

A Study of Consumer Preferences for Higher Education Institutes in Tehran through Conjoint Analysis

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Abstract

As the nature of the educational atmosphere grows more competitive, the role of marketing develops more meaningfully in this industry. One of the key aiding components of marketing effort is to understand consumers' preferences in their training purchase decision process. By implementing conjoint analysis, present study investigates how consumer do tradeoff between preferences of number of attributes and the importance they attached to each of these attributes. Result shows that the three most important attributes studied are word-of-mouth, trainer's academic qualification and trainer's practical experience. Findings of current study reveal which attributes are important to consumers and provide essential implications for marketers in developing actionable marketing communications.

Keywords: Consumer preference, Selection, Conjoint analysis, Educational Institute, Tehran

1. Introduction

Increase in demand for training services has intensified competition among existing training institutions, as well as establishment of new international institutions. In addition, many of these institutions implement different pricing strategies for offered courses. Given that, there are many available similar courses. Consumers must assess a range of alternatives in order to find one gain the best value. They generally base their assessment on information available in marketing materials provided by institutions and word-of-mouth. Nonetheless, services such as executive training can be difficult to evaluate.

Service have been classified into search, experience and credence (Darbi, 1973), of which credence property are the most difficult service to evaluate even after consumption (Iacobucci, 1996). Previous studies have depicted difficulty in evaluation of credence services due to a higher perceived risk than for physical product purchases (Iacobucci, 1996). Indeed, Iacobucci (1996) has advised to overcome the inherent intangibility of services and to reduce the perceived risks, marketers have to incorporate tangible symbols in their marketing communications to the consumers.

Researchers have mentioned that consumers commonly base their service decision on readily available information (Mattila, 2002). Several factors have been found to affect consumer service evaluation, including service provider expertise and trustworthiness (Erdem, 2004), corporate image and reputation (Lafferty, 2002) and personal recommendation (Mazzarol, 2002). Having insights into factors have most important contribution to evaluation of executive training and how consumers do tradeoff between these factors, provide valuable information to marketers.

Objectives of current study are to examine how consumers use information when they evaluate executive training decisions in Tehran. To conclude their preferences for training course selection, consumers consider what is important to them based on available information. Such considerations, consciously or unconsciously, lead to a trade-off between the attributes or aspects of courses that are important to consumers. An understanding of trade-off process and relative importance attached to the various attributes will help managers to devise effective marketing strategies. Marketers will be able to employ this information to communicate more effectively with service attributes that appeal to consumers.

Current study spots on attributes that differ among service providers. Namely, amount of training content detail, perceived expertise (academic and practical), institutional reputation, personal recommendations and price. These attributes have been identified as important factors in literature but their relative importance have not been examined in executive training. Other attributes such as training venues, environment, facilities, and customer services are of comparable standards among local institutions and therefore are unlikely to have any impact on the consumers' tradeoff process. Consequently, these attributes are not included in this study.

In training literature, support has been found for the importance of

a) Training content (Longenecker, 2002)

- b) perceived expertise(Longenecker, 2002)
- c) Institutional reputation (Mazzarol, 2002)
- d) Personal recommendations such as word-of-mouth(Mazzarol, 2002)
- e) Price(Leblanc, 1999).

For the purpose of this study, these factors are considered to impact executive training decisions.

Literatures point out that training content is related to knowledge gap which consumers would like to fill to improve their job performance(Roman, The Effects of Sales Training on Sales Force Activity., 2002).Marketers have to decide whether to provide detailed service content or brief service content along with other important information when they design communication material(Smith, 2002). Former studies have shown that inadequate information about a service, negatively affects consumer's choice(Smith, 2002).Expert knowledge and practical ability to unearth and meet the needs of clients are perceived to be the most important factors in choice of professional service providers in the advisory fields such as medical and financial consultants(Joiner, 2002).

