Applying Content Validity Coefficient and Homogeneity Reliability Coefficient to Investigate the Experiential Marketing Scale for Leisure Farms

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ABSTRACT

The purpose of this research was to develop experiential marketing scale for leisure farms and to identify this scale with high qualitative content validity and homogeneity reliability. Questionnaire survey method was used to collect data from 12 experts used a five point Likert scale to judge the importance of each item in this research. Delete question of the 14 item that has not to reach significant standard ($\alpha = .05$). The results of this study indicated that content validity coefficient for each item ranged from .73 to .96, and homogeneity reliability coefficient ranged from .49 to .85. A high coefficient value with significant level indicated that the whole scale or each item had high content validity and homogeneity reliability. Accordingly, this scale was used to be a valid and reliable measurement instrument.

Keywords: content validity, homogeneity reliability, leisure farms, experiential marketing scale

INTRODUCTION

Agriculture occupies an extremely important position in Taiwan’s economic development. Following Taiwan’s entry into the World Trade Organization; WTO in 2002, Taiwan engaged in full integration into the international market. Due to the challenges faced and impact of the internal and external environment on Taiwan’s traditional agriculture, the recreational industry that provides the public with recreational uses and nature education experiences adopts an innovative mode of operation through its agricultural transition (Tuan, 2006). According to estimates of the WTO, the number of tourists around the world will increase to 1.602 billion by 2020, thereby generating US$2 trillion (World Tourism Organization, 2000). According to the projection, it can be learned that the tourism industry will become the most important industry that contributes positively to the global economic development. In addition, with the socio-economic prosperity and fast-paced development of the industrial and business society in recent years, there has been an increased demand for psychological adjustment (Directorate General of Budget, Accounting and Statistics, Executive Yuan, R.O.C. (Taiwan); DGBAS, 1995), particularly life styles changes due to urbanization and rapid population density increases in metropolitan areas. The decreased living spaces and relatively inadequate green areas such as parks have resulted in people’s greater desire to want to get close to nature (Chen, 2005, p.42). Therefore, while there continues to be rapid growth in demand, how to enhance the development of leisure farms has become a subject worth exploring.

With the arrival of the experience economy era, the focus of the market appeal is “to create a valuable experience.” Experience has become an important factor for gaining an insight into consumer behavior (Day, 1990; Addis & Holbrook, 2001). In particular, leisure farms with abundant agricultural resources provide a basis for the “experience industry (Tuan, 2006, p.127). Consumers no longer want
only tangible products or services, but pleasant buying experiences and the creation of unique and memorable experiences with perceived values (Pine & Gilmore, 1998). Through the actual experience, the experiential marketing has become the consumers’ way of measuring the degree of products and services perceived (Mathwick, Malhotra & Rigdon, 2002), which comprises a series of activities before and after buying that affect consumers’ future consumption decisions (Robinette, Brand & Lenz, 2002; LaSalle & Briton, 2003). In other words, through emotional and sensory stimulations, harvests more valuable than the products or services can be created while value will become pleasant memories or special experiences, thus the incentive to buy again.

Leisure industry especially emphasized the importance of experience, which is in providing and delivering leisure services (Rossman, 1995). Experience is an the most important part of what consumers say they want and what managers can try to provide resources and activities through leisure, and consumer will encourage loyalty (Hull, Michael, Walker & Roggenbuck, 1996). “Experience” became a key element in understanding consumer behavior (Addis & Holbrook, 2001), and experience is also the key of success for leisure agriculture. Therefore, issues such as “What personal perceptions are elicited by experience activities?” and “What creates values consumers hold?” are worth exploring when differentiating leisure farm management.

In view of this, the main purpose of this study is to compile the “Leisure Farm Experiential marketing Scale” in order to present the content validity and reliability of the said scale through quantification methods proposed by Aiken (1980), which is intended for sequential data and facilitates simple calculations and explanatory analysis.

