

THRESHOLD PRICING IN  
UNIVERSITY CONTINUING EDUCATION

by

MARVIN EUGENE LAMOUREUX

B. Comm. (Economics) University of Montreal (Loyola College),  
Montreal, Que., 1962

M.Sc. (Marketing) San Jose State University, San Jose, Calif., 1966

M.B.A. (Urban Land Economics) University of California, Berkeley,  
Calif., 1968

A DISSERTATION SUBMITTED IN PARTIAL FULFILMENT OF THE  
REQUIREMENTS FOR THE DEGREE OF

DOCTOR OF EDUCATION

in the Faculty of Education.

We accept this dissertation as conforming to the  
required standard

THE UNIVERSITY OF BRITISH COLUMBIA

SEPTEMBER, 1975

In presenting this thesis in partial fulfilment of the requirements for an advanced degree at the University of British Columbia, I agree that the Library shall make it freely available for reference and study.

I further agree that permission for extensive copying of this thesis for scholarly purposes may be granted by the Head of my Department or by his representatives. It is understood that copying or publication of this thesis for financial gain shall not be allowed without my written permission.

Department of

Adult Education

The University of British Columbia

2075 Wesbrook Place

Vancouver, Canada

V6T 1W5

Date

Nov. 8/75

## ABSTRACT

Three pricing methods: multi-stage, economic and threshold were reviewed relative to continuing education. Because threshold pricing's scope for course price development was so broad, it became this study's purpose to determine if such a pricing method could be applied to continuing education.

Three studies were conducted using University of British Columbia Continuing Education data. The first study analyzed 937 courses which either failed to materialize or were conducted. Mean course prices between both groups were not significant. Course price and length interaction as each affected enrolment were also analyzed. Course length, not price, significantly affected enrolment. Centre course prices were therefore "acceptable" to the Centre's participants.

A second study analyzed 119 general and professional education course participants to determine threshold pricing attitudes. Although course price thresholds existed for both groups, it was evident that each represented a distinct market. Significant variations in socio-economic variables and pricing attitudes occurred. A more detailed study was then conducted using another 242 professional education course participants.

Hypotheses based on threshold pricing theory were tested. Significant differences existed between the mean price of courses and participant determined upper and lower bound prices. Positive and significant correlations occurred for selected "wealth" and "continuing education commitment" variables, as both variables related to these upper and lower bound prices. Price and imputed quality attitudes about Centre courses were evident with only 8.5% of the participants wanting free courses.

Classification of the 242 participants into three participant-determined price-oriented sub-markets ("top dollar", average, low) was statistically accomplished but proved inadequate for marketing decision purposes.

All three studies defined beneficial uses for both market segmentation and threshold pricing as each relates to continuing education. It was suggested, however, that further studies be conducted to broaden the scope of these decision techniques.



## TABLE OF CONTENTS

	Page.
Title Page .....	i
Abstract .....	ii
Acknowledgement .....	ix
Table of Contents .....	iv
List of Tables .....	vii

CHAPTER:

I.	INTRODUCTION .....	1
	Background to the Problem .....	1
	The Problem .....	3
	Purpose .....	5
	The Setting .....	6
	Procedure .....	7
	Plan of the Study .....	10
II.	THEORETICAL BACKGROUND .....	12
	Introduction .....	12
	Economic Theory of Demand .....	14
	Non-Economic Factors Related to Consumer Demand and Price .....	20
	Classification of Consumer Products .....	22
	Buyers' Subjective Perception of Price .....	24
	The Role of Price in the Marketing Process .....	33
	Pricing Goals and Price Determination .....	35

<u>CHAPTER:</u>		Page.
II.	Multi-Stage Approach to Pricing .....	41
cont'd.	Summary .....	46
III.	COURSE PRICES AND PARTICIPANT REACTION .....	48
	Introduction .....	48
	Purpose .....	48
	Exploratory Hypotheses .....	49
	Procedure .....	50
	The Pricing Strategy .....	51
	Pricing Strategy and Participant Behaviour .....	56
	Length of Course versus Enrolment .....	60
	Course Fee and Length versus Enrolment: An Interaction .....	62
	Summary .....	67
IV.	THE PILOT STUDY .....	69
	Introduction .....	69
	Purpose .....	69
	Exploratory Hypotheses .....	70
	Procedure .....	71
	The Questionnaire: A Reappraisal .....	73
	Respondents' Socio-Economic Composition .....	76
	Community and Educational Participation .....	84
	Program, Institutional and Price Response Patterns .....	89
	Summary .....	99

<u>CHAPTER:</u>	Page.
V. THRESHOLD PRICING AND MARKET SEGMENTATION .....	102
Introduction .....	102
Purpose .....	102
Research Hypotheses .....	103
Procedure .....	106
Respondents' Socio-Economic Composition .....	107
Program and Institutional Response Patterns .....	109
Community and Educational Participation .....	115
Course Price Response .....	116
Price Thresholds and Market Segmentation .....	126
The Findings .....	129
Marketing Considerations for Continuing Education Administrators .....	143
Summary .....	148
VI. SUMMARY AND CONCLUSIONS .....	150
Introduction .....	150
Summary .....	150
Conclusions .....	154
Implications .....	157
BIBLIOGRAPHY .....	162
INTERVIEWS .....	170
APPENDICES .....	171

## LIST OF TABLES

<u>TABLE:</u>	Page.
1. Fee Structure Variations between Professional and General Courses .....	53
2. T-test between the Price of "Go" and the Price of "No-go" Courses .....	59
3. The Relationship between Enrolment and Length of Course .	61
4. Correlation Matrix--Professional Courses .....	64
5. Correlation Matrix--General Courses .....	65
6. Percentage of Individuals in Each Family Income Category .....	75
7. Percentage of Individuals in Each Net Worth Category ....	75
8. Socio-Economic Composition - A Hotelling-T <sup>2</sup> Analysis ....	77
9. Analysis of Pilot Study Respondents' Marital Status .....	78
10. Analysis of Pilot Study Respondents' Employability .....	80
11. Respondents' Place of Residence .....	81
12. Respondents' Place of Residence .....	81
13. Income Levels .....	82
14. Sex Categories .....	83
15. Level of Organizational and Community Participation .....	85
16. Chapin Social Participation Scale Results .....	86
17. Hotelling-T <sup>2</sup> Analysis of the Chapin Social Participation Scale .....	87
18. Hotelling-T <sup>2</sup> Analysis of the Continuing Education Participation Scores .....	88
19. Program Responses - A Hotelling-T <sup>2</sup> Analysis .....	90
20. Participants with Outside Financial Aid .....	92

<u>TABLE:</u>	Page.
21. Location of Financial Aid .....	92
22. Institutional Responses - A Hotelling-T <sup>2</sup> Analysis .....	93
23. Reasons For Lack of Search .....	94
24. Search Procedures .....	95
25. Awareness Level of Participants .....	96
26. Course Price Considerations - A Hotelling-T <sup>2</sup> Analysis ...	97
27. Socio-Economic Composition of Participants .....	108
28. Respondents' Place of Residence .....	109
29. Program Responses of Professional Course Participants ...	110
30. Shopping Relationships between Behaviour and Self- Judgement .....	112
31. Reasons For Lack of Search .....	113
32. Participant Attitude Toward Other Institutions .....	114
33. Relationship between Threshold Bound Prices and Participant "Wealth" Factors .....	119
34. Relationship between Threshold Bound Prices and Participant Commitment to Continuing Education .....	121
35. Some Negative Relationships Toward Upper Bound Prices ...	123
36. Summary Output for Three-Group Upper Bound Discriminant Analysis .....	130
37. Summary Output for Three-Group Discriminant Analysis- Lower Bound Price Schedule .....	132
38. Summary Output for Two-Group Discriminant Analysis- Upper Bound High Versus Lower Bound High Price Segments .....	134
39. Summary Output for Two-Group Discriminant Analysis- Upper Bound Low Versus Lower Bound Low Price Segments .....	141

## ACKNOWLEDGMENTS

To the dissertation committee members who realized and accepted the study's complexity. To Dr. Gary Dickinson, who was instrumental in the development of the study's format and design. To my fellow students, Nicholas Rubidge and Adrian Blunt, who, being gentlemen, gave significant amounts of their time advising both myself and other graduate students about the Computing Centre programs. To all the people at the Centre for Continuing Education who supplied the information which made this dissertation possible.

## CHAPTER I

## INTRODUCTION

## BACKGROUND TO THE PROBLEM

Administrators in adult education, unlike their counterparts in elementary or secondary education, are confronted by administrative problems far beyond those classified as "educational". Adult educators usually do not have "captured" markets or clientele which are made available by legal statute. Program offerings, except in specific instances, are not limited by a provincial department of education and institutional existence, in a financial sense, is not totally determined through an automatic government budgeting system. What, in fact, sets public adult education administrators apart from their peers in elementary or secondary education may be defined within the concept of marginality.

Adult education administrators must allow the institution to function on a daily basis and, at the same time, grow to meet expanding community needs, not as a formally recognized educational institution, but as an addendum to a legally statuted institution such as a secondary school system, community college or university. Administrators are therefore placed in a position rather analogous to that of a marketing manager. Both are faced with the problem of pricing products or services which must successfully compete for a portion of the consumer's budget. If either person is unable to perform the marketing function successfully, the

institution does not remain financially flexible. This causes a restriction on the administration to meet operational needs and may lead to a curtailment of future growth.

To overcome these marketing problems, the adult education administrator may adopt one of three general program pricing strategies. The first strategy places the administrator in a conservative position with respect to his program offerings. He makes "safe" programs available to his potential clientele. These may include government-financed academic or vocational courses as well as popular general interest courses which have been successful in the past. His financial objective in this case would be to price courses so that a break-even point is virtually assured. If there is a greater demand than expected for a specific course and a profit is made, this unplanned profit could then be used for the development and presentation of programs which have a high probability of financial loss even though they may be definitely needed by a minority within the community.

The second pricing strategy demands that the administrator act more like a product marketing manager. In this sense, he researches the needs of his potential clientele and determines their attitudes towards certain prices or price lines for groups of courses. Price determination is not considered as just covering costs or earning a small profit; it is developed to earn the highest possible monetary return.

The third pricing strategy combines the two strategies as discussed above. Some educational programs are presented because they have proven themselves in the past and the administrator can anticipate the response.



In this area he may maximize his returns if he wishes since he has a good "feel" for the market demand. Other courses may be new and their potential participation unknown. Pricing strategy in these "non-safe" courses becomes a matter of decision-making related to market research, public relations and guess-work.

Regardless of the pricing strategy, an adult education administrator must make correct pricing decisions so that planned financial returns from course fees, as well as pre-determined budgetary requests, allow him to:

1. Offer a wide range of courses which are needed by specific segments of the community, although these segments may not be able to afford such services;
2. Experiment with program offerings which would not normally be considered;
3. Penetrate markets which previously would have been considered too remote;
4. Acquire staff for new program development, and
5. Generally expand the services of the institution. (Lamoureux, 1975)

#### THE PROBLEM

Because of the importance of successfully pricing course offerings, adult education administrators should look beyond the decision-making scope embodied in the cost-related break-even attitude and begin to realize that the price of an educational offering is not just to be defined as a cost factor to the potential consumer. (Leavitt, 1954) The course price

may actually be one of many subjective "cues", such as the institutional name or the type of educational offering, that the consumer uses in order to formulate a decision about the value of an expected purchase. (Andrews and Valenzi, 1971) Secondly, if the course price is derived mainly as a function of institutional costs such as instructor wages, overhead, or stationery, then the final fee may not fall into an acceptable price range for the potential participants; that is, the participants may consider the price either too high relative to the expected value, or too low and question the course's quality. The latter observation has been referred to as the principle of price and imputed quality. (Scitovsky, 1945)

Various consumer behaviour analysts have suggested that buyers have a notion of a fair price (actual or perceived) and that "the eventual purchaser perceives a band of prices above a particular price at which the article is regarded as too expensive, and below another price, as constituting a risk of not giving adequate value. (Stoetzel, p. 71)

Therefore, the general problem chosen for investigation was the existence and applicability of course price thresholds or ranges to the decision-making framework of program planners and administrators, with special reference to university continuing education programs. A specific research problem was also defined: do price thresholds actually occur around a "standard" price for continuing education courses?

Before responding to the research question, it was anticipated that an upper price threshold must exist as suggested by economic theory and common business sense. However, throughout adult education literature it is generally implied that a zero dollar low price threshold must be uppermost in the participants' minds. How could the price and imputed

quality principle possibly work? After all, something for nothing is a very rational purchase decision. (Buchanan and Barksdale, 1975)

## PURPOSE

The overall purpose of the study was to define threshold pricing's applicability for continuing education course price determination by advancing research originally developed by Stoetzel (1970), Scitovsky (1945), and Leavitt (1954). Within the framework of this broad structure, three specific research studies, each with a sub-purpose hierarchy, were pursued. The culmination of these research studies, as described below, accommodated the overall purpose.

### 1. Course prices and participant behaviour

An overview of the course price decision process of the Centre for Continuing Education at the University of British Columbia, a description of participant reaction to the resultant fee structure, and the examination of a non-price course enrolment factor were examined. The major purpose of this analysis was to determine if the Centre's pricing strategy generally conformed to standard practices found in adult education. It was also necessary to determine if the Centre's pricing strategy led to the development of course prices that were generally perceived as "acceptable", "fair", or "standard" by the participants, and to determine if a specific non-price "cue" significantly affected course enrolment.

## 2. Centre participants - a descriptive analysis

This research study's purpose was twofold. It was necessary to determine if the threshold price theory as well as the price and imputed quality principle existed for non-service items, in particular, continuing education courses. The products that had been previously analyzed included only non-service items, such as beer, carpets, and men's suits.

