Using Data Mining for Analyzing Experiential Marketing in Blogs

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Abstract

This paper will focus on analyzing the experiential marketing in Blogs by using data mining techniques. The analysis of this research will be based on data collected from questionnaires and the correlation analysis between the factors from five experiential marketing modules, Internet involvement degree, demographic variables and customers' loyalty and praise. The results show that, firstly, female bloggers are more impressed by think experiential module than male bloggers, and male bloggers are more impressed by act experiential module than female bloggers. Secondly, the sense experiential module will affect the visiting willingness of bloggers. Thirdly, the sense and relate experiential module will influence the loyalty and praise of bloggers. Finally, if we emphasis the marketing factors in act and relate experiential module, it will attract more visit from bloggers with high loyalty and praise. The major contribution of this research is to outline the factors that affect the integration of experiential marketing and Blogs for Internet marketing.

Keywords: experiential marketing, Blog, data mining, Internet Marketing.

1 Introduction

According to the data shown by the Technorati, a well-known Blog index web site, that Blog included in the registration of Technorati has reach more than 112 millions in December 2007. Blogs are new media and interface for Internet users to share their opinions and for readers to leave comments through an interactive way. Furthermore, the mechanism of link to and refer to other Blogs also makes Blogs become powerful and popular media in the Internet era.

According to The Pew Internet Project blogger survey [13], 52 % of bloggers show that the majority reasons for keeping a Blog are to share creative expression and personal experiences. It is also the reasons that Blogs are developed to use as new media for Internet marketing. As point out by Wright [3], Blogs create customer evangelists. If you feature comments on your blog, your customers can write about their positive experiences with you and your company, and, as Wright points out in the book, your customers can spread these positive experiences by communicating them to others via Blogs. You can also find out about customers' negative experiences via those comments and solve a customer's problem more quickly because of a Blog [3]. Hence, we may say that Blogs can be used to offer an authentic word of mouth marketing, which embraces the experiential marketing philosophy that pays more attention to psychological factors of consumers.

The experiential marketing, according to Schmitt [21], the marketing plans which customers care about are that have the combination of sensory stimulation, soul touching, though initiation, and that related to themselves in their lifestyle. They no longer need products with a heap of functions, but want the products with the experiences of entertainment, stimulation, emotional evoking, and creative thinking. Thus the ultimate goal of experiential marketing is to provide customers with the valuable experience, thereby further enhancing the customer experience will. As we can find that the integration of experiential marketing strategies and Blogs applications may be used as new Internet marketing tools. Therefore, it would be very valuable to discuss the impact and influence of this integration.

In this paper, we have proposed a method that includes data mining techniques to analyzing the factors that influence the experiential marketing in Blogs. We will use the advantage of the data mining techniques that offer automated discovery of previously unknown potential rules as well as automated prediction of trends and behaviors to analyze data collected from questionnaires. The major contribution of this research is to outline the factors that affect the integration of experiential marketing and Blogs for Internet marketing.

2 Literature Review

2.1 Blogs Development and Marketing

Blogs have come a long way since Dec. 17, 1997, when Jorn Barger coined the term "weblog" to describe the list of links on his Robot Wisdom website that "logged" his Internet wanderings [2]. As of June 2008, Blog search engine Technorati was tracking more than 133 million Blogs

[22]. Many Blogs provide commentary or news on a particular subject; others function as more personal online diaries. Recent developments show that the ability of Blogs for users to share their opinions and for readers to leave comments in an interactive format makes Blogs become the easiest, cheapest, fastest publishing tool in Internet. However, in addition to that Blogs allow millions of people to easily publish and share their ideas, and millions more to read and respond, the mechanism of link to and refer to other Blogs also makes Blogs become powerful and popular media for Internet communities. The most basic form of Blogs social interaction is the comment, a reader- contributed reply to a specific post within the site [15]. Hence, it can group together the bloggers with same interest and become a kind of Internet community.

According to the Pew Internet Project blogger survey [13], the most popular topic among bloggers is their life and experience. Therefore, we may assume that if there are marketing methods to combine with the personal life experience with products, such as experiential marketing model, Blog platform can be used to create another kind of marketing tool that is different from the traditional marketing way. Nowadays, consumers may discuss products in general term with their own personal experiences in their own Blogs. Hence, marketers must look beyond the hype to determine how Blogs can influence their products and how to effectively add them to the marketing mix. As point out by Cohen [5], regardless of your products, Blogs can be an integral part of a marketing strategy.

