer left behind. After these data have been collated and aggregated, they will have extremely high commercial value and have a certain sales potential.

Table 2. Evaluation of physical fitness and motor skills

N	SGA		EGA		IGAs	
	x_m	F_m	x_m	F_m	x_m	F_m
1	15.7150955200	0.9843755153	8.0390424728	0.9704386650	4.1028136456	0.9756682346
15	11.6227931976	0.9727005959	3.9201649287	0.9960578056	0.0469582658	0.9981565387
35	18.9991989136	0.7485142350	3.9583498251	0.9960181063	0.0000000058	1.0000000000
45	19.6880568695	0.9486948723	3.9294452090	0.9906810572	0.0000000006	1.0000000000
55	4.1989650726	0.9494066238	3.9295440272	0.9960810572	0.0000000000	1.0000000000

4.3. Apps under big data background

The large amount of data information formed by big data processing technology can be analyzed and sorted out through related information platforms and play an important role. Using these data information to build a new marketing system and information development platform has become an objective requirement for the development of the information age. In the information technology platform, the relevant information data is analyzed and arranged, and the information most needed by the audience group is provided, which lays the foundation for marketing development. Under the condition that the theoretical models of all-media marketing have been verified and implemented, we have both opportunities and challenges in developing our business. While building a new marketing system, there are also some risks and challenges, such as user information security issues and important data theft issues. Many of these advertising companies are unable to accurately target consumer groups based on existing data. Under the new situation, advertising marketing activities have become more diversified. Many advertising marketing models can be reused and the target audience is more accurate.

Table 3. Test results and analysis

SGA/IGAs		Variable encoding length			
		12	14	16	20
BIG	20	F/76	F/95	F/F	F/72
	50	F/84	33/9	31/42	F/26
	80	30/16	29/14	76/35	29/39
	100	18/22	20/22	28/30	37/14

5. CONCLUSION

There are also pricing issues for companies' training products. It's just that the price here is not the same as the price in marketing. The prices in marketing are measured and expressed in currency, and the prices of training products are more complex and difficult to quantify. It refers to everything an employee does to attend training, including currency and time. This price is more qualitative. In the pricing process, training managers must pay attention to the costs of employees and help employees save costs as much as possible. This will help improve employees' enthusiasm for training. In marketing theory, after the product is sold, the core work is completed. The remaining work is to provide after-sales service, customer relationship management and maintenance. However, in the training system, it is very different that, after the products are sold out, the core work has only just begun, that is, the implementation of training plans and project plans and the transformation of results. This step is the process of putting the previous plan and design into action. It is the process of transforming the result. Without this process, everything in front of it is futile and futile. One obvious manifestation of the existing marketing system structure is the failure of the traditional advertising marketing system. The development of corporate marketing cannot be separated from advertising, after a long period of development, a relatively stable advertising marketing system has gradually formed in the industry. But now it is being impacted by the era of big data. Many marketing agencies and consulting companies have started to build their own information and data systems, and then according to their own

information, help companies to carry out advertising marketing activities. In the traditional advertising marketing system, related companies make advertising programs based on market information, and then target the target audience to achieve marketing goals.

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