Secondly, it was necessary to determine if general and professional participants were a single market, or constituted two separate markets. This was done to narrow the scope but increase the effectiveness of the third study.

## 3. Threshold pricing and market segmentation

Based on the results obtained in the second study, students attending professionally-designated non-credit courses in education were intensively analyzed. The study's general purpose was to determine if price thresholds were effective in creating definable market segments which may be used for course price decision-making by continuing education administrators.

## THE SETTING

The University of British Columbia Centre for Continuing Education operates within administrative restrictions defined by the concept of marginality. Its organizational influence within the structure of the University is less than that of an academic faculty, although the educational demands placed on the Centre's administrators and program planners normally surpass those of most academic faculties.

The Centre is given a pre-determined operating budget with which it presents faculty-approved academic credit courses to students who are completing a Bachelor's degree. At the same time, the Centre's program planners develop a wide range of non-credit educational offerings including courses, lectures, seminars and panel discussions for individuals involved in governmental, educational, and voluntary agencies and for the general public. For the most part, these non-credit offerings have no pre-allotted budget and must be priced at least to pay for their operating and sundry costs and contribute to the growth of the organization. The program planners are therefore faced with basically the same pricing and product-development decisions as private enterprise marketing managers. However, the Centre's administrators are not organized to determine if their pricing philosophy as expressed through their pricing strategy and course prices is acceptable to the participants. Furthermore, the Centre has yet to study the effect of course price changes (especially increases) on their participants in general or particular segments of this apparent heterogeneous market.

#### PROCEDURE

The research design may be defined as a combination of an exploratory design and descriptive design. (Green and Tull, 1970) It is exploratory because the outcome led to a "more precise formulation of problems, including the identification of relevant variables and the formulation of new hypotheses". (Green and Tull, 1970, pp. 73-77) It is descriptive

because the study was involved in "the description of the extent of association between two or more variables", (Green and Tull, 1970, pp. 73-77) whereby these associations were useful for predictive and speculative purposes.

As mentioned previously, the research design was composed of three separate studies. The first study analyzed the price decision process used in the University of British Columbia Centre for Continuing Education to see if it fitted into the three-part price strategy paradigm described earlier. The study further described participant reaction to the Centre's fee structure in an a priori sense, and, within this framework, determined if a significant interaction occurred between course fees and course length as both affect course enrolments.

The second study, referred to as the pilot study, was used to test the major questionnaire in order to determine if there would be any administrative or analytical problems for the major study. Participant responses to specific questions were analyzed. This pilot study led to a redesigned questionnaire, as well as a decision to analyze only professional participants attending non-credit education courses.

The third study was conducted within the framework derived from the previous two studies. Participants attending professional non-credit courses responded to the questionnaire. The data derived therefrom were analyzed, hypotheses were tested, and observations were made.

A detailed description of the data analysis procedure is presented in each chapter. However, some general comments about the procedure are presented below.

The data from each study were analyzed and hypotheses tested by various statistical techniques including: t-tests, partial correlation coefficients, hotelling- $t^2$  tests, cross-tabulations and chi-square tests, and multiple discriminant analysis. The latter was useful for this study because it is "primarily a method of studying relationships among several groups", and, "it also can provide a basis for classification of individuals among several groups", or market segments. (Massey, 1965, p. 39) The dependent variables used for this classification (segmentation) purpose were participant responses to two pricing questions. One question asked for a price below which the course's quality would be suspect (lower bound price); the second question asked for a course price which would be too expensive (upper bound price). (Fouillé, 1970, p. 90)

Using multiple discriminant analysis, both upper and lower bound price categories were expressed as trichotomies. (Emry, p. 102) Therefore, both price categories were divided into three sub-categories: high, average, low, each sub-category being defined as a separate participant market.

The forward stepwise discriminant analysis was used to answer the question: "What characteristics of an individual are associated to the way he responds to the upper bound price sub-categories and the lower bound price sub-categories within a specific type of professional non-credit program?" Or, in slightly different terms: "What characteristics of the subjects will discriminate between the members of the three-price sub-categories within both major price categories for a specific type of educational program?"

The utility of linear discriminant functions as a statistical technique in Sociology has been illustrated by Brandow and Potter (1953), in Marketing Research by Green and Tull (1970), and Adult Education by Peterson (1971). In addition to identifying the discriminating independent variables, the forward stepwise discriminant analysis establishes linear discriminant functions with coefficients for each variable which contribute to the index score of each price group. (U.B.C. - BMD07M, 1973)

In essence, this study expanded the use of threshold pricing theory into the domain of continuing education by describing the independent variables that affected participant perception of course prices and by determining the effectiveness of multiple discriminant analysis relative to price-based market segmentation development.

#### PLAN OF THE STUDY

Following this chapter is a review of the literature. This review covers the theoretical bases which form the underlying assumptions related to economic pricing, psychological pricing and market-place pricing. Chapter III, Course Prices and Participant Reaction, describes the pricing techniques currently used at the University of British Columbia Centre for Continuing Education. Course price strategy and participant reaction to the subsequent prices were analyzed to determine threshold and imputed quality formulations.



Chapter IV, The Pilot Study, tested the proposed questionnaire to determine if any administrative or analytical problems could be discovered. A socio-economic, participation and attitude description of two major participant segments (general and professional participants) is presented. From this description, the professional segment was used for the major study.

Chapter V, Threshold Pricing and Marketing Segmentation, analyzed the professional participant market to determine the administrative applicability of threshold pricing techniques and the price and imputed quality principle. Various sub-markets within the upper and lower bound price categories are segmented for more detailed analysis.

Chapter VI, Summary and Conclusions, draws the complete study together to indicate achievement of purpose and proposals for future areas of study.

## CHAPTER II

## THEORETICAL BACKGROUND

## INTRODUCTION

The amount of adult education literature related to the pricing function in marketing management is extremely limited. The reasons for this void may be found in both marketing and adult education. Authors on marketing have not concerned themselves to the same degree with the marketing of services as the marketing of products. (Rathmell, 1975) Adult educators, on the other hand, have only recently been "expressing a need ... to develop marketing skills within their own staff or to seek the aid of professional marketers in the management, organization, and dissemination of information about their programs". (Buchanan and Barksdale, pp. 44-5)

At the present time, this literature void is filling with some general marketing literature. (Kotler, 1975; Rathmell, 1974; Webster, 1974) Adult education has had one major study (Buchanan and Barksdale, 1975) with various regional probes into the subject matter. (Lamoureux, 1975) However, the future use of marketing concepts in adult education appears to be expanding based on recent comments by authors in the discipline ... "they (extension administrators) need to become master craftsmen of marketing techniques in order to manage effectively the transactions they are responsible for". (Buchanan and Barksdale, pp. 44-5)

## Theoretical Foundations

The primary theoretical foundation has been derived from a field of study most commonly referred to as "pricing". Controversy concerning the complex role of price as a determinant of a purchase decision has led to two definable alternatives of analysis. (Shapiro, p. 14) The first alternative is based on assumptions found in economic demand theory, where price is assumed to influence buyer choice because price serves as an indicator of purchase cost. That is, the purchaser of the good or service is assumed to have perfect information about the range of prices he faces as well as a want satisfaction matrix of comparable product or service alternatives. Satisfaction maximization for a given budget constraint can thus be attained. (Harper, pp. 1-4)

The second alternative is based upon consumer behaviour research, indicating that there is no simple explanation of how price influences individual buyer's purchase decisions. Consumer behaviour analysts therefore ask the following question: "Does the price of a product convey only the value to be exchanged (as in economic theory), or does price also convey other information that is used by the consumer?" (Gardner, p. 25) such as product or service quality? Further complications have been noted if one assumes that price is only one of many market "cues" interacting with such factors as product or service characteristics, institutional image, prior purchase experience and promotional images. (Enis and Stafford, p. 57)

Between these conflicting price theories stands the continuing education program planner. He must, as his marketing function dictates, make a pricing decision involving his costs to produce the program as well

as the potential effect on the participants. (Leslie, pp. 5-9) Whether to develop a pricing formula that has as its underlying philosophy a "cost to the consumer" framework, a competitive strategy framework, (Dean, p. 457) or a combination of both (Oxenfeldt, pp. 463-470) becomes a major administrative task.

### Plan of the Review

The plan of this chapter is to review the literature found in economic demand theory and consumer behaviour analysis as both relate to program pricing. The role of marketing management as it pertains to the continuing educator's program pricing function will then be presented in order to give an administrative framework for eventual pricing policies.

### ECONOMIC THEORY OF DEMAND

Most economic texts (Samuelson and Scott, ch. 4; Leftwich, ch. 1) and marketing management texts (Stanton and Sommers, ch. 19; Kotler, ch. 14) cover economic demand theory in rather detailed fashion. "Traditional economic theory", as expressed by Howard (p. 77) "provides an old and rigorous theory of buyer choice ... (which) ... is cast more in the framework of a seller predicting a buyer's response than is true of any of the other (social science) disciplines".

In order to understand how economists generally deal with the complex factors relating to man's purchasing behaviour, one must realize a most fundamental assumption in economics--the principle of rationality.

This principle is characterized by the following points: (1) complete information, both present and future, about economic conditions are known to the rational man; (2) there are no institutional or psychological factors which impede action; (3) individual action has no great influence on the price structure. (Katona, p. 59)

Based on this simplified a priori system, economists have attempted to change various assumptions, introduce further complex factors and develop more realistic models of consumer behaviour. These variations include the introduction of pricing behaviour by large scale producers such as monopolists (a telephone company) and oligopolists (steel producers). Uncertainty about the probability distribution of future events has also caused economists to reformulate the assumption of complete information and foresight. (Luce and Raiffa, ch. 1)

Regardless of economic theory's steps toward market realities, that part of economic theory related to consumer behaviour and therefore demand for products or services has still maintained the rationality assumptions. (Rogers and Ruchlin, pp. 4-8) These assumptions are manifested in the form of the demand curve or, as it is also called, the demand schedule. This schedule is defined as "the demand for the amount of a particular good or service that consumers are willing and able to buy at each price in a set of possible prices during a specified period". (Rogers and Ruchlin, pp. 35-6)

The fundamental characteristic of demand theory is the inverse relationship between price and quantity demanded; that is, as the program fee increases from \$6 to \$30 the enrolment level decreases (36 to 6

participants), and as the program fee decreases from \$30 to \$6, the enrolment level increases (6 to 36 participants), because "more people substitute it for other goods". (Samuelson and Scott, p. 58)

A graphic representation of the demand schedule is called the demand curve. The inverse relationship between program fee and enrolment level is defined by the convex shape of the curve. This property is given a name: "The law of downward sloping demand"; that is, "when the price of a good is raised (at the same time that all other things are held constant), less of it will be demanded". (Samuelson and Scott, p. 59)

Given the above "law", economic demand theory then derives its basic consumer buying behaviour analysis based on various forms of so-called demand elasticity.

Elasticity of demand is used to analyze changes in the quantity demanded given a variation in the price structure. This concept is devised to indicate the degree of responsiveness of participants to changes in the program fees. "It depends primarily upon percentage changes and is independent of the units used to measure (program enrolment) ... and ... (program fee)." (Samuelson and Scott, p. 404) Elasticity has a qualitative definition using three alternative categories:

1. When a reduction in program fees raises enrolment level so much that total revenue, or program fee per participant multiplied by the number of participants, increases, one speaks of elastic demand;

2. When a reduction in program fee results in an exactly compensating increase in program enrolment so as to leave total revenue unchanged, one speaks of unitary elasticity;

3. When a reduction in program fee results in such a small percentage increase in program enrolment such that total revenue actually decreases, one defines this situation as inelastic demand.

Elasticity of demand has a numerical definition and is calculated by the use of the following formula:

$$\begin{aligned} \text{elasticity} &= \frac{\text{percentage change in enrolment}}{\text{percentage change in program fee}} \\ &= \frac{\text{change in enrolment}}{\text{original enrolment}} \div \frac{\text{change in program fee}}{\text{original program fee}} \end{aligned}$$

The quantitative outcome is then defined by the following criteria:

<u>Elasticity Value</u>	<u>Elasticity Description</u>
Less than one	Inelastic
One	Unitary Elasticity
Greater than one	Elastic

As was mentioned previously, measures of elasticity bear a direct relation to revenue considerations. Total revenue (TR) for any enrolment was defined as the program fee multiplied by the number of participants for that particular level of fee requirement. Thus, for any given price change, the following relationship between demand elasticity and total revenue prevails:

<u>Elasticity Value</u>	<u>Total Revenue After a Program Fee:</u>	
	<u>Increase</u>	<u>Decrease</u>
Inelastic	Increases	Decreases
Unitary Elasticity	No change	No change
Elastic	Decreases	Increases

By definition, an elastic demand curve (or schedule) implies that the quantity change is proportionately larger than the price change. Therefore a price decrease from \$30 to \$24 which increases enrolment from 6 to 18 participants is so great that the total revenue (TR) would, for example, increase from \$180 to \$432. The inverse could also occur; that is, a price increase from \$24 to \$30 could cause a greater percentage decrease in enrolment (18 to 6) leading to a decrease in TR--\$432 to \$180.

Unitary elasticity occurs when the program planner notices that a decrease in a program fee causes no definite change in his TR. A similar occurrence appears if the program planner were to raise the program fee. Although enrolment would drop, the fee increase would offset any loss and the TR would remain the same.

Inelasticity of demand occurs "when a percentage cut in (the program) price evokes so small a percentage in quantity (enrolment) as to make total revenue fall". (Samuelson and Scott, p. 404) For example, the fee is reduced from \$18 to \$12, and the enrolment increases from 24 to 30 participants. This increased enrolment is so minimal that TR decreases from \$432 to \$360. The inverse situation is more interesting since the participants, although faced with a higher fee, still attend the program in such numbers that the slight decrease in enrolment--from 30 to 24 participants--is more than offset by the larger percentage increase in program fee--\$12 to \$18.