2.2 Internet Experiential Marketing

Internet marketing is defined as the marketing of products or services over the Internet. The most important benefits associated with Internet marketing are the availability of great amount of information related to customers, products, and customers' experience with the products. The benefits of the information about customers' experience with the products show in discussion forum, bulletin board, or Blogs can be seen from it has been used for viral marketing and Blogs marketing, It can be praise delivered or enhanced by the network effect of Internet. It can also be developed as a new Internet experiential marketing model, which refers to a live brand experience and using preexisting social network to produce increases in brand awareness.

Although, as early as in 1987, Judd, V. C., had proposed the concept of the 5th P: People of marketing [10], which suggested including customers into marketing strategies. It can be seen as the initiative of experiential marketing. Simonson and Schmitt, in their book "Marketing Aesthetics", coined the phrase "marketing aesthetics" to refer to the marketing of sensory experiences in corporate or brand output that contributes to the organization's brand identity [20]. The concept was moving beyond traditional "feature and benefits" marketing to focus on the experiential benefits provided by a company or brand as a whole and the aesthetic planning that is essential for developing and implementing a corporate or brand identity. At that time, web site had already included in the publication elements by Schmitt and Simonson. This can be seen as the initiative of integrating Internet and experiential marketing for brand information sharing.

In the book "Experiential Marketing" [21], Schmitt proposed the concept of Strategic Experiential Modules (SEMs) that get customers to Sense, Feel, Think, Act, Relate to company and brands. Schmitt had shown how experiential marketing can create experiences for their customers through sensory, affective and creative associations as well as lifestyle and social identity campaigns. He also emphasized that in order to win customers' hearts and their loyalty; marketers must appeal to customers' senses and provide them with gratifying, lasting experiences.

Nowadays, in the Internet era, the key audiences mentioned above can be looked as members in an Internet community of customers with brand loyalty. Blogs, which has the ability of high levels of interactivity and elicit personal experience and response among members of the Internet community, can be used as the platform for the forum for customers mentioned above. As we may assume from above review that the integration of the mechanism of Blogs and Internet community in Internet can be used to forming the revolutionary approach of Internet experiential marketing. Hence, in this study we will focus on the analysis of using Blogs for experiential marketing in Internet community.

2.3 The Data Mining Techniques

Data mining technology has been widely applied to management, marketing, medicine and finance, and so on [1,4,8,12]. Data mining can help enterprises efficiently analyze customer behavior and obtain a further insight into their demands [7]. In the related techniques of data mining, cluster analysis and decision tree are the popular methods. The principal purpose of cluster analysis is to classify the data patterns into several different clusters so that the individuals in the same cluster could have high degree of similarity and different clusters would have high degree of difference. Among various clustering algorithms, K-means algorithm [14] is one of the methods that are efficient and easy to be applied.

The general statistical method usually could only calculate the distribution of the surface of data whereas decision tree could analyze the potential association rules among the critical attributes from the data. Moreover, the

class prediction of the unknown data samples could be further acquired by testing the related attributes' values according to these association rules.

ID3 (Iterative Dichotmiser 3) algorithm developed by Quinlan [19] is one of the most commonly used and efficient decision tree algorithm. Katharina et al. [11] studied the behavior of ID3 and pointed out that ID3 was better than other decision tree methods, such as C4.5, CHAID, and CART. As compared with the improved methods (for example, C4.5) based on ID3, Ohmann et al. [17] indicated that the number of association rules worked out by ID3 was not as numerous as that of C4.5. Therefore, we chose ID3 as the data mining technique for this study.

3 The Proposed Methods

3.1 The Research Framework

The main purpose of this study is to discuss the influence factors of applying experiential marketing in Blogs. The Blogs here are presumed as the platform for customers to exchange information and share experiences and are used as the place for Internet experiential marketing. We use online questionnaires to collect data from bloggers, who are the user or visitor of Blogs. The framework of this research is illustrated in Figure 1.

As shown in Figure 1, there are independent variables that include the five modules from experiential marketing, bloggers' Internet involvement and demographic variables, while the dependent variables are bloggers' loyalty and praise.

The principles of the research framework come from the realization that customers care not only the practical-functions of products, but also the experience during consumption process which has changed the concepts of production and marketing. Therefore, the enterprises are obligated to create individual experience for customers in order to satisfy customers and to improve their loyalty [18]. In order to explore the experiences from bloggers, we use the five Strategic Experiential Modules (SEMs) of experiential marketing, which was proposed by Schmitt in 1999 [21], as the assessment items of bloggers' experience. Furthermore, the five SEMs are then used to establish the framework for analyzing the loyalty and praise behavior of bloggers. We also introduce the Internet involving degree and demographic data of bloggers for analyzing the factors that influence the application of experiential marketing in Blogs.