**LITERATURE REVIEW**

**Experiential Marketing**

With the concept of experiential marketing proposed by Schmitt in 1999, experience has become a main stream in the market. Traditional marketing mix no more satisfies demands of the times in this changing society nowadays, and become enters molds the sense organ experience, the thought approval experiential marketing. When consumers evaluates the product value, not only are the product appeal a determinant of the product value, but past experiences also serve as reference information for consumers (Tversky & Kahneman, 1991; Shafir, Osherson & Smith, 1993). It has been found from experience related literatures that the value consumers care about is derived from the consumption experience (Alderson, 1957); that is, the value obtained from the consumption experience is a driving force for consumers to spend. By gaining an insight into this kind of value, consumers’ spending behaviors can be better understood.

Experiential marketing focuses on consumer experiences, which provide sensory, emotional, cognitive, behavioral, and relational value that replace functional values (Schmitt, 1999). It is more memorable than traditional marketing. Schmitt (1999) argues that experiential marketing can differentiate a product from competitors and therefore it can also promote innovations. It is the difference between letting consumers gives experiences with products in order to give them enough information to make the decision, and get their something special or personal to impress their mind or excite their senses. When people always had experiences in their everyday life, but the consumer will remember the message better though experiential marketing by their senses, feelings, thought process, and actions. Consumer wants and needs to experience is a story connected to the product, for example Walt Disney create an “artificial world full of staged experiences” (Pine & Gilmore, 1999). Smilansky (2009) also defined experiential
marketing is the process of identifying and satisfying consumer needs, and is an integrated methodology through brand-relevant communications that add value. Therefore experiential marketing can also create consumer loyalty, and can satisfy consumers’ need in place of traditional marketing (Schmitt, 1999).

Moreover, Schmitt (1999) proposed the tools of experiential marketing, which built Strategic Experiential Models (SEMs). The SEMs can be used to created different types of consumer experiences. There are five types of consumer experiences in this models, and include sense, feel, think, act, and relate. The sense experiences model appeals to the senses, with the objective of creating sensory experiences through sight, sound, touch, taste, and smell. The feel experiences model appeals to consumers’ inner feelings, with the objective of creating affective experiences that range from mildly positive moods linked to a brand to strong emotions of joy and pride. The think experiences model appeals to the intellect, with the objective of creating cognitive, problem-solving experiences that engage consumers’ convergent and divergent thinking through surprise, intrigue, and provocation. The act experiences model enriches consumers’ lives by targeting their physical experiences, showing them alternate ways of doing things, as well as alternate lifestyles and interactions. At last, the relate experiences model contains aspects of sense, feel, think, and act marketing, thus relating the individual to something outside his/her private state (Schmitt, 1999).

Based on the literatures above, the experience marketing scale proposed by Schmitt (1999) has been adopted in this study, which shall be explored from five dimensions, sense experience, feel experience, think experience, act experience, and relate experience.

Content Validity

Content validity is mainly used to test whether the items possess representativeness and comprehensiveness, and whether or not the items tested fully reflect the research contents and theories. In the past, content validity testing had relied on logical analysis, which is based on the representation of the theoretical field to determine whether a scale possesses content validity, but it had not been able to objectively determine the content validity through quantification methods.

In order to make up for the inadequacy of the content validity used in determinations through logical analysis, scholar Lawshe (1975) proposed the content validity ratio(CVR) equation to quantify the experts’ degree of agreement on the content validity of one item and express the degree of the content validity through single indictors that range from -1 to 1. After deleting the CVR indicator items with negative values or have not reached significant standards, the items retained were good test items that possessed high degrees of content validity (Yu, 1993; Lai & Chang, 2007).

Another approach is the content validity coefficient and homogeneity reliability coefficient proposed by Aiken(1980, 1985), which can be used to quantify the validity rating of each item into one coefficient (V value). At the same time, in order to understand whether or not the experts share the same opinions (i.e. the reliability of expert opinions), Aiken (1980, 1985) also proposed a statistical method called the homogeneity reliability coefficient, which is used to quantify the experts’ degree of consistency for the item evaluations into one coefficient (H value) to serve as reliability indicators for testing the significance (Yu, 1993; Lai & Chang, 2007).