Great numbers of studies have confirmed perceived expertise reduces client's perceived risk and increases his or her confidence in the reliability of the service received(Joiner, 2002). In addition, perceived expertise indicated by competence in knowledge and skills are considered as major determinants of service quality(Parasuraman, 1985). Reputation for good quality is one of the most important factors in achieving a sustainable competitive advantage(Aaker, 1989). In the training literature, institutional reputation has been found to influence students' choice of institution (Mazzarol, 2002). The intangible nature of professional services and the inherent risk associated with it has led consumers to seek information from personal sources before making purchase decisions(Bansal, 2000). In the purchase of services, Murray(1991) noted that information from personal source, such as word-of-mouth, is more influential than information from impersonal sources, such as advertising media. In addition, Murray found that information about the opinions and experiences of peers are more effective in influencing purchase of services than purchase of goods.Personal advocates such as salespeople also play an important role in reducing consumer's perceived risk(Sweeney, 1999). The ability of salespeople in providing product knowledge or recommendations may also influence the purchase decision, especially for less knowledgeable customers(Sweeney, 1999). Previous research has noted when monetary sacrifice is high, perceived value of the purchase is low which negatively affects consumer's willingness to buy(Dodds, 1991). Thus, price negatively influences perceived value.The potential dual influence of price which positively influences perceived quality and negatively influences perceived value has been found in many studies(Dodds, 1991). Hence, it complicates assumptions about influence of price on intentions to purchase, as perceived quality and value are both positively relate to intentions.

Although, researcher awareness about consumer service purchase decisions is high, very few studies have focused on consumer trade-offs in training purchase decisions. Most of researches on executive or corporate training have focused on evaluation of training after

attending a course(Longenecker, 2002) while other researches focused on training program development issues such as appropriateness of content, training duration and mode of delivery(Roman, 2002). Current research applies conjoint analysis to measure utilities of various attributes among higher educational institute.

2. Conjoint analysis technique

Traditional research techniques in assessing consumer preference tend to treat each attribute independently and very. So far little information on how consumers are likely to make a favorable or unfavorable buying decision is unearthed using old techniques. Consumers do not consider each attribute of a training course purchase singly and independently when making a choice. Instead they consider whole range of service attributes in totality.

Conjoint-based approach help to understand how customers make trade-off one product attribute against another. Conjoint analysis engage respondents in a more realistic judgment stance than do other research methods can better predict overall consumer preference through aggregating the utility scores of all individual product attributes(Levy, 1995). It becomes a popular method to identify and understand combined effects of product attributes on preferences for a product/service(Hobbs, 1996). Conjoint analysis is also known as “tradeoff analysis” or “utility analysis”. Two basic assumptions are made in conjoint analysis(Gil, 1997):

First, a product/service can be described as a combination of levels of a set of attributes.

Second, these attribute levels determines consumers' overall judgment of the product/service.

Using conjoint analysis is as appealing as it asks respondents to make choices between products defined by a unique set of product attributes in a way resembling what they normally do by trading off features, one against the other.

When asked which attributes they would like, most of customers choose everything on their wish list. Conjoint can establish relative values of particular attributes and identifies tradeoffs which customers are likely to make in choosing a product and a service in addition with price they are willing to pay for it(Toombs, 1995). The relative importance of each attribute can be calculated as the utility range(i.e. difference between the highest and the lowest utility for that attribute) divided by the sum of utility ranges of all attributes(Okechuku, 1993).

Conjoint analysis produce two important results(Levy, 1995):

1. Utility of attribute: It is a numerical expression of the value consumers place in an attribute level. It represents relative “worth” of the attribute. Low utility indicates less value and high utility indicates more value.
2. Importance of attribute. It can be calculated by examining the difference between lowest and highest utilities across levels of attributes.