Examples of all three consumer behaviour reactions can be found in continuing education. (Lamoureux, 1973, p. 65) Elastic demand occurs when potential participants are able clearly to define a "good deal" offered by the institution. (Scitovsky, p. 480) An example would be the one-day or



evening lectures that are offered by the Centre. The average enrolments in these programs are significantly higher than all other programs offered by the Centre. (Lamoureux, 1974, p. 26a)

Unitary elasticity could occur for any specific type of program. The main point here is that enrolment is affected by price increases or decreases, but in exactly the same proportion. This would be an ideal consumer behaviour reaction if the objective of the institution were to increase enrolment without negatively affecting the budget.

Demand elasticity is the more interesting of the three behavioural reactions. Continuing educators can accept the fact that decreases in program fees ideally should cause an influx of participants and increased total revenue, or, at the very least, increased enrolment with the same total revenue but a lower cost per participant to present the program. What happens in many cases, however, is that the programs may be very popular in a general interest sense such as Far East "religious-type" classes and the opportunity to ask "what the market will bear" becomes evident. This popularity demand is translated into economic theory as inelastic demand because the potential participants are willing to pay higher program fees rather than not attending.

The second type of program where inelastic demand occurs is the professional course. There is a high and rather immediate potential for a monetary return on the part of the participants. They are therefore reluctant to withdraw from attending specific professional programs that may allow them to acquire a certificate or new level of proficiency. In this framework, the program planner should expect that relatively high program fees will not deter enrolment.

The previous observations about consumer behaviour would theoretically lead to the development of demand curves "other things being equal". Thus, to decide on an enrolment demand schedule for a specific program or group of programs "we vary the price of ... (the program) ... and observe what would happen to its quantity bought (enrolment) at any one period of time in which no other factors are allowed to change so as to becloud our experiment". (Samuelson and Scott, pp. 64-5) In summary, therefore, this form of analysis, along with variations incorporated in the demand curve's elasticity factors, tries to determine changes in the quantity demanded (enrolment) based solely on changes in price.

#### NON-ECONOMIC FACTORS RELATED TO CONSUMER DEMAND AND PRICE

Although consumer demand analysis based on economic theory still exerts considerable influence, criticism of the basic postulates and results derived therefrom have been voiced by economists, (Scitovsky, 1945; Monroe, 1973; Cooper, 1970) business and marketing analysts, (Bartels, 1962; Harper, 1966) and social scientists interested in the relationship between price and consumer actions. (Stoetzel, 1970; Olander, 1970; Enis and Stafford, 1969)

Historically, the conflict about the relationship between price and quantity demanded commenced during the same time period that Adam Smith was writing his thesis, *Wealth of Nations* (1776). Another economist, Bernoulli (circa 1700's), noted that "... the subjective value of money or its 'utility' is not necessarily the same as its monetary worth".

(Cooper, 1969, p. 112) This fundamental observation was generally neglected and disregarded as Alfred Marshall (1890, Jevons (1871), Menger (1871) and Walras (1874) "independently and almost simultaneously ... (developed) ... the marginal utility theory of value ... (leading to the classical form) ... of demand analysis constituting the main source of modern microeconomic thought". (Kotler, p. 102)

However, within the same time period, Thorstein Veblen (1899), argued that "many purchases were motivated not by intrinsic needs or satisfaction, so much as by the search for prestige". (Kotler, p. 108) These attempts to explain man's purchasing behaviour, not "as an economic unit in the market ... (but) ... as a consuming unit in the market" (Bartels, p. 19) were being concurrently voiced by both businessmen and marketing academicians. The fragmented criticism against classical demand theory was finally acknowledged by economists when Tibor Scitovsky presented a major paper before the Marshall Society at Cambridge University on March 2, 1945. In this widely acclaimed paper, Scitovsky made reference to a fundamental problem in the rationality assumption by stating that because of the wide range of products the shopper is "no longer an expert shopper", and one must "judge quality by indices of quality"; that is, "the size of the firm, its age" ... (and) ... "price ...". (Scitovsky, pp. 477-8)

The above observations have had their impact in two major areas of consumer behaviour research--classification of consumer products and buyers' subjective perception of price.

## CLASSIFICATION OF CONSUMER PRODUCTS

As far as marketing management is concerned, the reduced influence of price on consumer behaviour in favour of a multiple "cue" influence (Smith and Broome, pp. 520-8; Andrews and Valenzi, p. 649) has broadened the research related to the classification of consumer products. Originally developed by Copeland (1924), this three-way typology of convenience goods, shopping goods and specialty goods, which is "based on consumer buying habits rather than on consumer products", (Stanton and Sommers, p. 145) has found acceptance in both business circles and by marketing theorists. (Holton, pp. 53-6; Dommermuth and Cundiff, pp. 32-6) Often referred to as "one of the most venerable of marketing concepts" (Kaish, p. 28) it "has proven useful in the analysis of pricing, promotion and distribution of goods problems". (Kaish, p. 28; Bucklin, p. 50)

There are four basic criteria used to determine if a product, or in the case of continuing education program planners, a service, exhibits the characteristics of one of the three classification types:

1. Importance -- economically or psychologically important purchases are capable of producing anxiety, lest a wrong decision is made;
2. Functional performance differences -- if the goods under consideration have sharply differing characteristics, the consequences of a wrong decision will be great, thus a heavy premium is placed on accurate pre-decision search behaviour;
3. Difficulty in relating physical product qualities and performance differences -- regardless of importance of the purchase and functional

differences, a consumer's shopping activity will be worthwhile only if he is able to determine from the information available how the product will perform;

4. Depth of assortments available -- regardless of the individual's abilities to perceive and appraise a product's functional performance, there is little value in refining one's image of the ideal product if the market doesn't offer it. (Kaish, p. 51)

Based on these criteria, the definitions of the three consumer goods classifications, although varying somewhat among marketing theorists, are as follows: (Holton, p. 53; Kaish, p. 31; Dommermuth, and Cundiff, p. 32; Bucklin, p. 50)

Convenience goods -- "the significant characteristics of convenience goods are that the consumer has complete knowledge of the particular product (or its substitutes) which he wants before going out to buy it and that it is purchased with a minimum of effort on his part";

Shopping goods -- "are products for which the consumer usually wishes to compare quality, price, and style in several stores before purchasing. A key identifying characteristic, and the one which separates shopping goods from convenience goods, is that for shopping goods the consumer lacks full knowledge of pertinent product features before embarking upon the shopping trip";

Specialty goods -- "have been defined as those with unique characteristics and/or brand identification for which a significant group of buyers are habitually willing to make a special purchasing effort." (Stanton and Sommers, p. 148)

This particular goods classification has accepted the economists' theory of demand through the recognition of the convenience goods category. The classification has, however, expanded the unidimensional

consumer behaviour framework by taking note, as Bernouilli, Veblen and Scitovsky have done, that consumers may be confused and ignorant about goods and services, and, at the same time, these very consumers are willing to use price as a "cue" for quality. As a result of this movement toward price and imputed quality (Lambert, pp. 35-40), consumer behaviour analysts have also noted that consumers appear to develop price ranges or thresholds (Fouillé, p. 89; Emry, p. 98; Adam, p. 75) when deciding about their potential purchases. These research findings bear a close relationship to the shopping and specialty goods categories, more so than the convenience goods category, and lead to the second major area of consumer behaviour research attributed to Scitovsky's paper.

#### BUYERS' SUBJECTIVE PERCEPTION OF PRICE

Research evidence to be reviewed in this section will be directed toward the question of whether buyers use price as an indicator of quality. Following this introductory format, the review will then be directed to determining "whether certain perceptual phenomena relating sensory processes to physical stimuli are analogous to price perception". (Monroe, 1973, p. 75) We are interested here in the literature analyzing the existence of the so-called price thresholds.

#### Price and Imputed Quality

As Scitovsky noted, the buyer generally does not have complete information about the quality of alternative product offerings, yet he

forms perceptions from the information available, therefore: "the habit of judging quality by price, however, is not necessarily irrational. It merely implies a belief that price is determined by the competitive interplay of the rational forces of supply and demand ...". (p. 478)

### 1. Single-cue studies

Research into this price-quality phenomenon has followed two patterns. The first is generally called a "single-cue" study; (Engle, Kollat and Blackwell, p. 252) that is, where only the differential information available to respondents was price. In one of the first experimental studies on this relationship, Leavitt (pp. 205-10) found that his subjects (30 Air Force officers and 30 male and female graduate students) tended to choose higher priced items when: (1) price was the only information; (2) the products were perceived to be heterogeneous in quality, and (3) the price difference was large. The products studied were moth flakes, cooking sherry, razor blades and floor wax. Tull, Boring and Gonsior (pp. 186-191) replicated Leavitt's study using table salt, aspirin, floor wax and liquid shampoo. The same basic price-quality relationship occurred.

In an extensive experiment, Shapiro found that for 600 women:

(1) price was generally an indicator of quality; (2) price could not overcome product preferences; (3) the use of price to judge quality was a generalized attitude, and (4) price reliance varied over products, but was more significant in situations of high risk, low self-confidence, and absence of other cues. Lambert (1970, p. 68; 1972, pp. 35-37) found that for 200 undergraduates the frequency of choosing high-priced brands

was positively correlated with perceived variations in product quality and perceived ability to judge quality.

Distinguishing between the effects of price as an indicator of quality on the perception of product attractiveness or on the perception of purchase offer attractiveness, Olander (pp. 50-69) experimentally tested the effect of price for household textiles on more than 100 young women's perceptions of product attractiveness. When consequences were related to pairwise choices, similar towels were more often preferred when assigned a high price than when assigned a low price.

The above studies have looked at price in isolation and as the sole criterion of quality judgements. A frequent criticism of these single-cue studies is that when price is the only information available, subjects naturally associate price and quality. But in the world of the every-day consumer, there are more than just price cues.

## 2. Multi-cue studies

To overcome the criticism of the single-cue studies, other price-quality studies have experimentally varied other cues in addition to price. This procedure is the second part of the price-quality pattern and is referred to as multi-cue studies, multi-cue in the sense that price is considered along with store name, brand name, promotional information. Using home economics students, housewives, carpet buyers and salesmen, Enis and Stafford (pp. 340-42) discovered that perception of the quality of carpeting was directly related to price.

Gardner's first price-quality study attempted to answer two questions: (1) "does price affect estimates of product quality for widely different types of products?"; (2) "does the price of a product convey



only the value to be exchanged or does price also convey other information that is used by the consumer?" (p. 25) His products were suits, shirts and toothpaste, and he used an experimental design with university students as subjects. His results were defined in three separate statements:

(1) "it must be concluded that price does not affect the perception of quality in the same manner for different types of products"; (2) "this study indicates that price carries more information than just the value to be exchanged"; (3) "conclusions by Leavitt (p. 205) and Tull, Boring and Gonsior (p. 186) are seen to be valid even though they imply a price-quality relationship from preference behaviour rather than from actual statements of product quality". (p. 40)

Although these studies provide evidence of a positive price-quality relationship, their results do imply that price may not be the dominant cue in quality perception. However, the diminished value of the price cue has not been a generalized finding in other multi-cue studies.

Andrews and Valenzi noted that "when cues are drawn from more than one information domain, there is a greater likelihood for an interaction among cues ...". (p. 649) The authors therefore asked 50 female students to rate the quality of sweaters and shoes. Quality ratings for each product were obtained first for each cue presented separately (price, store name, brand name), then for all 27 variable combinations. The results indicated that the lower the price, the greater the influence of brand names, but in combined quality judgements, price was clearly the dominant cue.

### 3. Summary

In summary, the ability to determine the specific effect price has on buyers' perceptions of quality is complicated by the multitude of research designs and products tested, although Monroe notes the emergence of a "suggestion that brand name is important and dominates price for relatively inexpensive grocery products and beverages. For clothing, there is an apparent increasing concern for price." (1973, p. 73) Shapiro has responded to this point in a survey article by suggesting that "the important role of price in indicating the quality of many products can be explained in four ways": (pp. 22-34) (1) "ease of measurement" where price is used as a valid cue given the maze of products; (2) "effort and satisfaction" where high price and satisfaction are psychologically related; (3) "snob appeal" or the Thorstein Veblen theory of goods acquisition where people like to brag about what they bought and the item's price; (4) "perception of risk" or the complete price and imputed attitude--"you get what you pay for".

Thus, one may conclude that: "The evidence cited infers that, at least over some range of prices, demand is greater for higher prices, and the demand curve has a positive slope." (Monroe, 1973, p. 73)

### Threshold Pricing

Scitovsky went a step further than just defining what appeared to be a rather obvious and "not necessarily irrational" (p. 478) price-quality relationship. He also dealt with consumers' responsiveness to a

stimulus (price) and with potential thresholds or bounds, "cheap and expensive" (p. 480) based on a "fair or normal price". (p. 479)

Even at this early time in the development of subjective price analysis, Scitovsky realized that price is a more complex criterion than many authorities seem to feel. Consumers are often unaware of the exact prices for many products, and it may be as many authors suggest, that there is a range of acceptable prices. As long as price falls within this zone of indifference, (Emry, p. 100) then price may not be much of a factor, although it can become quite significant when ranges are exceeded. If this point could be considered reasonable, then its significance for the marketing of continuing education services is significant. The price-quality factor has been generally accepted for the higher priced goods. Continuing education programs are generally higher priced than convenience goods; therefore, a price-quality consideration could be construed by the program planner. On the other hand, if the price threshold concept exists, then one would have to assume that the program planner should only consider the value of the price-quality relationships at either end of the zone of indifference since it is at these two points that the consumer decides either positively or negatively about the price and its relationship to the item. (Adam, p. 84)

Monroe and Venkatesan have defined threshold or limit as "a point or region on a scale where a response shifts from positive to negative, or negative to positive, as the case may be". (p. 346) Within the structure of price determination, Stoetzel states that "the eventual purchaser

perceives a band of prices above a particular price at which the article is regarded as too expensive, and below another price, as constituting a risk of not giving adequate value". (p. 71)

As far as the framework within which the consumer develops the price range, Monroe points out that "the reaction to the price stimulus is subjective at best since subjects can be assumed to be reacting to that price relative to an entire set of purchase decision variables". (1971, p. 463) However, the primary research determining various consumer factors which may identify the upper and lower bounds of the price threshold for a given product, product line, or group of similar or competing products has not been pursued beyond relating the bounds estimations to a given price stimuli. Furthermore, "the hypothesis of a standard price serving as an adaptation level for price judgements has not been directly tested ... (although) ... evidence does support the plausibility of this hypothesis". (Monroe, 1973, p. 76)

Shapiro (p. 25), continuing with Scitovsky's line of thought about a fair or standard price, suggests that consumers will not be expected to react to small price changes or price-quality relationships unless there are perceptible price changes from the so-called norm.