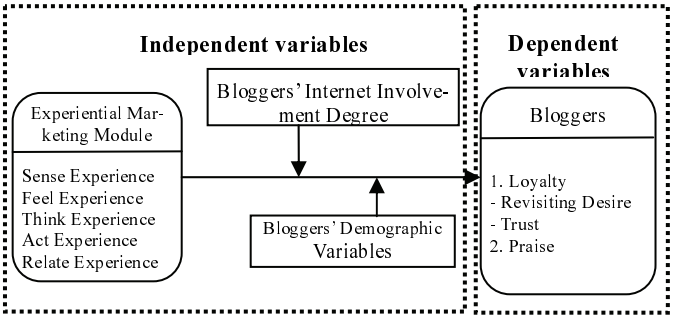

Figure 1 The Proposed Research Framework

3.2 The Design of Evaluation Factors

The main framework of this study is based on the five forms of experience in experiential marketing module of Schmitt. The analysis will then be supplemented by bloggers' Internet surfing experiences and their demographic variables to measure bloggers' response after visiting the Blogs.

The design of the evaluation factors, which are based on the five forms of experience in experiential marketing module are described as follows:

(A) *Module of sense experience:* This module is the corner stone of the five forms of experience in experiential marketing. It is used to respond to the results of the facial perception of bloggers to the contents of Blogs in this research. Sense experiential module can create a strong feeling experience relate to the major elements, style and theme of Blogs. It follows a model of stimuli, processes and reaction (S-P-C). The evaluation factors designed for this module are: (1) the appearance of the marketing Blog; (2) the sense of comfortable, clarity and well-organization shown by the layout of the Blog; (3) the flourish content of the Blog, and (4) the sense of pleasant comes from the background music of the Blog.

(B) *Module of feel experience:* This module is used to stirring up the bloggers' feeling on the brand and products shown in Blogs. It is used to provide the experience links to the brand and products in various means to make bloggers with feeling of satisfaction and delight. The evaluation factors designed for this module are: (1) the sentimental contents of the Blog; (2) the overall atmosphere of the Blog; and (3) the pleasant feeling while exploring the Blog.

(C) *Module of think experience:* This module aimed at activating the innovative thinking of the bloggers. It is required to understand what the bloggers are thinking and what they are interest. The evaluation factors designed for this module are: (1) the mystery of the contents of the Blog; and (2) the influence of the Blog to the bloggers.

(D) *Module of act experience:* This module is to aim at discussing the interaction of the bloggers with others and the physical experience of the bloggers. The evaluation factors designed for this module are: (1)

the willingness of the bloggers to subscribe the RSS service of the Blog; and (2) the willingness of the bloggers to use the interactive service of the Blog.

(E) *Module of relate experience:* This module including the discussion of all the above-specified experiences. It is especially stressed the acquisition of confidence from the interaction with the other bloggers during exploring the Blog. The evaluation factors designed for this module are: (1) the brand identity built by the Blog; and (2) the mutual identity of bloggers from using the Blog.

In addition to the evaluation factors in experiential marketing module, there are some other factors used to evaluate bloggers' behavior. These factors can mainly classify into two categories, which are loyalty and praise. The detail design of the evaluation factors that relate to the bloggers are as follows.

(A) *Loyalty*: As defined by Dick and Basu [6], customer loyalty is the strength of relationship between consumption attitudes and repurchases behavior. Jones and Saaser [9] defined customer loyalty as the repurchase desire of a customer for certain products or services.

The analysis of the loyalty of bloggers in this research is further subdivided into two items, which are revisiting desire and trust. The evaluation factors designed for *revisiting desire* are: (1) the browsing habits of bloggers to the Blog; and (2) the information searching priority of bloggers to the Blog.

The evaluation factors designed for *trust* are: (1) the bloggers' trust to the information provided by the Blog; (2) the bloggers' recommendation to the information from the Blog to the other interactive platform; and (3) the bloggers' verification to the information provided by the Blog.

(B) *Praise:* Praise is a process of personal influence, in which interpersonal communications between a sender and a receiver can change the receiver's behavior or attitudes [16]. The evaluation factors designed for praise are: (1) the bloggers' recommendation to the Blog to their friends; (2) the Blog linkage makes by bloggers; and (3) the bloggers' media to recommend the Blog.