Yu (1993) mentioned that although the content validity ratio proposed by Lawshe (1975) coincided with the understanding and needs regarding the content validity for each item, the indicators might be in negative values, and evaluation standard consistency is narrowly defined, the actual significance of content validity cannot be explained or represented. Therefore, it is suggested that the approach of Aiken (1980, 1985) be adopted to improve the problem of the content validity ratio proposed by Lawshe (1975).
For this reason, the recommendation proposed by Yu (1993) has been adopted in this study. The content validity coefficient and homogeneity reliability coefficient proposed by Aiken (1980, 1985) shall serve as referential indicators for objective evaluations of the test or scale suitability.

METHODS

Research Sample
In this study, the expert questionnaire survey has been adopted as the study method. The content of the questionnaire shall serve as a basis for research data analysis and study of content validity and reliability of the leisure farm experimental value scale. A total of twelve experts and scholars including nine experts and scholars that study the leisure agriculture industry, marketing, and consumers behavior as well as three experts from the leisure farm industry have been invited to evaluate the appropriateness of the items and whether or not the items were consistent with the respective “leisure farms experiential marketing” dimensions.

Measures
In this study, the research tools used include the variable dimensions and items compiled from the experiential marketing related literatures and the self-compiled expert opinion survey of the leisure farm experiential marketing content. Through the five-point Likert Scale method, the ratings ranged from “extremely unimportant” to “extremely important” were given one to five points respectively. Then, experts and scholars were commissioned to inspect the item contents and give appropriate ratings for the items. After that, the items in the scale that had similar or confusing semantics, unsmooth sentences, inapplicable classifications, or items that are inconsistent with the actual situations were supplemented, amended, or deleted to ensure a more complete questionnaire.

The scale in this study is mainly based on the experiential marketing related viewpoints proposed by Schmitt (1999). Experiential marketing is defined as any consumer experiences some stimulations result from direct observation and participation their own events, in which generates motivation, personal to impress their cognitive, excite their senses and purchase behavior (Schmitt, 1999). Discussions on five dimensions including sense experience, feel experience, think experience, act experience, and relate experience by Strategic Experiential Models (Schmitt, 1999, p.231). The nomenclature of the items and variables is found in Table 1. Targeting the 19 questions, and do not put the lie detection questions. The operational definitions of the research variables are as follows:
1. Sense experience: The sense experience impact through sight, sound, touch, taste, and smell. And it will provide aesthetic pleasure, excitement, beauty, and satisfaction through sensory stimulation.
2. Feel experience: To understand what stimuli can trigger certain emotions as well as the willingness of the consumer to attract.
3. Think experience: To encourage consumers to creative thinking through surprise, intrigue, and provocation in a revaluation of the company and products.
4. Act experience: Consumers’ lives by targeting their physical experiences, showing them alternate ways of doing things, as well as alternate lifestyles and interactions.
5. Relate experience: To appeal the individual’s desire for self-improvement, to appeal the need to be perceived positively by individual others, and relate the person to a broader social system, thus establishing strong brand relations and brand communities.
<table>
<thead>
<tr>
<th>Factor</th>
<th>Item</th>
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<tbody>
<tr>
<td>Sense experience</td>
<td>1. The natural resources of farm try to attract my senses very much.</td>
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<td></td>
<td>2. The landscape resources of farm are very attractive.</td>
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<td></td>
<td>3. There are very interesting to keep in touch with the animals and plants.</td>
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<tr>
<td></td>
<td>4. The industry resources of farm are very special.</td>
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<tr>
<td>Feel experience</td>
<td>5. The environment of farm tries to put me in a certain mood from clean and comfortable.</td>
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<td>6. The waiter of farm makes me respond in an emotional manner from cordial.</td>
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<td></td>
<td>7. The experiential activity of farm let me feel very fresh and interesting.</td>
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<tr>
<td></td>
<td>8. The relevance activity of farm makes me respond in very joyful emotional manner. (For example pluck and feed.)</td>
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<tr>
<td>Think experience</td>
<td>9. The products of farm try to intrigue me from the uniqueness of the agricultural production process.</td>
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<td></td>
<td>10. The interpretation or indication service of farm stimulates my curiosity that I realize the characteristic of the animals and plant.</td>
</tr>
<tr>
<td></td>
<td>11. The characteristically experiential activity of farm stimulates my interest.</td>
</tr>
<tr>
<td></td>
<td>12. Personally experience from the farm tries to intrigue me that safeguard the naturally ecological.</td>
</tr>
<tr>
<td>Act experience</td>
<td>13. The souvenirs of farm reminds me of I want buy very much.</td>
</tr>
<tr>
<td></td>
<td>14. When participate in activities from the farm, tries to make me think about my lifestyle and health status.</td>
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<tr>
<td></td>
<td>15. Every indication in the farm is obviously that make me easy to understand to distinguish.</td>
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<td></td>
<td>16. Through website information of farm, will try to attract me come to farm.</td>
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<tr>
<td>Relate experience</td>
<td>17. I can relate to other people through come to the farm.</td>
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<td></td>
<td>18. The agricultural product of farm tries to get me to think about relationships with local characteristic.</td>
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<td></td>
<td>19. The natural landscape in the farm, tries to get me to think about important between environmental resources do not destroy.</td>
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</table>