Gabor and Granger (1970, pp. 134-5), because of a prior study of consumer price knowledge, stated that customers did not enter the market with a series of demand schedules as postulated by economic demand theory. What, in fact, was occurring led them to restate Adam (1970) and Stoetzel's (1970) hypothesis that customers enter the market with two price limits, an upper and lower bound.

Olander also suggested that a buyer's price judgement is influenced by his perception of prevailing market prices and his perception of the price most frequently charged. "I have gathered data ... which indicate that the pattern of interaction between price and subjective quality of the product is influenced by the consumer's ideas about the price range in the market and by what he thinks is the price most frequently charged." (p. 62) Olander was one of the first authors to realize that price sensitivity based on a given market price level or consumer expectation about a price is only a sub-analysis needing further expansion.

McConnell found evidence that his subjects (college students and their families) used the high priced brands of beer as a frame of reference for judging low and medium priced brands. "With a physically homogeneous product and unknown brand names, subjects perceived the highest priced brand as being a better quality product than the other two brands." (October, 1968, p. 442) A maximum price observation was also derived by Fouillé (1970) who asked his subjects the following question: "What is the price of the -- item you buy?" (p. 96) Their responses correlated strongly with a question on the maximum price ( $r = .69$ ), and less strongly with the minimum price ( $r = .32$ ).

Kamen and Toman in studying gasoline prices concluded that consumers do have a "fair price concept" (1970) and that consumers have price thresholds or zones below or above which they will switch or regard the quality of an item more than before. Peterson (1970) noted "that for a product about which there is a lack of information (1) price would serve as a major determinant of quality perception, and (2) the price perceived

quality relationship would be non-linear; that is, there are sets of upper and lower price limits. Within these limits price may well serve as an indicator of quality, but above and below them respectively, the product will be perceived as being too expensive or of questionable quality". (p. 525)

In summary, Emry (1970) has been given credit for noting some important implications of threshold price theory: (Monroe, 1973)

1. "A price judgement is a judgement of 'value for money' where value refers to use-value of some commodity for some person or persons." (p. 100)

2. "Price judgements are relative, not absolute; relative to what is known of other prices as well as being relative to the significance attached to the associated use values." (p. 100)

3. "There appears to be a 'normal' or standard price for each discernible quality level in each commodity class, and this normal price tends to act as an anchor for judgements of individual prices." (p. 100)

4. "There appears to be a range of tolerance or region of indifference about each such 'standard' and its associated quality level." (p. 100)

5. "The normal price or standard will tend to be some average of the prices being charged for similar commodities; that is, prices are not judged in isolation." (p. 101)

6. "A further effect of the range is that a shift in judgement of what is a standard price is more likely to occur when the range is extended than when the range is restricted." (p. 102)

7. "Despite the relative continuity of money scales (that is, divisible to 1/2 pennies) prices will be seen as a set of ordered categories (cheap-fair-dear) rather than as forming a continuum." (p. 102)

#### THE ROLE OF PRICE IN THE MARKETING PROCESS

The American Marketing Association has defined marketing as: "The performance of business activities that direct the flow of goods and services from producer to consumer or user." (Stanton and Sommers, 1972, p. 3) More recently, this rather narrow definition (Kotler, pp. 13-14) has been revised to include the effects of a philosophical change occurring in the field of marketing and in marketing management. The philosophical change has been referred to as the "marketing concept":

"A managerial philosophy concerned with the mobilization, and control of total corporate effort for the purpose of helping consumers solve selected problems in ways compatible with planned enhancement of the profit position of the firm." (King, p. 85)

Thus, most marketing theorists have broadened the definition of marketing to read as follows:

"Marketing is a total system of interacting business activities designed to plan, price, promote and distribute want-satisfying products and services to present and potential customers." (Stanton and Sommers, pp. 3-4)

Based on this systematic approach to marketing, the role of price becomes a "controllable variable" (McCarthy, pp. 38-40) in the marketing system. It is controlled in the sense that for most organizations, whether public or private, the marketing manager has a range or group of alternative price structures within which he may distribute a good or service. There are, naturally, various constraints which must be considered: government regulations (public utilities); competition (steel industry); an organization's costs or alternatively, its budget limitations (continuing education), and the expected return on sales.

Given these restrictions, marketing authors have placed price, along with three other equally important variables, into a four-way classification called the "marketing mix"; that is, price, product, place and promotion. (Borden, p. 4)

Each of the four variables must be manipulated by the marketing manager in order that a suitable product or service is made available at a suitable location and time, with adequate promotion and an acceptable price.

Thus, the field of marketing has advanced from a purely sales orientation, with promotional overtones, (Bartels, pp. 60-63) to become a total systems approach concerning the organization of an institution's facilities with one basic goal in mind: that of customer satisfaction. No longer does one simply produce and hope to sell the given product. Rather, a concerted effort towards market research and product planning, combined with the marketing mix variables, is used to produce products or services that will have a high probability of being demanded at a level forecasted by the institution.



## PRICING GOALS AND PRICE DETERMINATION

Inasmuch as price is one of four major elements in the marketing mix and is itself the major topic for this research project, one should assume that the other non-price component operations are, *ceteris paribus*, being pursued.

Given this framework, the remaining portion of the chapter will concentrate on relating the price variable to the overall needs of the organization. This is normally presented as a two-phase operation: determining pricing goals and developing a procedure for price determination. (Backman, pp. 250-54; Stanton and Sommers, pp. 394-405)

### Pricing Goals

Stanton and Sommers have noted that "management should decide upon objectives of pricing before determining the price itself". (p. 397) Their premise is based upon a comprehensive study of price policies and methods of price determination used by twenty large corporations. The study presented five main goals concerning the pricing function:

1. Achieve target return on investment or on net sales;
2. Stabilize prices;
3. Maintain or improve a target share of the market;
4. Meet or prevent competition;
5. Pricing with product differentiation.

The first four goals were cited most often by the corporations. The fifth goal, which relates more to the marketing concept than the first four, had started to gain popularity in some of the major firms which were in process of reorganizing their marketing departments at the time of the survey.

1. Achieve target return on investment or net sales

Target return on investment or net sales is defined as "building a price structure designed to provide enough return on the capital used for specific products, groups of products, or divisions so that sales revenue will yield a pre-determined average return for the entire company". (Stanton and Sommers, p. 398) This pricing goal is used mainly by large organizations which seek to determine the advisability of investment in a particular facility as compared with alternative investment opportunities. (Backman, pp. 265-6)

Lanzillotti noted that this goal was selected when one or both of two conditions were present. First, the organizations were leaders in their industry, or they sold in relatively protected markets. Secondly, the goal was related to new products and low unit price, high-volume, standardized items.

2. Stabilized prices

In some degree, this goal is a corollary to that of a target return on investment; that is, price stability is one approach to a target return.

This goal is often found in industries where there are only a few competitors and price leadership by one organization predominates. Each

organization knows what products or services the other has available, the market is clearly definable, wide fluctuations in demand have been known to occur, and the market growth, under normal circumstances, could be described as steady or constant.

A long-run pricing goal or policy is therefore found most often. The organizations are willing to forego maximizing profits in times of prosperity if they are able to balance the latter with reasonable profits in less prosperous periods. (Stanton and Sommers, pp. 400-401)

### 3. Maintain or improve target share of market

For some organizations, the major pricing goal is to maintain (or increase) a given share of the market. This objective ensures that the marketing department is focused on the flow of the market and that the organization knows almost immediately if its market position is steady, decreasing or increasing.

In some respects market share is a better indication of organizational health than target return on investment, especially in times of prosperity and increasing markets. (Stanton and Sommers, p. 401) A firm might be earning what management considers a reasonable return, but what is reasonable may be based on a market consideration of some years ago. Unless management keeps fully abreast of conditions in an expanding market, this reasonable profit may be too small (absolutely); the company may be getting a decreasing share of the market.

### 4. Meet or prevent competition

In one sense when a company seeks simply through trial and error to find a price at which its output can be sold, one may almost say that

such a firm has no pricing goal. At least it has no control over the goal and the means used to reach it. (Stanton and Sommers, p. 402)

Preventing competition may exist in the short run but this pricing goal normally needs collusion among firms within an industry. This action, within a short period of time, would come within Canadian Federal jurisdiction through the Combines Investigation Act. In a monopoly situation where only one firm exists and is, in effect, the whole industry (British Columbia Telephone) legislation has usually been passed to prevent misuse of the pricing function.

#### 5. Pricing through product differentiation

Organizations which consider the marketing concept as a viable philosophy towards developing new products or services must consider the development of a continuous product differentiation course. The market is considered a dynamic force that is always under pressure to change. What was popular one year ago may not be popular today. Lead-times for product introduction are decreasing as fast as the markets are being satisfied. This is caused by excessive competition from domestic and foreign producers. (Stewart, pp. 167-174)

If product differentiation is an organization's major goal for survival, then each product or service must be given a separate pricing consideration. The prices must interrelate with the "image" of the organization as well as the past price structures used by the firm.

### Procedure for Price Determination

"The successful marketing of services to consumers is related directly to the pricing practices of service firms. In most cases, consumers may choose between patronizing service establishments or performing services for themselves." (Parker, p. 38) The above statement has been repeated by various marketing authors in many forms (Stanton and Sommers, p. 546) because Parker's comprehensive study of the service industry noted the critically important nature of consumer discretionary purchasing behaviour. In the case of most services, including continuing education, the customer may postpone his purchase, or even perform the service himself. Only rarely does a potential buyer of continuing education services face the situation where he needs a program immediately.

Another factor to consider is that price variations such as markdowns or special deals, trial offers or "three for the price of one" are not generally possible. If there is a lack of participants such that a program is unable to pay for its minimum costs, a program planner cannot usually postpone the program for a week, drop the fee or make available some special deals and re-advertise the offering. The program is either cancelled outright or continued as is but at a financial loss.

Marketing authors (Stanton and Sommers, pp. 403-403; Oxenfeldt, 1966, pp. 125-133; James, pp. 521-532; Darden, pp. 29-33) have noted that there are three broad pricing methods generally in use by marketing managers: complete pricing methods, partial pricing methods and price lining pricing,

(Oxenfeldt, 1966, pp. 70-71) and "the basic methods of price determination for services are generally the same as those for products". (Stanton and Sommers, p. 546)

# 1. Complete pricing method

There are five distinct variations to the general method:

(a) Cost-plus pricing -- some margin or addition to a base cost of a service is added to cover profit. This margin is generally figured as a percentage of the cost although it may be an absolute or constant dollar figure. The percentage or dollar figure usually remains over long periods of time. (Kelley, pp. 370-80)

(b) Flexible markup method -- in place of a constant margin, this method calls for markup to be varied on the basis of several possible considerations such as new product introduction, cost variances, given state of demand. (Wentz, pp. 356-69)

(c) Trial and error or experimental pricing -- "This method calls for trying one or more prices that seem reasonable". (Oxenfeldt, p. 71) The price that finally seems best after a trial is then used. (Field, Douglas and Torpey, pp. 261-8)

(d) Research method of pricing -- This "requires an investigation ... of the variations, options, preferences and purchase intentions of potential consumers in an effort to find the price at which the desired level of sales would be attained". (Oxenfeldt, p. 71; also see Pratt, pp. 98-136)

(e) Intuitive method of pricing -- this method involves reliance on the price-setter's vague feelings and hunches. (Parker, p. 42)

## 2. Partial pricing methods

There are two pricing formats found in this method:

(a) Price maintenance, or adhering to the price that has been charged in the past. The goal here appears to be stability where feasible. (Samuelson and Scott, pp. 547-48)

(b) Price leadership, or following the prices set by other firms.

This is consistent in industries dominated by a few firms, where the products (steel) or services (medical services) are rather homogeneous and costs of production and marketing somewhat standard. (Parker, pp. 41-43)

## 3. Price lining pricing

This "consists of maintaining a constant price over long periods of time, while changing the quality of the product to reflect costs". (Oxenfeldt, 1966, p. 71) The determination of price by this method involves "inverted pricing, which starts with a retail price goal and works back through distributor margins (where used) and selling costs to necessary manufacturing costs, and hence to design and selection of product that will fit into the product line strategically". (Dean, p. 424)

## MULTI-STAGE APPROACH TO PRICING

Each of the above pricing methods has been used, described and criticized since the advent of marketing-oriented literature. (Bartels, pp. 47-69) It was not until the introduction and development of the marketing concept that theorists began to consider more systematized

approaches to pricing. The outcome of this analysis has been the presentation of a "multi-stage approach to pricing". (Oxenfeldt, 1960, pp. 123-134)

First presented by Oxenfeldt in an article for the Harvard Business Review, various authors have since adopted this approach to product and service pricing since "no one procedure (as described above), generally acceptable by all companies, has yet been developed for determining base prices ...". (Stanton and Sommers, p. 403)

Oxenfeldt's rationale for the development of a multi-stage pricing process is not to develop a one-price, mathematically elegant model into which unlimited and apparently free cost and demand data may be fed. Rather, his objective is to reduce the probability of a pricing error considering the modern dynamics of the market, the lack of truly accurate cost and demand data, and the high cost of making a mistake using a pricing model too steeped in theory.