3.3 The Analysis Methods

The main purpose of this study is to discuss the effect of using Blogs for experiential marketing. In order to find out the effect from the factors designed in former section, we are introducing the combination of clustering and data mining techniques to analyze the possible relationships among those factors.

The purpose of cluster analysis is to classify the data into several different clusters so that the individuals in the same cluster can have high degree of similarity and different clusters will have high degree of difference. Among various clustering algorithms, K-means algorithm [14] is one of the efficient methods which are easy to be applied. The K-means starts from selecting randomly K data points as the initial centroids of clusters. The Euclidean distance is applied to measure the distance between data points and cluster centroids. Each data point is distributed to the nearest cluster, and the new cluster centroids can be computed subsequently. Then recursively repeat above process until the clustered results are stabilized.

Table 1 Reliability of Various Evaluation Factors

Evaluation Factors	Reliability (Cronbach's α)
Five modules of experiential marketing	0.8240
Bloggers' Loyalty	0.7711
Bloggers' Praise	0.8863
Bloggers' Internet involving degree	0.9192

The another important analysis method in this paper is to use a data mining technique, the ID3 decision tree algorithm, to find out the possible relationship among the factors from both independent and dependent variables. Assume that a certain dependent variable is selected out as the *target attribute*, and this attribute has t kinds of different values. Then the ID3 algorithm will classify all data patterns into t "*classes*" according to t values of the attribute. While the computation is finished, the path constructed from root node to each leaf node forms an association rule. In other words, all of the internal nodes on the path constructs a row of "if" judgment of several attributes. With the "then" results presented by the class signified by the leaf nodes, there is the association rule of "if-then" pattern constructed.

The construction processes of ID3 decision tree are described as follows:

Firstly, it starts from root node and all of the data patterns are initially included in the root. Let the independent variables be *candidate attributes*. ID3 algorithm will select an unselected attribute with the maximum *Information Gain* from candidate attributes. The definition of *Information Gain* is by considering a certain attribute A on node C, the Information Gain $G(A)$ of attribute A would concern the *Entropy* $E(C)$ of node C, which is calculated by using the following formula:

$$E(C) = -\sum_{i=1}^{t} \frac{p_i}{n} \times \log_2 \frac{p_i}{n}$$

Where t is the total number of classes associated with C, p_i is the total number of data patterns corresponding to the i-th class in C, and n is the total number of data patterns in C.

The *Information* Gain $G(A)$ of attribute A is calculated by using the following formulas:

$$G(A) = E(C) - E^{+}(A)$$

$$E^{+}(A) = \sum_{j=1}^{k} (n_j / n) \times E(C_j)$$

Where k is the *number* of possible attribute values of A, C_j (for $1 \le j \le k$) is a subset of C including the data patterns corresponding to the jth possible attribute value of A, and n_j is the total number of data patterns contained in C_j.

Secondly, ID3 algorithm divides all the data patterns contained in this node into children nodes according to the value of this attribute. The calculation process is that if any of the two conditions is satisfied, the current node will be signified as a leaf node. Given a leaf node C, we assign the class of C, denoted as $Class(C)$, to be the class with the most data patterns in C. And then we calculate *Purity* (denoted as $Purity(C)$ for this leaf node to end this node's execution of algorithm. The formulas of $Purity(C)$ are defined as:

$$Purity(C) = (|Class(C)| / |C|) * 100\%$$

Where the number of data patterns in node C is denoted by $|C|$, and N is the number of total data patterns.

Finally, each children node respectively repeats the same process for its own data patterns until either: (1) all of the attributes are selected; (2) all data patterns contain in the node are of the same class. While the processes are finished, the path constructed from root node to each leaf node shows the association rules that are found among survey data of all evaluation factors. The association rules will then be shown by using "if-then" pattern fro further analysis and verification.

4 Data Analysis and Results

4.1 Data Collection and Reliability Analysis

This research distributed the questionnaires on the website through Internet. There were 272 questionnaire returned and 257 valid questionnaires. The valid return rate was about 94.48%

We adopted the most commonly used reliability factor Cronbach's α in practice to measure the reliability of the questionnaire. When Cronbach α was more than 0.7, it generally meant it was considerably reliable.

The factors from five modules of experiential marketing, Bloggers' loyalty, praise and Internet involvement degree are chosen for analyzing their reliability. The values of Cronbach's α of each factor are shown in Table 1. The overwhelming majority of the Cronbach α values are more than 0.7 which revealed that the questionnaire in this research revealed considerably high degree of reliability.