3. Approaches to conjoint analysis

There are two general approaches to data collection for conjoint, two-factor-at-a-time trade-off method and multiple factor full-concept method. Two-factor-at-a-time trade-off method is now seldom used. Full-concept is more realistic as all factors are considered and evaluated at the same time. In the full-concept (or full-profile), the respondents are asked to rank or score a set of profiles according to their preference. On each profile, all factors of interest are represented and a different combination of factor levels (i.e. features) appears. Possible combination of all factor levels can become too large for respondents to rank or score in a meaningful way. Full-concept approach in SPSS categories conjoint uses fractional factorial designs which uses a smaller fraction of all possible alternatives. This reduced size subset (orthogonal array) considers only the main effects and the interactions are assumed to be negligible.

The SPSS conjoint procedure can calculate utility scores (or part-worths) for each individual respondent and for the whole sample. These utility scores, analogous to regression coefficients, can be implemented to find relative importance of each factor. SPSS permits use of simulation profiles to represent actual or prospective products to estimate or predict market share of preference.

4. Research design

The proposed model included five attributes, namely, perceived expertise, amount of training content detail, institutional reputation, price and personal recommendations. Conjoint study in this thesis includes seven attributes. Attributes and their levels are shown in Table 1. Each of these attributes and levels are described in more detail below. Despite a careful selection of factors, there are still too many ($2 \times 3 \times 2 \times 3 \times 3 \times 2 \times 3 = 648$) possible profiles for respondents to choose from. The SPSS generated a parsimonious orthogonal array of 16 profiles.

Table 1. Conjoint attributes and attribute levels

Factor	Factor Level
Amount of training content detail	Detailed learning objectives/outcomes/topics provided in the brochure
	Brief learning objectives/outcomes/topics provided in the brochure
Trainers academic qualifications	Trainer has a Doctoral degree
	Trainer has a Masters degree
	Trainer has a Bachelor Degree
Trainers practical experience	Trainer has practical experience in the area being taught
	Trainer don't have practical experience in the area being taught
Institutional reputation	The institution has an above average reputation
	The institution has an average reputation
	The institution has a below average reputation
Word-of-mouth	Your colleagues/friends/relatives give a favorable opinion of the course
	Your colleagues/friends/relatives give an unfavorable opinion of the course
	You do not know anyone who has taken the course
Advice from staff of the institution offering the course	Good advice provided by staff from the institution regarding the course
	No advice provided by staff from the institution regarding the course
Price	\$ 100
	\$ 200
	\$ 400

Background characteristics of respondents were collected for describing the sample. The background characteristics collected in the current study included age, gender, education level, frequency of attending courses and occupation. Specifically, data for this study are obtained from executives attending courses at Higher Education Institute in Tehran. These individuals are chosen as they have recently been involved in choosing executive training courses. While conjoint analysis places the fewest demands on the sample size requirement, multivariate analyses such as regression and discriminate analysis are recommended to have a sample size of minimum five observations per independent variables(Hair, 1998).The sample size used in the current study is approximately 150.

Questionnaire are pre-tested on a small sample of executives prior to the main survey launch to identify possible problem areas such as respondent understanding of attributes, levels in conjoint profiles and preciseness of the instructions. Some questions and instructions in the questionnaire are reworded after pre-test based on the feedback from the pre-test respondents.

The final version of the questionnaire was administered as a pen and paper questionnaire. Respondents were briefed on the purpose of the survey and invited to participate in the survey by completing the questionnaire and submitting it to the survey administrator at the end of the course they were attending.

There were two phases of analysis undertaking in this thesis. The first phase involved the preparation of the data prior to analysis and the descriptive analysis. The second phase involved the estimation of the conjoint model, the examination of the attribute hypotheses, the segments identification, and the examination of consumers' preference profile.

In first phase, the data were examined to understand the nature of and the relationships among the variables, prior to the application of the multivariate techniques. Second, the sample characteristics were examined at the univariate level. Univariate statistics such as frequency, mean, standard deviation and variances were computed to better understand the data and to identify any potential problem for later phases of analysis. Graphical methods, including histograms and scatter plots were also used to understand the characteristics of the underlying data and the relationships between the variables in this thesis.