The six stages presented below are those of Oxenfeldt. (1966, pp. 73-76) As mentioned previously, most marketing authors have adopted this mode of presentation as far as the development of a pricing methodology. It should be pointed out, however, that each author has his own variation. (Stanton and Sommers, pp. 403-408; Darden, pp. 29-33; Huegy, pp. 295-305)

### Selection of Market Targets

Based on an analysis of the organization's "strengths and weaknesses, capabilities, resources, commitments, aspirations, the predilections of



management, and the capabilities of rival (organizations)", (1966, p. 73) the selection of a particular market segment is considered.

The whole process of market segmentation is considered as a first prerequisite for a useful marketing strategy and a high probability of financial success. (Rich and Jain, pp. 431-46) Without some knowledge of one's capabilities, a selected market, and expected competition, the development of an effective marketing mix would be useless. (Smith, pp. 3-8)

#### Selection of Brand (Institutional) Image

Brand image has been loosely defined as representing "a bundle of feelings, attitudes, and associations toward a brand (in our case 'institutional') name, many of which are vague, emotional, and unconscious". (Oxenfeldt, pp. 73-4)

The selection of an institutional image based on a selected market target is mainly the result of the institution's own actions. For continuing educators, it would represent the type of instructors, the location of programs, the overriding image of the institution and the price level of the program. Each factor contributes to the potential participant's attitude about the quality as well as the approachability of the specific institution. Thus, "a brand image exerts its greatest effect on the way customers perceive the product and whether they notice it at all in the welter of goods offered". (Oxenfeldt, pp. 73-4)

### Composition of the Marketing Mix

Since an institution's brand image reflects its marketing actions, past and present, the composition of the marketing mix and the place of price in this structure becomes significant.

In integrating a marketing mix, the program planner assigns a role to price in the sense that he must decide whether appeals for participation will rest heavily on price inducements or on other marketing factors such as breadth and depth of program offerings, image of instructors, location of program presentations. Without long-range consistency in the development of the marketing mix, brand or institutional image may become confusing, negative, or without value as a marketing technique. (Borden, pp. 393-397)

### Selection of Specific Price Policy

The preceding three stages have assigned a specific role to price concerning the development and exploitation of particular market targets. Program planners must now translate this role into a policy regarding a product or service line.

### Choice of a Price Strategy

Although it may be difficult to draw a sharp line between policy and strategy, it is possible and useful to make a quality distinction between each. Policies are developed as mentioned above, to deal with a wide range

of anticipated and foreseeable situations that are normally recurrent by nature. However, markets are frequently beset and dominated by special or random situations that basic policy was not designed to meet. For example: (a) the provincial government may adopt a new policy toward continuing education; (b) a strong competitor may enter the market; (c) there may be a turnaround (positive or negative) in the local economy, or (d) a new policy concerning continuing education may appear from the university executive.

Therefore, "special situations like these ordinarily require an adjustment in price and the formulation of a strategy to guide management in setting price during the time that the special situation occurs". (Oxenfeldt, 1966, p. 132)

The strategy or strategies used should be compatible with the institution's given commitments and resources, its market targets, its institutional image objectives, its convictions about the relative emphasis to attach to various elements in the marketing mix, and its specific pricing policies.

### Selection of a Specific Price

Once the program planner has taken into account his marketing targets, brand image, marketing mix, pricing policy and strategy, "he can afford to ignore everything but the calculation of costs and revenues". (Oxenfeldt, 1966, p. 132) This occurs because he has sharply circumscribed himself in the specific sums that may be charged.

Oxenfeldt has propounded two primary methods of price setting.

"The first method would be to set the highest price in the acceptable range and reduce it if sales resistance is encountered." (p. 75)

Secondly, a differential price is set "whereby the firm would base its price on the prices charged by selected rivals, possibly maintaining the differential that prevailed in the past". (1966, p. 75)

#### SUMMARY

Within the construct of modern-day marketing thought, price is considered a more or less controllable variable. It is controllable and integrated with three other variables: product planning, distribution systems, and promotional programs, into a system called the marketing mix.

Given the marketing mix, the pricing process was presented as a dual procedure. First, the determination of the pricing goals and second, the actual price determination.

Five pricing goals were presented as currently dominating most large corporations. These include: (a) achieve target return on investment or on net sales; (b) stabilize prices; (c) maintain or improve a target share of the market; (d) meet or prevent competition, and (e) pricing with product differentiation.

The procedure for price determination constituted three historically fundamental methods: (a) complete pricing method; (b) partial pricing method, and (c) price lining pricing. A new innovation to pricing was

discussed. Referred to as the "multi-stage approach to pricing", this method had its formulation within the growth and acceptance of the marketing concept. No longer was pricing considered to be a one-price formulated consideration; rather, a step-by-step method was to be used to reduce the probability of pricing failure and increase the awareness of the other interrelated variables of the marketing mix.

## CHAPTER III

## COURSE PRICES AND PARTICIPANT REACTION

## INTRODUCTION

Chapters I and II developed a conceptual framework for continuing education course pricing strategies as well as a theoretical foundation describing the potential applicability of price thresholds (ranges) to such pricing strategies. In this chapter a conventional format is used to expand these theoretical considerations by reconstructing the organizational environment within which prices are determined. (Backman, pp. 273-275) This analysis is presented to give an overview of various technical and administrative constraints relative to a specific pricing process. Generalized consumer or participant reaction to this organized process may then be observed within a defined pricing strategy.

## PURPOSE

The study of course prices and participant reaction reported in this chapter involved four major objectives:

1. To describe the price decision process in the University of British Columbia Centre for Continuing Education in order to determine if the process can be placed within the three-part price strategy paradigm presented in Chapter I; (see pp. 2-3)

2. To describe course participant reaction to the Centre's fee structure in order to determine course fee acceptability by the participants;

3. To determine if a specific non-price "cue" (length of course) presented by Verner and Neylan (p. 230) could be a major course enrolment factor;

4. To determine if a significant interaction occurs between course fee and course length as both may affect course enrolments.

#### EXPLORATORY HYPOTHESES

The hypotheses stated in this chapter should not be considered as research hypotheses in the strict sense. (Dickinson and Lamoureux, p. 85) Rather, one "... is seeking information which will enable him to formulate specific research questions and/or to state (research) hypotheses ...". (Green and Tull, p. 73) The specific research hypotheses derived from this series of projects and related exploratory hypotheses are stated in Chapter V.

Hypothesis 3.1: The Centre for Continuing Education's pricing strategy conforms to a generally accepted strategy found within the field of adult education. (Lamoureux, May 1975; Buttedahl, 1974)

Hypothesis 3.2: The Centre for Continuing Education's pricing strategy leads to the development of course prices that are generally perceived as "acceptable", "fair", or "standard" by the participants. (Verner, 1974)

Hypothesis 3.3: The length of a course has a greater effect on potential participant attendance at the Centre for Continuing Education than does course price. (Verner and Neylan, 1966)

#### PROCEDURE

Details of the Centre's pricing process, pricing mechanism, and pricing strategy were acquired from an interview with Dr. Knute Buttedahl, former Associate Director of the Centre. Based on these extensive discussions, the Centre's pricing strategy was placed into one of the pricing paradigm's sub-categories as delineated on pp. 3-4.

Perceived acceptability of the course prices offered by the Centre was determined by an analysis of 937 conducted ("go") and cancelled ("no-go") courses. They were offered during a two-year period and were composed of both general and professional courses. A t-test between the mean price of successful courses and the mean price of courses that failed was conducted to determine if significant differences existed. If no differences existed then the given price structure and strategy would be judged as "acceptable", "fair", or "standard" by the participants.

The interactive effect of course price and course length on participant enrolment was analyzed using two specific tests. Partial correlation analysis was used to nullify variance in a dependent variable and determine the "real" relationship between course fee and enrolment. (Green and Tull, p. 237) A multiple forward stepwise regression was used to predict enrolment for fixed values of course length and course prices. (Bjerner, 1972)



## THE PRICING STRATEGY

The Centre's Pricing Process

Every three to five years, program planners and Centre administrators meet to discuss the fee structure. Consideration is given to changes in direct or out-of-pocket costs as well as overhead costs that have occurred since the previous fee structure decisions. Any cost variations that are expected to occur in the foreseeable future are also discussed.

Budget variations amounting to general additions and deletions or those related to specific content areas are analyzed for their impact on given program areas or potential program considerations. For example, there was a substantial budget cut during the summer of 1973. The basic pricing formula was discussed in relation to this budget cut, although no definite fee structure changes were made.

Feedback from participants is given some weight in the pricing process. If it is discovered that certain courses draw a lower but highly interested socio-economic group, consideration is given to lower than normal fees. Attempts are made to cut expenses for courses in such cases. On the other hand, if it is observed that a course may draw a professional group of participants whose educational expenses are being paid by their organizations, it is conceivable that higher than normal fees would be charged.

Competition in the local geographical area from other continuing education institutions is considered. Competitive publicity brochures are

scrutinized to determine if such courses are different than, similar to or exactly the same as the Centre's. From this analysis, fee variations among other adult education institutions aid in determining their potential effect on Centre enrolments.

The final factor in the price decision process may be defined as a general feeling or attitude toward the overall situation as it is and as it is expected to be. A combined intuitive knowledge of these professional program planners is used to acquire "gut feelings" about specific courses, fees and present fee structure. The above process has led to the present pricing philosophy which may be defined as a "minimum fee attitude"; that is, the Centre "does not try to maximize profit".

The pricing philosophy, as accepted by the last general fee structure meeting, has allowed the use of a basic pricing formula. There are three fundamental objectives to the formula:

1. To provide consistent guidelines for program planners;
2. To provide guidance so that one program area does not undercut (in a price sense) another related program area;
3. To minimize negative participant reaction through consistency in course fees.

The pricing formula is only a guideline and variations do and must occur. For example, as a result of the 1973 budget cut, program planners have had a tendency to add an extra amount where possible and in a rather ad hoc fashion. Furthermore, the tendency to relate the type of courses to the type of participants; that is, general versus professional programs, has allowed for more selective price variations not related solely to course costs.

The outcome of these variations may be seen in Table 1. General and professional fee schedules were significantly different ( $p < .005$ ). General courses had a tendency to be priced below a fee of \$21.00 (61.2%) rather than above this amount (38.8%). Professional courses reversed this fee structure with 60.5% of the courses priced above the \$21.00 level, with 39.5% below \$21.00.

TABLE 1  
FEE STRUCTURE VARIATIONS BETWEEN PROFESSIONAL  
AND GENERAL COURSES

<u>Fee Schedule</u>	<u>General Courses</u>	<u>Professional Courses</u>
Less than \$6	7.8%	6.7%
\$ 6 - \$ 9	12.1	9.5
\$10 - \$15	20.6	11.6
\$16 - \$20	20.7	10.7
\$21 - \$25	6.1	4.3
\$26 - \$30	8.1	8.8
\$31 - \$50	12.8	10.8
\$51 or more	<u>11.8</u>	<u>36.6</u>
	100.0%	100.0%
$\chi^2=70.3$ ; d.f.=7, $p < .005$	397 courses	328 courses

Because a portion of the fee formula related to the number of instructor contact hours it was suggested that the fee variations may be due to variances in course length, that is, the longer the courses, as

measured by contact hours, the greater the fees. A chi-square test between professional and general courses, as related to course length, indicated no significant difference between both groups.

### Mechanics of Course Price Determination

The program planner has six basic steps for deriving a course fee:

1. Define a need in the community that may be satisfied by some form of education program which could be given through the Centre;
2. Develop an idea about the type of course to be presented;
3. Form some general opinion about the nature of the potential participants;
4. Decide on the length of the course, that is, the number of contact hours or sessions, date and place of the course, and instructor;
5. Prepare a rough budget to see if the potential course is financially feasible (see Appendices A and B for copies of the budget forms).

(a) Using the Course Information and Budget sheet, the variable and fixed costs are determined in order;

(b) Revenue is estimated by determining the number of potential participants, unless some pre-determined arrangement has been made with an institution or organization. If grants or subsidies are available these are added into the revenue section;

6. Using a standard fee formula, the course fee is determined by multiplying the number of contact hours for the course by one of two

dollar figures--one for professional courses and one for general courses. This dollar figure is compared with the expected expenses. If the standard figure derived from the fee formula is equal to or greater than the dollar expenses (less grants, if any) the course is a potential "go".

Not all course fees fall within the above range. Some must be priced at a lower level. This, however, does not mean that a course will be cancelled. If the program planner can give a creditable rationale for having the course, it is generally accepted by the Centre administrators.

### Summary and Conclusions

A three-part pricing strategy for continuing education programs was previously developed. In essence, the program planner could use a backward pricing system whereby he only considers the relationship between the out-of-pocket (variable) costs, the overhead (fixed) costs and the number of participants needed to just pay for the course (break-even point). No consideration is given to course fee variations for different types of participants.

Secondly, he could act somewhat like a product marketing manager and, after having analyzed the market for the course, construct a pricing schedule which not only attracts the participants, but also earns the highest possible monetary return.

Finally, he could, as most adult educators do, combine the above two strategies. On the one hand, the historical use of backward pricing by continuing education institutions could be adopted as a safety feature;

whereas knowledge gained from some form of community-market analysis could aid the program planner in developing selective price schedules for potential groups of participants. He would therefore combine the need to formally present a break-even factor for each course to satisfy a philosophy of "reasonable prices" and at the same time, attempt to earn an acceptable rate of return.