4.2 Analysis of Decision Tree

Before we apply the decision tree algorithm for data mining calculation, we have to manage the normalization such as transforming the patterns of the original data and properly quantifying it. The non-numerical attributes of the questionnaire are based on Likert five-point scale. We classify the numerical values into proper number of clusters according to distribution of the attribute's values. For example, the attribute "Internet involving degree" has three kinds of values: "high", "medium", and "low" from the distribution of data values.

Case I: Rules from Male Bloggers and Female Bloggers

In this case, we will try to find the difference between male Bloggers' loyalty and female Bloggers loyalty. We divide all of Bloggers' data into two clusters according to the value of gender. The five factors from experiential marketing modules and Bloggers' gender are used as the candidate attributes. And the Bloggers' loyalty is used as the target attribute. The ID3 decision tree algorithms are used to find out the possible association rules between candidate attributes and target attribute. The rules are schematically illustrated as a tree structure. Each leaf node signified a resulted class; the path from the root node to each leaf node represented an "if-then" rule.

The ID3 decision of this case is shown in Figure 2 and Figure 3 to represent the rules of female and male Bloggers.

Based on the decision tree shown in Figure 2, the rules for female's loyalty are as follows:

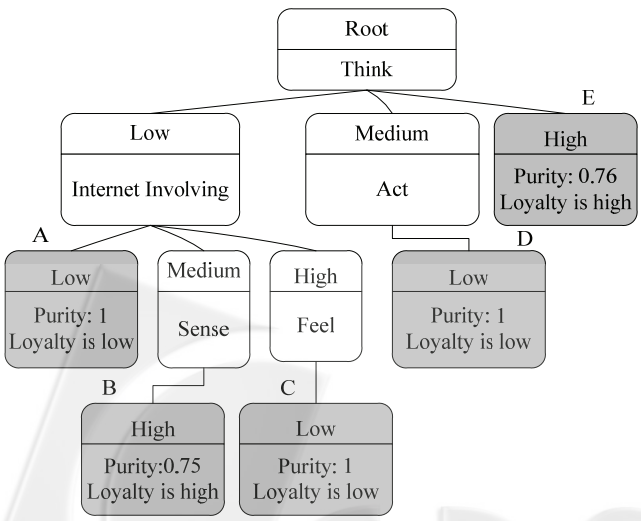

Figure 2 Decision Tree of Female's Loyalty

Table 2 The Classification Based on Five Experiential Marketing Modules Factors

	Sense	Feel	Think	Act	Relate
Cluster I	medium	medium	medium	medium	medium
Cluster II	high	high	high	high	high
Cluster III	low	low	low	low	low

1. *Rule A*: If the degree of think is low, and the degree of Internet involving is low, then the degree of loyalty is low.
2. *Rule B*: If the degree of think is low, the degree of Internet involving is medium, and the degree of sense is high, then the degree of loyalty is high.
3. *Rule C*: If the degree of think is low, the degree of Internet involving is medium, and the degree of sense is low, then the degree of loyalty is low.
4. *Rule D*: If the degree of think is medium, and the degree of sense is low, then the degree of loyalty is low.
5. *Rule E*: If the degree of think is high, then the degree of loyalty is high.

As concluded by Figure 3, the rules for male's loyalty are as follows:

1. *Rule A*: If the degree of act is low, then the degree of loyalty is low.
2. *Rule B*: If the degree of act is high, and the degree of sense is low, then the degree of loyalty is low.
3. *Rule C*: If the degree of act is high, the degree of feel is high, and the degree of Internet involving is high, then the degree of loyalty is low.
4. *Rule D*: If the degree of act is high, the degree of feel is high, and the degree of sense is medium, then the degree of loyalty is high.
5. *Rule E*: If the degrees of act, feel, sense and think are high, then the degree of loyalty is high.