**RESULTS**

In this study, the statistical method of content validity coefficient and homogeneity reliability coefficient proposed by Aiken (1980, 1985) has been adopted. The degree of agreement among the experts and researchers regarding the importance of the item content was the quantified into one coefficient (V value). After testing the significance, the items served as indicators for determining whether or not the items developed possessed content validity. In addition, the degree of consistency of the items evaluated was quantified into another coefficient (H value), which also served as an reliability indicator after testing the significance of the items in order to test the reliability of the scale content and whether or not the expert opinions were consistent. The content validity coefficient and homogeneity reliability coefficient calculations are described as follows.

**Content Validity Coefficient Calculation**

The content validity calculation method proposed by Aiken (1980, 1985) is only applicable for sequential evaluation data such as the Likert rating scale. The basic assumption, data symbols, and data are defined as ratings from n number of raters on one single item while each item is rated by every rater.
on a scale of c number of rating classes. The c number of rating classes must be whole numbers with continuity, of which both positive and negative values can be used (Yu, 1993).

The scoring is the total of the deviation scores dij in item j given by n number of raters to obtain the total deviation score Sj of item j. The formula is as follows:

\[ d_{ij} = r_{ij} - 1 \quad (j = 1 \ldots m, i = 1 \ldots n) \]  

(1)

\[ S_j = \sum_{i=1}^{n} d_{ij} \]  

(2)

Secondly, based on the rating results for item j given by n number of raters, the content validity coefficient Vj of item j is obtained. The formula is as follows:

\[ V_j = \frac{S_j}{n(c-1)} \]  

(3)

The above Vj value falls between 0 and 1. A higher value indicates higher content validity of item j. From the table, whether or not the actual Vj values of the items in the entire questionnaire have reached significant standard can be obtained.

In this study, twelve experts and researchers have been invited to engage in the content validity testing. After checking, the table shows that the content validity coefficient (V value) of each tested item has to be greater than .69 to effectively reach significant standard (α=.05). The calculation results in this study using the formulas are as shown in Table 2. Delete question of the 14 item that has not to be greater than .69 to reach significant standard (α=.05). A content validity coefficient (V value) of between .73 and .96 indicates significant standard has been reached. Therefore, the researchers’ validity assessments for each item in the scale show that the items possess good content validity, indicating the scale is an effective measurement tool.