It is clear that the University of British Columbia Centre for Continuing Education has organized itself around the third pricing strategy. (Hypothesis 3.1) As discussed above, the Centre works on a backward or break-even technique, but this is varied according to the type of participant who may enrol in the specific course. Thus, course prices are generally higher for the professional groups and lower for the general public. (Table 1)

#### PRICING STRATEGY AND PARTICIPANT BEHAVIOUR

Price threshold theory states that upper and lower price bounds exist around a consumer-determined "acceptable" or "fair" price (whether actual or perceived) for a product or service. Given the theoretical base and analysis of the multitude of courses offered by the Centre, the following questions were posed:

1. Did the Centre's pricing strategy lead to course pricing that could be perceived as "fair" or "acceptable" by the participants?
2. Could price, relative to other motivating factors, (Boshier, 1967) be considered as generally non-significant when a participant is attempting to decide about attending a Centre course? (Verner and Neylan, 1966)

The Study

Information was obtained on 937 courses that were listed in the Centre's various promotional brochures and year-end statistical summaries.

These courses, including "go's" and "no-go's", covered a period of two fiscal years (or 6 academic terms) between Fall, 1971 and Summer, 1973.

The available data included the following information:

1. Year of the course
  - (a) 1971-1972
  - (b) 1972-1973
2. Term of the course
  - (a) Fall
  - (b) Spring
  - (c) Summer
3. Type of course
  - (a) General
  - (b) Professional
4. Course method
  - (a) Series
  - (b) Lecture
  - (c) Short course
5. Location of the course presentation
  - (a) University of British Columbia
  - (b) Vancouver
  - (c) Other
6. Number of contact hours
7. Enrolment in the course
8. Price of the course
9. Course success or failure

Both successful and unsuccessful courses included data from numbers 1, 2, 3, 4, 5, 8 and 9. Successful courses also included number of contact hours and enrolment in the course (numbers 6 and 7).

The data was transferred to coding forms and keypunched onto IBM data cards. Two statistical programs available in the University of British Columbia Computing Centre were utilized. MV-TAB was used for cross-tabulations, chi-square tests and presentation of descriptive information. TRIP was used to determine means, standard deviations, correlations between variables and t-tests.

#### Course Price versus Enrolment

Hypothesis 3.2 regarding the relationship between price strategy and participant perceptions about "fairness" was analyzed by means of a t-test on the price variable. Separate t-tests were conducted for the two major non-credit course categories (General and Professional) since the Centre uses two pricing formulae. Further tests were conducted using three other sub-categories: Year, Term and Location.

Table 2 presents t-test (two-tail) data between "go" and "no-go" courses. In eleven out of thirteen tests, there were no significant differences between the mean price of successful courses and the mean price of courses that failed. Hypothesis 3.2 is therefore accepted. Based on the Centre's present fee structure, these data appear to indicate that prices have a secondary effect on enrolment. This, as price threshold theory states, occurs because the prices are within a given range around



an "acceptable" course fee. Factors other than price appeared to cause various courses to fail or to succeed, and potential participants may have decided to choose or not to choose a course because of many non-price "cues".

TABLE 2

T-TEST BETWEEN THE PRICE OF "GO" AND THE PRICE OF "NO-GO" COURSES

<u>Professional Courses</u>			
	<u>Test Categories</u>	<u>T-Prob.</u>	<u>N<sup>2</sup></u>
<u>Year</u>	1971-72	.280	231
	1972-73	.173	185
<u>Term</u>	Fall	.794	173
	Spring	.038 <sup>1</sup>	156 sig.<.05
<u>Location</u>	U.B.C.	.650	266
	Vancouver	n/a	
<u>TOTAL</u>		.712	416
<u>General Courses</u>			
	<u>Test Categories</u>	<u>T-Prob.</u>	<u>N<sup>2</sup></u>
<u>Year</u>	1971-72	.742	207
	1972-73	.430	314
<u>Term</u>	Fall	.338	222
	Spring	.924	216
<u>Location</u>	U.B.C.	.030 <sup>1</sup>	338 sig.<.05
	Vancouver	.476	156
<u>TOTAL</u>		.645	521

Note: if T-Prob. is <.05, it is usually concluded that the sample means are significantly different.

N = number of courses

## LENGTH OF COURSE VERSUS ENROLMENT

Verner and Neylan examined attendance patterns for various kinds of public school adult education courses. Their results clearly pointed out that course length influences attendance. "Furthermore, no course studied achieved complete attendance at any time ... the data show a mean percentage loss of 30% in all courses". (Verner and Neylan, p. 239)

It was of interest to extend the Verner and Neylan study by analyzing the effects of course length on initial enrolment. Inasmuch as the previous study aided program planners concerned with the behavioural characteristics of participants after they entered a course, it would also be helpful to understand the potential relationship between course length and participant behaviour before the "purchase" of a continuing education course. If it is found that course length causes the same basic negative reaction in participant behaviour before enrolment as it has shown to do while participants are actually enrolled in courses, then a case could be advanced for short intensive courses over those with a broad scope and lengthy contact hours.

Analysis

An inverse and significant relationship between enrolment and length of course appears to be generally substantiated. (Table 3) All professional course correlations relating length and enrolment level were negative with eight out of eleven significant. Six are significant at the  $P < .01$  level, and

TABLE 3

## THE RELATIONSHIP BETWEEN ENROLMENT AND LENGTH OF COURSE

<u>Professional Courses</u>				
<u>Enrolment</u>	<u>Categories</u>	<u>r<sup>3</sup></u>	<u>N<sup>2</sup></u>	<u>P<sup>1</sup></u>
<u>Year</u>	1971-72	-.26	178	<.01
	1972-73	-.19	150	<.05
<u>Term</u>	Fall	-.30	126	<.01
	Spring	-.27	128	<.01
	Summer	-.06	74	
<u>Method</u>	Series	-.26	151	<.01
	Short Lecture	n/a	n/a	
	Short Course	-.09	167	
<u>Location</u>	U.B.C.	-.22	201	<.01
	Vancouver	-.11	51	
	Other	-.27	76	<.05
<u>TOTAL</u>		-.23	328	<.01
<u>General Courses</u>				
<u>Year</u>	1971-72	-.28	225	<.01
	1972-73	.30	163	<.01
<u>Term</u>	Fall	-.27	175	<.01
	Spring	-.28	153	<.01
	Summer	-.33	60	<.01
<u>Method</u>	Series	-.21	344	<.01
	Short Lecture	n/a	n/a	
	Short Course	-.27	27	
<u>Location</u>	U.B.C.	-.28	248	<.01
	Vancouver	-.35	122	<.01
	Other	n/a	n/a	
<u>TOTAL</u>		-.28	388	<.01

Where:  $p < .01$  and  $< .05$  = significant difference

N = number

r = correlation coefficient

two at the  $p < .05$  level. The general course correlations follow a similar pattern. All correlations were negative with nine out of ten significant at the  $p < .01$  level.

Given these outcomes, one must consider that the Verner and Neylan observations are also reflected in a potential participant pre-enrolment decision process. (Hypothesis 3.3)

#### COURSE FEE AND LENGTH VERSUS ENROLMENT: AN INTERACTION

The previous analyses have inquired into the relationship between two variables that were suspected as being major determinants of course enrolment and acceptance. Summary conclusions would indicate that course length was the predominant variable between the two; however, the tests were conducted separately using two distinct statistical methods.

Two further statistical tests were therefore used to determine significant effects on course enrolment based on an interaction between course fee and length.

#### The Tests

The first test was a partial correlation analysis. Since the data were of an ex post facto nature in which two specific independent variables (course fee and length) have occurred, partial correlation analysis was used to nullify variance in a dependent variable (course enrolment) that was presumably "caused" by one or more independent variables which are

extraneous to the particular relation under consideration. In this study the extraneous independent variable was course length, and this variable was controlled in order to ascertain the "real" relationship between course fees and enrolment.

The formula for the coefficient of partial correlation is: (Green and Tull, p. 237)

$$r_{12.3} = \frac{r_{12} - r_{13}r_{23}}{\sqrt{1 - r_{13}^2} \sqrt{1 - r_{23}^2}}$$

where:  $r_{12}$  = price by number of participants (enrolment)

$r_{13}$  = price by length of course

$r_{23}$  = enrolment by length of course

The second statistical method was a multiple forward stepwise regression analysis, that is, the construction of a linear estimating equation for predicting enrolment (Y) for fixed values of course length ( $X_1$ ) and course fees ( $X_2$ ). Expressed algebraically, the model is:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2$$

where:  $\alpha$  = mean of Y population when  $X_1$  and  $X_2$  are zero

$\beta_1$  = change in Y population mean per unit change in  $X_1$

$\beta_2$  = change in Y population mean per unit change in  $X_2$

The objective was twofold: (1) to determine if either independent variable occurred in the equation, which would mean that the specific variable was significant in its effect upon the dependent variable (course enrolment), and (2) to determine if the significant independent variable had a negative or positive effect upon the dependent variable.

### The Professional Courses

A TRIP computer run was used to determine the correlation matrix as shown in Table 4. The relationship between course fee and course enrolment, controlling for course length, was negative but not statistically significant. Therefore, the pricing formula as presently used for professional courses had no significant negative effect on course enrolment.

A regression analysis also rejected price as a significantly contributing independent variable toward course enrolment. The equation derived is as follows:

$$Y = 60.781(-)1.2238(X_1) \text{ where: } X_1 = \text{length of course}$$

$$\text{and: } R_2 = .0519 \text{ (significant at } p < .05)$$

TABLE 4

#### CORRELATION MATRIX--PROFESSIONAL COURSES

<u>Variables</u>	<u>Contact Hours</u>	<u>Enrolment</u>	<u>Fee</u>
Contact Hours	1.0		
Enrolment	(-).2246	1.0	
Fee	.6705	(-).1914	1.0

Therefore:  $r_{12} = (-).1914$

$r_{13} = .6705$

$r_{23} = (-).2246$

And:  $r_{12.3} = (-).0580$

$N \text{ (number)} = 326$

$d.f. = 329$

$p = \text{not significant}$

Therefore, where both independent variables were allowed to interact with each other to determine the combined effect on course enrolment, course length ( $X_1$ ) not only predominated over course fee ( $X_2$ ), but course fee had so little effect as to be rejected by the statistical procedure.

### The General Courses

A TRIP computer run was used to determine the correlation matrix as shown in Table 5. Once again the relationship between course fee and enrolment was not statistically significant, so the pricing formula as presently used for the general interest courses had no overall effect on course enrolment.

TABLE 5  
CORRELATION MATRIX--GENERAL COURSES

<u>Variables</u>	<u>Contact Hours</u>	<u>Enrolment</u>	<u>Fee</u>
Contact Hours	1.0		
Enrolment	(-).2757	1.0	
Fee	.8183	(-).2229	1.0

Therefore:  $r_{12} = (-).2229$

$r_{13} = .8183$

$r_{23} = (-).2757$

And:  $r_{12.3} = .0050$

$N = 395$

d.f. = 392

$p = \text{not significant}$

A regression analysis also rejected price as a significantly contributing independent variable. The equation derived is as follows:

$$Y = 74.5064(-)2.1471(X_1) \quad \text{where: } X_1 = \text{length of course}$$

$$\text{and: } R_2 = .076 \text{ (significant at } p < .05)$$

Again, course length proved to be the only significant independent variable when allowed to interact with course fee in determining course enrolment.

The partial correlation statistical method was also used to test the relationship between contact hours and enrolment, but controlling the effect of price. For both professional and general courses, the overall results obtained in this chapter coincided. Length of course negatively affected course enrolment, and this effect, unlike that of course fee, was significant.

Professional Courses:  $R_{23.1} = (-).1409$  where  $p < .01$

General Courses :  $R_{23.1} = (-).1784$  where  $p < .01$



Further Comments

As with many continuing education institutions, the Centre will advertise courses with limited enrolments. The effect of these courses upon the previous negative relationships between enrolment and course length was therefore considered. Unfortunately data was unavailable to answer any specific questions related to the following points: (1) the percentage of all courses with limited enrolments; (2) did any courses reach these limits; if yes, how many, and (3) although limits were reached, were participants actually turned away, extra courses offered, or some alternative route taken.

Administrators at the Centre were uneasy about attempting to answer these questions and suggested that it would entail a completely new study on the part of a research analyst, and extra administrative staff on the Centre's part to keep these records. From an administrative viewpoint, the value of such knowledge was questioned.

In summary, it is assumed for this study that such courses had no significant effect upon the above correlations.

## SUMMARY

The analysis of data indicated that participants' behaviour toward courses was, at least for the Centre of Continuing Education, not significantly dictated by course fees. T-tests between courses that failed to materialize (no-go's) and the courses that did go were used to present

this finding. Tests using partial correlation coefficients and multiple forward stepwise regression techniques gave further validation to this observation. The Centre's pricing strategy therefore appears to coincide with the Centre's pricing philosophy (Hypothesis 3.1) and the pricing attitudes as expressed within the field of adult education (Hypothesis 3.2).

Length of course, as suggested by Verner and Neylan, was used as a basis to study a second relationship: that of length of course versus participant behaviour, or, more specifically, potential for enrolment. Not only did course length negatively affect participant attendance while the course was in progress as expressed by Verner and Neylan, the study presented in this chapter concluded that course length had the same basic negative effect on potential participants when the latter considered enrolment into a course (Hypothesis 3.3). Partial correlation and multiple regression techniques were used to develop and validate these findings.

In summary, the course fees as developed through the standardized formula at the Centre for Continuing Education had little or no adverse effect on course enrolment, and, as suggested by threshold theory, the fees did not approach any upper or lower boundary. They were, in fact, within the acceptable range for the majority of participants.

## CHAPTER IV

## THE PILOT STUDY

## INTRODUCTION

A questionnaire was developed for random distribution to participants attending the University of British Columbia Centre for Continuing Education's 1974 Summer Session. This pilot study was deemed necessary because the questionnaire was rather extensive and may have included questions which would have alienated or confused the respondents.