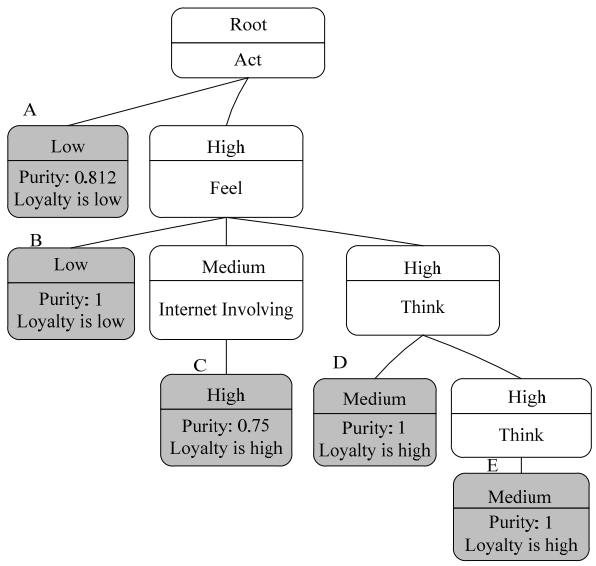

Figure 3 Decision Tree of Male's Loyalty

Table 3 The Classification of Factors of Loyalty and Praise

	Loyalty	Praise
Cluster I	low	low
Cluster II	high	high
Cluster III	medium	medium

We may conclude from the rules above that think experience module is the most critical factors to determine the female's loyalty. However, the act and feel experience module determine the male's loyalty.

Case II: Rules of Taking Compounded Attribute As the Target Attribute

In this case, we would like to know if there exists any rules for the target attribute which is compounded of several attributes.

Firstly, we use K-means algorithm to classify the Bloggers' data into three clusters by using the five experiential marketing modules. The associated values as shown in Table 2. Then we combine the five modules: Sense, Feel, Think, Act, and Relate into a compounded attribute. Moreover, we denote the compounded attribute as three associated values: "Cluster I", "Cluster II", and "Cluster III", which the detailed values of the five modules are the same as those shown in Table 2.

Secondly, we set this compounded attribute to be the target attribute. Moreover, we set the factors from Bloggers' loyalty, praise, and Internet involvement degree as the candidate attributes. The we perform ID3 algorithm, and the results of the ID3 decision tree is shown in Figure 4.

As we may conclude from Figure 4 that there are no predominant rules can be found by using this method. However, according to Schmitt [21], there should have some relationships between experiential marketing modules to the other variables, such as Bloggers loyalty, praise, gender and Internet involving degree.

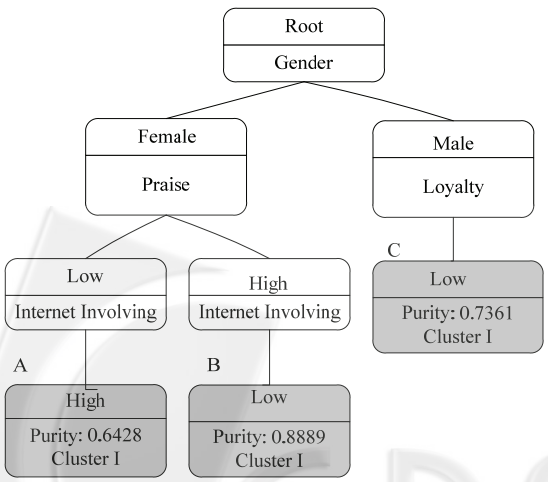

Figure 4 Decision Tree of Experiential Marketing Modules to the Other Variables

Thus, in order to verify the results from Figure 4, we classify the Bloggers' data by using the two attributes: loyalty and praise, and the result is shown in Table 3. Similarly, we combine loyalty and praise to be a compounded attribute. Then we set the factors from five modules of experiential marketing, gender, and Internet involvement degree as the candidate attributes.

The result of performing ID3 is shown in Figure 5, we may find the rules as follows.

1. *Rule A*: If the degree of think is low, then the degrees of loyalty and praise are both low.
2. *Rule B*: If the degree of think is high, the degree of relate experience is low, and the degree of Internet involving is low, then the degree of loyalty and praise are both low.
3. *Rule C*: If the degree of think is high, the degree of relate is low, the degree of Internet involving is high, the gender is female, and the degree of act is low, then the degrees of loyalty and praise are both low.
4. *Rule D*: If the degree of think is high, the degree of relate is low, the degree of Internet involving is high, the gender is female, and the degree of act is high, then the degrees of loyalty and praise are both high.
5. *Rule E*: If the degree of think is high, the degree of relate is low, the degree of Internet involving is high, and the gender is male, then the degrees of loyalty and praise are both high.
6. *Rule F*: If the degree of think is high, the degree of relate is high, and the age range is from 16 to 20, then the degrees of loyalty and praise are both high.