In second phase, there is conjoint analysis. Prior to conducting the analysis in each of these two stages, the data were first examined for outliers and violations of underlying statistical assumptions.

The first stage of analysis was conjoint analysis. The relative importance of each attribute was computed to evaluate the differences in importance consumers attached to these attributes in the choice experiment. Although there were no specific hypotheses relating to the relative importance of the attributes, the information should be very useful to marketers. From this, 130 completed and partially completed questionnaires were obtained, providing a response rate of 86%. As Bretton Clark's (1992) conjoint program does not allow missing data, a number of respondents were excluded from the subsequent analysis due to missing data. Consequently, the 107 people who had fully completed the questionnaire were included in subsequent analysis, providing a usable response rate of 82%.

Respondents' age categories ranged from under 21 (2.6 %) to above 51 (1.7 %). The majority of respondents (93.1 %) were between 21 and 50 years. There were more female respondents (56%) than male respondents (44%) and a majority of the respondents (91.4 %) had attained at least a Diploma or higher in their educational achievement. Occupations varied, with 32 % of the respondents being student, 50 % in executive roles and 7.8 5 in management (manager orentrepreneur). While 31% ofthe respondents had not attended previous executive training courses, 32 % attendedcourses once or twice per year and 37 % attended courses more frequently.

5. Results

A sample of 150 executives who were attending courses in Tehran Institutes were administered the questionnaire discussed.

Utilities for each attribute level are estimated using full-concept conjoint analysis approach and analyzed further using the SPSS statistical software. Table 2 shows the relative utilities that were obtained the relative importance of each of the attributes.

Table 2. Conjoint analysis results –relative utilities and importance

Attribute	Relative importance (%)	level	Average Utility
Amount of training content detail	7.7	Detailed level of training content	1.975
		Brief level of training content	-1.975
Trainers academic qualifications	19.4	Trainer with Doctoral Degree	6.426
		Trainer with Masters Degree	1.153
		Trainer with Bachelor Degree	-7.579
Trainers practical experience	16.0	Trainer with practical experience	8.028
		Trainer without practical experience	-8.028
Institutional reputation	13.3	Above average institutional reputation	3.609
		Average institutional reputation	-0.826
		Below average institutional reputation	-2.783
Word-of-mouth	21.85	Favorable word of mouth	9.597
		Do not know anyone who had attended the course	-0.087
		Unfavorable word of mouth	-9.510
Advice from staff of the institution offering the course	8.75	Good advice given by the staff of the institution	3.311
		No advice given by the staff of the institution	-3.311
Price	13.01	\$ 100	1.764
		\$ 200	1.094
		\$ 400	-2.858

Average utility scores, shown in column 4 of table 2, describe desirability of the various aspects of an attribute. Higher scores suggest respondents possess greater preference for specified aspect. Scores reveal not only a preference “ranking” but also degree of preference. Second column of table 2 (The relative importance) provides an indications of importance placed on each attribute relative to the other attributes. Overall, respondents’ preferences were determined more by word-of-mouth than other attributes.

The major determinants of institute choice for customers in Tehran and their relative importance are word-of-mouth (relative importance 21.85), Trainers academic qualifications (relative importance 19.4) , Trainers practical experience (relative importance 16.0) , Institutional reputation (relative importance 13.3), Price (relative importance 13.01) , Advice from staff of the institution offering the course (relative importance 8.75) , Amount of training content detail (relative importance 7.7).

6. Conclusion and Marketing Implications

In conclusion, four most important determinants of institute preference for customers are word-of mouth, trainers’ academic qualification, trainers’ practical experience and institutional reputation. Obviously, conjoint analysis can provide real insights into students’ decision process and education managers should consider its advantages much more than they have in past. It provides a reliable approach to understand the way students’ make

trade-off between competing attributes and provides understanding of the attributes that are most likely to create positive preference.

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