## PURPOSE

There were eight objectives for the pilot study:

1. To determine if there would be any difficulty related to the questionnaire distribution;
2. To determine if respondents had difficulty understanding how to respond to the questionnaire;
3. To determine the lead time between distribution of the questionnaire and final analysis of the data;
4. To determine if the costs related to distribution, acquisition and analysis of data were beyond the resources of the project;
5. To anticipate where respondents may refuse to cooperate in answering specific questions (areas of non-response);

6. To make preliminary data runs using selected computer programs to anticipate any format problems;
7. To acquire some preliminary knowledge about the nature of participants attending the Centre;
8. To determine if both professional and general participants, or just one of the market segments, should be studied in the major analysis.

#### EXPLORATORY HYPOTHESES

As explained previously, the hypotheses for the pilot study were exploratory in nature and aided in the development of research hypotheses for the major study presented in the next chapter.

Hypothesis 4.1: Upper and lower bound price thresholds exist for participants attending continuing education courses. (Enis and Stafford, 1969)

Hypothesis 4.2: The concept of price and imputed quality exists for continuing education participants. (McConnell, 1968)

Hypothesis 4.3: Continuing education participants exhibit a generally high propensity toward educational participation. (Miller, 1970)

Hypothesis 4.4: Continuing education participants exhibit a generally high propensity toward community and other types of social participation. (Miller, 1970)

Hypothesis 4.5: Continuing education participants perceive themselves as having a good self-image concerning their ability to discriminate among course offerings. (Brown, 1971)

Hypothesis 4.6: Continuing education participants are consistent when judging the value of courses offered by related types of educational institutions. (Brown, 1968)

Hypothesis 4.7: Continuing education participants perceive themselves as devoting a considerable amount of time and effort in searching for alternative course offerings among various educational institutions. (Dommermuth, 1967)

Hypothesis 4.8: Participants' attitudes about continuing education are similar to those noted elsewhere. (Adolph and Whaley, 1967)

Hypothesis 4.9: General and professional continuing education participants have differing attitudes about course prices and in reality are two different market segments. (Stanton and Sommers, 1972)

## PROCEDURE

Fifteen courses were randomly chosen from 56 courses available during the 1974 Summer Session. The courses were drawn from two broad categories and included:

### Professional Category (7 courses)

Rocky Mountain Fieldtrip  
Intermediate Science Curriculum Studies  
Special Education Services in Sweden  
Woodcut Printmaking  
Wall Hanging Workshop  
Spinning and Dyeing Workshop  
Cameras in the Classroom

General Category (8 courses)

Exploration in Drawing  
 Tapestry Workshop  
 Respiration for Relaxation  
 Prose Writing Workshop  
 An Educational Travel Program  
 Pottery Workshop  
 Antogaine Feedback Training  
 Education-travel Showcase

The courses involved both a wide range of content and tuition fees--free of charge to \$235.00 for general courses, and \$30.00 to \$60.00 for professional courses.

Distribution and Collection Procedure

Participants were chosen randomly from each class. The reasons for the study and the specific procedures for filling out the questionnaire were explained to the respondents, who took the questionnaire home and returned the completed form within one week. The respondents were also asked to criticize the content and form of specific questions both in writing and orally. The written portion included notes and letters returned with the questionnaire as well as direct responses on the questionnaire. The respondents met with the researcher and discussed problems or points they considered important or confusing.

A total of 119 respondents completed and reacted to the questionnaire. Professional courses contributed 49 respondents and general courses 70 respondents.

## Data Analysis

Each questionnaire that contained some form of criticism was analyzed. This procedure allowed for judgements about questionnaire distribution techniques, questionnaire layout and participant confusion, alienation and reaction to specific questions. The objective was to develop a higher level of questionnaire acceptance among the participants.

Analysis of the participants' socio-economic factors, general response patterns and participation patterns was conducted using various statistical tests available through the University of British Columbia Computing Centre programs. The specific analyses included chi-square tests, hotelling- $t^2$  tests, and cross-tabulations for descriptive presentations.

### THE QUESTIONNAIRE: A REAPPRAISAL

The pilot study questionnaire was analyzed to determine problem areas that needed to be corrected for the final study. Six major changes were made:

1. During the proposal stage, it was assumed that Statistics Canada would have socio-economic data available for the census tracts. The latter would have been compared with information derived from the study to determine if the Centre for Continuing Education clientele represented their geographic population bases. Unfortunately, the respondents came from many census tracts and there were too few from each tract. These questions were therefore eliminated.

2. Data on family income levels (referred to as "income" throughout the dissertation) were collected on an ordinal scale as it was presumed that asking for specific incomes might be unacceptable. The oral discussions with the respondents indicated that this fear was unjustified. Furthermore, a statistical judgement problem arose when too many individuals placed themselves into the three highest income categories. These three categories had respective differences of \$3,000, \$5,000 and infinity, which would have led to an even more questionable analysis. (Table 6) It was therefore decided to ask the respondents for their specific taxable income.

3. It was felt that "interesting" variations might exist between income and net worth. This proposition proved unworkable because 80% or more of the respondents indicated net worth in the first two categories: "less than \$50,000, or \$50,000 to \$100,000". (Table 7) This question was eliminated.

4. The study attempted to place continuing education services into a marketing-based product classification as described on pages 22-24. (See question 14 in Appendix C.) Unfortunately, these questions caused great conceptual confusion resulting in a high rate of non-response and were therefore eliminated.

5. All 119 subjects responded positively to the "Recent Continuing Education Participant" question because their present course was included. It was decided to ask only for prior participation since many subjects became confused and did not include their present course.



TABLE 6

## PERCENTAGE OF INDIVIDUALS IN EACH FAMILY INCOME CATEGORY

<u>Income Levels</u>	<u>General Participants</u>	<u>Professional Participants</u>	<u>Combined</u>
Less than \$ 2,000	7.81%	2.17%	5.45%
\$ 2,000 - 3,999	7.81	2.17	5.45
4,000 - 5,999	9.38	6.52	8.81
6,000 - 7,999	6.25	-0-	3.64
8,000 - 9,999	10.94	4.35	8.18
10,000 - 11,999	14.06	17.39	15.45
12,000 - 14,999	9.38	28.26	17.27
15,000 - 19,999	14.06	19.57	16.36
20,000 or greater	<u>20.31</u>	<u>19.57</u>	<u>20.02</u>
Total	100.00%	100.00%	100.00%
	N = 64	N = 46	N = 110

TABLE 7

## PERCENTAGE OF INDIVIDUALS IN EACH NET WORTH CATEGORY

<u>Income Levels</u>	<u>General Participants</u>	<u>Professional Participants</u>	<u>Combined</u>
Less than \$ 50,000	59.32%	67.50%	62.63%
\$ 50,000 - 99,999	22.03	20.00	21.21
100,000 - 149,999	6.78	7.50	7.07
150,000 - 199,999	1.69	2.50	2.02
200,000 - 249,999	1.69	2.50	2.02
250,000 - 299,999	-0-	-0-	-0-
300,000 - 349,999	1.69	-0-	1.01
350,000 - 399,999	3.39	-0-	2.02
400,000 or greater	<u>3.39</u>	<u>-0-</u>	<u>2.02</u>
Total	100.00%	100.00%	100.00%
	N = 59	N = 40	N = 99

6. In order to validate responses to participation questions, two questions were asked at the beginning of the major questionnaire concerning the respondents' participation in two types of activities. If the respondents indicated that they were participating in either community or continuing education activities and then refused to respond to the more detailed participation question, it was considered as a non-response to the participation questions.

In summary, the pilot study was successful in attaining its administrative objectives. Confusing and misleading questions were improved or eliminated without reducing analytical content. The questionnaire for the major study benefited by looking less cluttered for the respondents and becoming more amenable for analysis. Lead time between distribution and final analysis was judged adequate and project costs acceptable.

#### RESPONDENTS' SOCIO-ECONOMIC COMPOSITION

Based on results derived from hotelling- $t^2$  tests (Table 8) and chi-square tests, eight of the ten socio-economic variables differed significantly between professional and general participants. These variables included: marital status, age, years of formal schooling, occupational status, employability, distance travelled to the course, location of residence and income levels.

Professional participants who attended continuing education courses, when compared with general course participants, had a greater tendency to be married (64.6% versus 40.0%); were younger (35.3 years versus 38.8 years); had more years of formal education (16.3 years versus 14.6 years); were involved in positions having a higher occupational status (67.5 points versus 52.2 points); were employed more (87.5% employed versus 62.3% employed); travelled a greater distance to get to the courses (26.3 miles versus 8.7 miles); did not come from Vancouver (31.3% versus 77.1%), and had higher income levels. No significant difference occurred for number of dependents and sex of the participants.

TABLE 8  
SOCIO-ECONOMIC COMPOSITION  
A HOTELLING-T<sup>2</sup> ANALYSIS

<u>Socio-Economic Factors</u>	<u>General Participants</u>	<u>Professional Participants</u>	<u>Difference Between the Means</u>
Age	38.8 years	35.3 years	3.53 <sup>1</sup>
Formal Schooling	14.6 years	16.3 years	- 1.76 <sup>1</sup>
Occupational Status	52.2 points	67.5 points	-15.30 <sup>1</sup>
Distance Travelled	8.7 miles	26.3 miles	-17.53 <sup>1</sup>
Number of Dependents	.4 persons	1.5 persons	- 1.01

p<.05 (significant difference)

Marital Status

General participants were somewhat more evenly distributed between the single and married categories (41.4% and 40.0%) than were professional students (22.9% and 64.6%). This uneven distribution, when tested by chi-square, denoted a significant difference between the two participant groups. (Table 9)

TABLE 9  
ANALYSIS OF PILOT STUDY RESPONDENTS'  
MARITAL STATUS

	<u>General Participants</u>	<u>Professional Participants</u>	<u>Combined</u>
Marital Status <sup>1</sup>	41.4%	22.9%	33.9%
Single	40.0	64.6	50.0
Married	<u>18.6</u>	<u>12.5</u>	<u>16.1</u>
Other <sup>2</sup>			
	100.0%	100.0%	100.0%
	N = 70	N = 48	N = 118

<sup>1</sup> $p < .05$  (significant difference); d.f. = 2;  $\chi^2 = 6.9$

<sup>2</sup>divorced, widowed, separated

### Age

A Hotelling- $t^2$  test between the mean ages of both participant groups indicated that general participants had a mean age of 38.8 years (s.d. = 17.1 years) and were significantly older than professional participants who had a mean age of 35.3 years (s.d. = 12.8 years). Their respective standard deviations also indicated that the general participants were drawn from a wider age spectrum. (Table 8)

### Formal Schooling

Professional participants had a mean of 16.3 years of formal schooling (s.d. = 2.6 years) which was significantly more than general participants ( $\bar{X}$  = 14.6 years; s.d. = 3.4 years). Upon re-analysis of the questionnaire it was discovered that there was a concentration of school teachers taking professional courses. There were also a number of home-makers concentrated in the general courses.

### Occupational Status and Employability

Using the Blishen Occupational Class Scale it was determined that professional participants with a mean of 67.5 points (s.d. = 8.9 points) rated significantly higher with respect to status of their occupations than did general participants ( $\bar{X}$  = 52.2 points; s.d. = 14.2 points).

The variance in the standard deviation between both groups validated the employment concentration found in the professional category. (Table 8)

A generally accepted relationship between occupational status and years of formal schooling also appeared to be validated. (Blishen, 1958)

TABLE 10  
ANALYSIS OF PILOT STUDY RESPONDENTS'  
EMPLOYABILITY

	<u>General Participants</u>	<u>Professional Participants</u>	<u>Combined</u>
Employability			
Employed	62.3%	87.5%	72.6%
Unemployed	<u>37.7</u>	<u>12.5</u>	<u>27.4</u>
	100.0%	100.0%	100.0%
	N = 69	N = 48	N = 117

$p < .01$  (significant difference); d.f. = 1;  $\chi^2 = 7.80$

#### Place of Residence and Distance Travelled

General participants were mostly from Vancouver (Table 11) and consequently travelled less distance to attend courses than professional participants. (Table 8) A chi-square test on place of residence revealed a significant difference between the two participant groups. (Table 11)

Only 31.3% of professional participants lived in Vancouver, whereas 77.1% of the general participants were from Vancouver.

TABLE 11  
RESPONDENTS' PLACE OF RESIDENCE

<u>Place of Residence</u>	<u>General Participants</u>	<u>Professional Participants</u>	<u>Combined</u>
Vancouver	77.1%	31.3%	58.5%
Other	<u>22.9</u>	<u>68.7</u>	<u>41.5</u>
Total	100.0%	100.0%	100.0%
	N = 70	N = 48	N = 118

$p < .05$  (significant difference); d.f. = 1;  $\chi^2 = 22.85$

Professional participants averaged 26.3 miles (s.d. = 30.7 miles) and general participants averaged 8.7 miles (s.d. = 11.3 miles). The standard deviations also reflect the wide variance in residential locations related to professional participants. The distribution of respondents by place of residence is shown below. (Table 12)

TABLE 12  
RESPONDENTS' PLACE OF RESIDENCE

<u>Place of Residence</u>	<u>General Participants</u>	<u>Professional Participants</u>	<u>Combined</u>
Vancouver	77.1%	31.3%	58.5%
North Shore	11.4	10.4	11.0
Burnaby	4.3	4.2	4.2
New Westminster	-0-	6.3	2.5
Port Coquitlam and Coquitlam	-0-	4.2	1.7
Richmond, Delta and Surrey	1.4	10.4	5.1
Lower Fraser Valley	-0-	4.2	1.7
Upper Fraser Valley	2.9	2.1	2.5
Other	<u>2.9</u>	<u>27.1</u>	<u>12.7</u>
Total	100.0%	100.0%	100.0%
	N = 70	N = 48	N = 118

Income Levels

When the original nine income categories (found in Table 6) were reduced to five, a chi-square test determined that a significant difference occurred between the two participant groups.