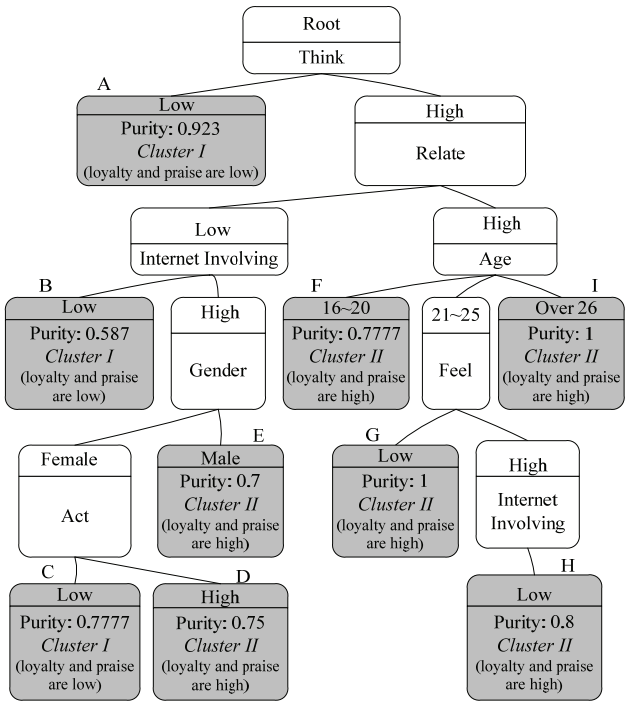

Figure 5 Decision Tree of Loyalty And Praise to the Other Variables

Table 4 Classification Results of Performing K-means Algorithm to All Survey Data Set

	Sense	Feel	Think	Act	Relate	Loyalty	Praise	Internet Involving
Class I	18.83333	10.76667	7.3	6.766667	6.866667	20.9	13.81667	41.71667
Class II	21.25532	12.65957	8.319149	7.617021	7.574468	21.34043	14.57447	48.61702
Class III	19.22034	11.20339	6.983051	6.050847	6.338983	15.47458	10.69492	48.52542
Class IV	17.875	10.57143	7	6.607143	5.857143	16.25	10.69643	37.375

7. *Rule G*: If the degree of think is high, the degree of relate is high, the age range is from 21 to 25, and the degree of feel is low, then the degrees of loyalty and praise are both high.
8. *Rule H*: If the degree of think is high, the degree of relate is high, the age range is from 21 to 25, the degree of feel is high, and the degree of Internet involving is low, then the degrees of loyalty and praise are both high.
9. *Rule I*: If the degree of think is high, the degree of relate is high, and the age is over 26, then the degrees of loyalty and praise are both high.

Based on the above rules, we can only find out that factors in think and relate experiential marketing modules are critical to Bloggers' loyalty and praise. However, we can not find that there is any regular correlation between experiential marketing modules and Bloggers' loyalty and praise here.

It is because the ID3 tree shown in Figure 5 is much more complicate than the other trees and whether the degree of factors from experiential marketing module is high or low, the degree of loyalty and praise are remaining the same.

Case III: The Categorization of Bloggers

In this case, we will try to find the categorization of users of Blog. Firstly, we use K-means algorithm to classify all Bloggers' data into four classes as shown in Table 4, which is clustered by using the seven attributes: five modules of experiential marketing, loyalty, praise, and Internet involvement. Note that each score is transferred form the Likert five-point scale into the range between 0 and 25.

According to Table 4, we find that the four classes are with the following major characteristics:

Class I: The degree of Internet involving is high, the degrees of loyalty and praise are high, and the degrees of act and relate are high.

Class II: The degree of Internet involving is high, the degrees of loyalty and praise are high, and the degrees of five experiential attributes are high.

Class III: The degree of Internet involving is high, the degrees of loyalty and praise are low, the degrees of act and think are low, and the degrees of sense

and feel are high.

Class IV: The degree of Internet involving is low, the degrees of loyalty and praise are low, and the degrees of relate, sense and feel are low.

Secondly, we will integrate the above result of performing K-means with ID3 algorithm. We use the class derived in Table 4 (with four values: I, II, III, and IV) as the target attribute, and set the factors from five modules of experiential marketing, gender, loyalty, praise, and Internet involvement degree as the candidate attributes. Then we perform ID3 algorithm and obtain the result as shown in Figure 6.

Based on the decision tree shown in Figure 6, we may find the rules as follows.