### Table 2: Leisure farms experiential marketing of content validity coefficient (V value)

<table>
<thead>
<tr>
<th>Item</th>
<th>1</th>
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<th>19</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vj</td>
<td>0.65</td>
<td>0.77</td>
<td>0.79</td>
<td>0.82</td>
<td>0.85</td>
<td>0.96</td>
<td>0.88</td>
<td>0.73</td>
<td>0.75</td>
<td>0.83</td>
<td>0.85</td>
<td>0.79</td>
<td>0.73</td>
<td>0.6</td>
<td>0.79</td>
<td>0.79</td>
<td>0.75</td>
<td>0.77</td>
<td>0.77</td>
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#### Homogeneity Reliability Coefficient Calculation

Aiken (1980, 1985) also proposed a statistical method of homogeneity reliability coefficient, which is used to quantity the degree of consistency of the experts’ item evaluations into another coefficient (H value). In the same manner, the items tested for significance serve as referential indicators for reliability. The basic assumptions, symbols, and calculation methods: first, calculate the gap between the absolute values of two raters; the total n (n-1)/total of the gap between the absolute values of the two raters. The formula is as follows:

\[ S_j = \sum_{i=1}^{n-1} \sum_{i=i+1}^{n} |r_{ij} - r_{i,j}| \quad (j = 1 \ldots m, i = 1 \ldots n) \]  

(4)

Then, calculate the homogeneity reliability coefficient, Hj of item j. The formula is as follows:

\[ H_j = 1 - \frac{4S_j}{(c-1)n^2-k} \]  

(5)

Of which, n is the total number of experts; Sj represents the total of deviation scores in item j, as rated by n number of experts in the scale with c number of rating classes; rij are the ratings from the
experts in item j; and k is the dummy variable. If n is an even number, K=0; when n is an odd number, k=1, and the H or Hj value is between 0 and 1. A greater value indicates higher homogeneity reliability coefficient (Aiken, 1985; Yu, 1993). From the table, whether or not the Hj values in the respective items have reached significant standard can be tested.

In this study, twelve experts and researchers have been invited. After checking, the table shows that the homogeneity reliability coefficient (H value) of each tested item has to be greater than .47 to reach significant standard (α=.05). The calculation results using the formula in this study are as shown in Table 3. Delete question of the14 item that has not to be greater than .47 to reach significant standard (α=.05). A homogeneity reliability coefficient (H value) of between .49 and .85 indicates that significant standard has been reached. Therefore, the scale is said to possess good internal consistency and reliability and is considered a reliable measurement tool.

<table>
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<tr>
<th>Item</th>
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</thead>
<tbody>
<tr>
<td>Hj</td>
<td>0.67</td>
<td>0.51</td>
<td>0.52</td>
<td>0.61</td>
<td>0.67</td>
<td>0.85</td>
<td>0.68</td>
<td>0.60</td>
<td>0.60</td>
<td>0.64</td>
<td>0.59</td>
<td>0.57</td>
<td>0.51</td>
<td>0.49</td>
<td>0.47</td>
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</table>

DISCUSSIONS

Validity refers to the measurement of accuracy; it is a scale or measurement tool used to precisely measure characteristics for testing or degree of function. Higher scale validity indicates that the scale results can better present the actual characteristics of the tested subjects. Reliability on the other hand refers to the trustworthiness of the scores tested using a scale, which is the consistency or stability of the results. To construct one measurement tool, both methods are considered very important indicators. The quality of the scale validity and reliability affects the accuracy and completeness of data collected, which in turn affects the final research result presentation.

As the content validity of scales in the past had been rated through logical analysis, no objective and quantified verifications were done. Therefore, an applicable sequential data quantification and analysis method was proposed by Aiken (1980, 1985) to test whether or not the leisure farms experiential marketing scale possessed good expert content validity and homogeneity reliability coefficient. The research results indicate that all the items in the leisure farms experiential marketing scale compiled in this study have content validity coefficients of between .73 and .96 and homogeneity reliability coefficients are between .49 and .58, indicating significant standards have been reached in both. This being said, the scale is said to possess good expert content validity coefficient and homogeneity reliability coefficient. It is a scale that possesses effectiveness and reliability, is suitable for evaluating the experiential marketing perceived by leisure farm tourists, and is considered a reliable measurement tool.

REFERENCES