1. *Rule A*: If the degree of Internet involving is less than 40, and the degree of loyalty is low, then it belongs to the Class IV.
2. *Rule B*: If the degree of Internet involving is less than 40, the degree of loyalty is high, the degree of relate is low, and the degree of act is high, then it belongs to the Class IV.
3. *Rule C*: If the degree of Internet involving is less than 40, the degree of loyalty is high, and the degree of relate is high, then it belongs to the Class I.
4. *Rule D*: If the degree of Internet involving is more than 40, the degree of loyalty is low, and the degree of praise is low, then it belongs to the Class III.
5. *Rule E*: If the degree of Internet involving is more than 40, the degree of loyalty is low, the degree of praise is high, and the degree of think is low, then it belongs to the Class III.
6. *Rule F*: If the degree of Internet involving is more than 40, the degree of loyalty is high, the degree of praise is high, and the degree of act is high, then it belongs to the Class II.

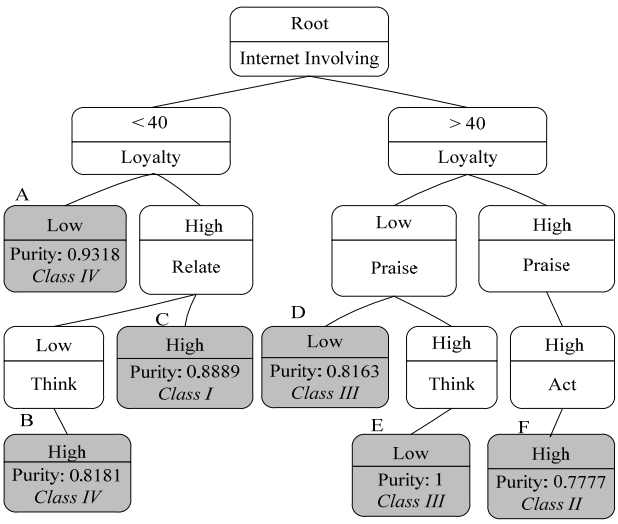

Figure 6 Decision Tree of Four Major Classes With All Variables

After analyzing the rules above, we may divide bloggers into four major types with major characteristics as follows:

Type I: The degree of Internet involving is low, and the degrees of relate, feel and act are low. The degrees of loyalty and praise are low for this type of the bloggers. These bloggers are classified as those people who use Internet to find data only.

Type II: The degree of Internet involving is high, the degrees of act and think are low, and the degree of sense and feel are high. The degrees of loyalty and praise are low for this type of the bloggers. These bloggers are classified as those people who often use Internet to find entertainment news.

Type III: The degree of Internet involving is high and the degrees of act and relate are high. The degrees of loyalty and praise are high for this type of bloggers. These bloggers are classified as those people who use Internet to make friends.

Type IV: The degree of Internet involving is high, the degrees of five experiential attributes are high, and the degree of act is extremely high. The degrees of loyalty and praise are high for this type of the bloggers. These bloggers are classified as those people who use Internet for relaxing and inspiration.

5 Conclusions

This research is focused on analyzing the experiential marketing in Blogs by using data mining techniques. The analysis of this research is based on data collected from questionnaires and the correlation analysis between the factors from five experiential marketing modules, Internet involvement degree, demographic variables and customers' loyalty and praise.

The results of this research indicate that the five experiential marketing modules, Internet involving degree, and demographic variables, which are designed in this research, are significant in discussing Bloggers' loyalty and praise.

We find that sense experience is the key factor to attract bloggers. There were 87% of the questionnaire thought sense experiential module is a very important factor for bloggers. The results of case II also show that the degree of the sense factor is extremely higher than the others.

It is also shows that think experience is the most critical factor to determine the female Bloggers' loyalty. The factors from act and feel experiential marketing modules will determine male Bloggers' loyalty.

From the results of Case II that factors in think and

relate experiential marketing modules are critical to Bloggers' loyalty and praise. However, we can not find that there is any regular correlation between experiential marketing modules and Bloggers' loyalty and praise here.

According to the results from Case III, we may conclude that if the degrees of loyalty and praise are high, then the level of act and relate is high. Hence, factors in act experiential module play an important role in the Case III results.

The conclusion of this research shows that, firstly, female bloggers are more impressed by think experiential module than male bloggers, and male bloggers are more impressed by act experiential module than female bloggers. Secondly, the sense experiential module will affect the visiting willingness of bloggers. Thirdly, the sense and relate experiential module will influence the loyalty and praise of bloggers. Finally, if we emphasis the marketing factors in act and relate experiential module, it will attract more visit from bloggers with high loyalty and praise.

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