TABLE 13  
INCOME LEVELS

<u>Income Levels</u>	<u>General Participants</u>	<u>Professional Participants</u>	<u>Combined</u>
Less than \$ 6,000	25.00%	10.86%	19.08%
\$ 6,000 - 9,999	17.19	4.35	11.82
10,000 - 14,999	23.44	45.65	32.72
15,000 - 19,999	14.06	19.57	16.36
20,000 or greater	<u>20.31</u>	<u>19.57</u>	<u>20.02</u>
Total	100.00%	100.00%	100.00%
	N = 64	N = 46	N = 110

$p < .05$  (significant difference); d.f. = 4;  $\chi^2 = 11.05$

General participants were concentrated either in the two lower income categories (42.19%) or the two upper income categories (34.37%).

Professional participants were concentrated in the middle income category (45.65%) or the two upper income categories (39.14%). In comparing the variances, the outcome clearly indicates that professional participants earned significantly greater family incomes than general participants.



### Number of Dependents

The mean number of dependents declared by the professional ( $\bar{X} = 1.5$  persons; s.d. = 3.5 persons) and general participants ( $\bar{X} = .4$  persons; s.d. = .9 persons) was not significantly different. (Table 8) Although there was a significant difference between both groups concerning marital status, those participants who were married, divorced or who merely indicated dependents remained similar.

### Sex

A chi-square test between groups of participants (Table 14) indicated that involvement in the courses by males and females was similar and no statistically significant differences occurred.

TABLE 14  
SEX CATEGORIES<sup>1</sup>

<u>Sex</u>	<u>General Participants</u>	<u>Professional Participants</u>	<u>Combined</u>
Male	72.5%	61.4%	68.1%
Female	<u>27.5</u>	<u>38.6</u>	<u>31.9</u>
Total	100.0%	100.0%	100.0%
	N = 69	N = 44	N = 113

<sup>1</sup>no significant difference; d.f. = 1;  $\chi^2 = 1.05$

## Conclusion

As stated by Evans (1959) traditional market research incorporating "variables such as age, income, race, sex or geographic location are used to describe markets ..." and "... explain and predict purchase behaviour". (p. 340) Given this decision framework, the results of the analysis of participant socio-economic characteristics indicated that the two groups appeared to represent two market segments. Key variables such as formal schooling, income levels, age, employability (employed versus not employed), occupational status and marital status would seem to confirm Hypothesis 4.9.

## COMMUNITY AND EDUCATIONAL PARTICIPATION

Two major questions relating to participation were pursued. One question asked about the respondents' participation in continuing education programs within one year prior to the course they were presently taking. The other question referred to involvement in organization and community activities at the time of the survey. Both questions used a response format based on Chapin's Social Participation Scale. (Miller, 1970, pp. 245-250) The second question (organizational activities) was a direct copy; the first question (educational activities) used a modified version.

Organizational Participation

TABLE 15

LEVEL OF ORGANIZATIONAL AND COMMUNITY PARTICIPATION<sup>1</sup>

<u>General Participants</u>	<u>Professional Participants</u>	<u>Combined</u>
12.1 points ( $\bar{X}$ )	23.3 points ( $\bar{X}$ )	16.8 points ( $\bar{X}$ )
15.5 points (s.d.)	20.5 points (s.d.)	18.5 points (s.d.)
N = 65	N = 47	N = 112

<sup>1</sup>p<.05 (significant difference)

Table 15 has been put into the context of Chapin's research results for a more meaningful interpretation. (Table 16) The professional group responded in the same manner, if not somewhat higher than was reported by Chapin (23.3 points versus Chapin's 20.0 points). The general group was in Chapin's "skilled" range (12.1 points versus Chapin's 12.0 points). These scores bear strong association to the results obtained in Table 8 where the occupational status between both groups was analyzed. In that case, the professional group (67.5 points) also varied significantly from the general group (52.2 points).

TABLE 16  
CHAPIN SOCIAL PARTICIPATION SCALE RESULTS

<u>Categories</u>	<u>Point Score</u>
Professional	20 points
Managerial and Proprietary	20 points
Clerical	16 points
Skilled	12 points
Semiskilled	8 points
Unskilled	4 points

A hotelling- $t^2$  test was used to determine significant variances between both participant groups for this present study. Sub-categories from within each participation scale were used for this test. The total number of organizations within which the respondents participated, whether local or national, was not significantly different between the groups. There were, however, four sub-categories which varied significantly: (1) frequency of attendance; (2) financial contributions; (3) committee participation, and (4) participation as an officer in the organization. In all these categories, the professional group surpassed the general group. (Table 17)

TABLE 17

HOTELLING-T<sup>2</sup> ANALYSIS OF THE CHAPIN SOCIAL PARTICIPATION SCALE

<u>Variables</u>	<u>General Participants X Score</u>	<u>Professional Participants X Score</u>	<u>Difference Between The Means</u>
Total Organizations	1.86	2.87	- 1.01
Local Organizations	1.08	1.02	.06
National Organizations	0.79	1.89	- 1.11
Attendance Levels	2.60	4.81	- 2.21*
Financial Contributions	5.08	7.40	- 2.33*
Committee Participation	1.49	4.43	- 2.95*
Offices Held	1.15	3.72	- 2.57*
Total Points	12.10	23.30	-11.14*

\*p&lt;.05 (significant difference)

Educational Participation

A format similar to the Chapin Social Participation Scale was used for the analysis of continuing education participation activities. The subjects were asked if the specific courses were general or professional in their orientation; if they completed and paid for the courses; how many hours they participated in continuing education; and if they formally participated in a course's instruction or planning. The hotelling-t<sup>2</sup> test was used to compare the professional and general groups for the various sub-categories of the scale. (Table 18)

TABLE 18  
HOTELLING-T<sup>2</sup> ANALYSIS OF THE CONTINUING EDUCATION  
PARTICIPATION SCORES

<u>Variables</u>	<u>General Participants X Score</u>	<u>Professional Participants X Score</u>	<u>Difference Between The Means</u>
Total Courses	3.26	2.33	.93
General Courses	2.54	0.98	1.56*
Professional Courses	0.71	1.37	- .65
Completed Courses	6.17	4.49	1.68*
Personally Paid	7.82	5.39	2.44*
Instruction Function	0.97	1.20	- .23
Development Function	0.79	1.20	- .42
Hours in Attendance	81.39	126.40	-45.00*
Total Points	17.45	14.78	2.71*

\*p<.05 (significant difference)

No significant differences occurred in the mean number of courses attended and either group's participation in the instruction and development functions. The general group had a greater tendency to complete the courses and pay for tuition themselves. The completion factor appears to relate to the length of the professional courses in that each professional participant attended an average of 126.4 hours per course whereas each general participant attended an average of 81.4 hours per course.

### Summary

Professional participants devoted significantly more effort to social participation than did general participants (23.20 points versus 12.10 points). The reverse occurred for educational participation. The professional participants' mean score of 14.78 points was significantly less than the general participant score of 17.45 points.

### PROGRAM, INSTITUTIONAL AND PRICE RESPONSE PATTERNS

Respondents were asked to indicate their attitudes about the following: (1) the course they were attending; (2) comparable courses in other educational institutions; (3) course price; (4) consumer search and awareness; (5) use of outside financial aid; (6) reasons for attending Centre courses; (7) their need (economic or personal) for attending Centre courses, and (8) their ability to judge among competing courses. This combination of participation data and marketing research information was deemed necessary to determine factors which may influence consumer attitudes about the course price structure of the Centre.

Table 19 summarizes the participants' program responses. Score variations between both groups for all five factors were statistically non-significant. Both participant groups appraised themselves as: devoting a reasonable amount of time to planning their course purchase; satisfying personal rather than economic needs, and having a fair to good ability when pre-judging a course's characteristics or competition.

TABLE 19  
PROGRAM RESPONSES  
A HOTELLING-T<sup>2</sup> ANALYSIS

<u>Factors</u>	<u>General Participants</u>	<u>Professional Participants</u>	<u>Difference Between The Means<sup>1</sup></u>
	<u>Index</u> <u>Score<sup>2</sup></u>	<u>Index</u> <u>Score<sup>2</sup></u>	
Planning Effort	5.17 points	4.66 points	.51
Personal Need	6.30 points	6.55 points	-.26
Satisfaction			
Economic Need	2.05 points	2.00 points	.05
Satisfaction			
Pre-Judgement	6.57 points	6.57 points	.00
Ability			
Ability to Judge a	6.12 points	6.38 points	-.26
Competing Course			

<sup>1</sup>None of the factors showed significant mean differences between participant groups.

<sup>2</sup>Scores had a range of 0-9 (lowest to highest).

#### Program Responses

The amount of effort that participants devoted to planning their course "purchase" remained consistent between both groups and was defined by the participants as "the usual amount" (5 points on the index score). This may be interpreted through the goods classification concept (Stanton and Sommers, 1973) where consumers perceive the purchase as either shopping or specialty. In either case the amount of purchase pre-planning is neither trivial nor extraordinary.



Both groups decided that the courses satisfied a personal rather than an economic need. With 3.0 signifying a "below average" index score it was rather surprising that professional participants did not define their courses as satisfying an economic (2.00) rather than a personal need (6.55).

The participants felt that their ability to pre-judge a course's characteristics was rather good. In other words, they personally did not feel uneasy about a potential course before entering it and were confident about their own decision-making procedure as it related to course content, objectives, and quality. Both groups had identical index scores of 6.57 where 7.0 meant "good".

The same judgemental outcomes occurred when the participants were asked to rate their ability to judge the difference between similar types of continuing education courses offered at different local educational institutions.

Clearly, the Centre participants perceived themselves as rather good consumer shoppers when deciding upon a continuing education course and a specific institution. Hypotheses 4.5 and 4.6 are therefore accepted.

#### Financial Assistance

The professional participants had a greater propensity to have their fees paid by others (23.4% versus 12.1% - Table 20). Who actually paid for the program fees was asked as an open-ended response question. The responses were classified into three major categories. (Table 21)

TABLE 20

## PARTICIPANTS WITH OUTSIDE FINANCIAL AID

	<u>General Participants</u>	<u>Professional Participants</u>	<u>Combined</u>
Yes	12.1%	23.4%	16.8%
No	<u>87.9</u>	<u>76.6</u>	<u>83.2</u>
Total	100.0%	100.0%	100.0%
	N = 66	N = 47	N = 113

$p < .01$ ; d.f. = 1;  $\chi^2 = 6.64$

TABLE 21

## LOCATION OF FINANCIAL AID

	<u>General Participants</u>	<u>Professional Participants</u>	<u>Combined</u>
School District	13.0%	90.0%	58.7%
Relatives	87.0	-0-	35.3
Local Association	<u>-0-</u>	<u>10.0</u>	<u>6.0</u>
Total	100.0%	100.0%	100.0%
	N = 7	N = 10	N = 17

It is evident that those participants who had their fees paid were either school teachers or dependents. Ninety per cent of the professional group who obtained fee payments received them from their school district. The general group obtained their fee payments from relatives (87.0%) or a school district (13.0%).

### Institutional Responses

Participants were asked to rate other types of institutions relative to similar course offerings as against the University of British Columbia Centre for Continuing Education equivalent. (Table 22) The reason for their non-search attitude was asked within the structure of the same question by an open-ended technique. Nine distinct response categories were identified from 92 responses. (Table 23)

TABLE 22  
INSTITUTIONAL RESPONSES  
A HOTELLING-T<sup>2</sup> ANALYSIS

<u>Institutional Type</u>	<u>General Participants</u>	<u>Professional Participants</u>	<u>Difference Between The Means<sup>1</sup></u>
	<u>Index Score<sup>2</sup></u>	<u>Index Score<sup>2</sup></u>	
Community Colleges	4.88 points	4.87 points	.01
High Schools	3.99 points	4.15 points	-.17
Community Centres	3.82 points	4.09 points	-.27
Private Schools	4.73 points	5.00 points	-.27

<sup>1</sup>None of the factors showed significant mean differences between participant groups.

<sup>2</sup>Where: 4.00-6.99 points = "no difference"  
1.00-3.99 points = "significantly worse" (term used in questionnaire)

Over 20% of the general and 28% of the professional participants "assumed no other institutions offered the courses". Added to the latter response, the feeling that "the University of British Columbia's offering

was much superior" increased the two percentages to over 37% for general participants and 35% for professional participants. Direct advertising and promotion appeared to have little effect, although the University of British Columbia's image may be considered as part of the overall promotional presentation. (Stanton and Sommers, pp. 1-35) Both groups had similar attitudes about all four institutions. They agreed that community colleges and private profit-making institutions could offer similar courses, although some differences might be expected. The high schools and community centres fared somewhat poorly and bordered on the lower end of the "no difference" zone and toward the "significantly worse" zone.

TABLE 23

## REASONS FOR LACK OF SEARCH

<u>Reasons</u>	<u>General Participants</u>	<u>Professional Participants</u>	<u>Combined</u>
Assumed no other institutions offered course	20.8%	28.2%	23.9%
No time	7.6	-0-	4.4
Previous experience made me feel U.B.C. was superior	17.0	7.7	13.0
Because of the instructor	15.1	15.4	15.2
Location of U.B.C.	13.3	7.7	9.8
No particular reason	13.2	15.4	14.1
Timing of the offering	7.6	15.9	10.9
Advertising	5.7	7.7	6.5
Recommendation	<u>1.9</u>	<u>2.6</u>	<u>2.2</u>
Total	100.0%	100.0%	100.0%
	N = 53	N = 39	N = 92

The study attempted to determine if the subjects actually searched for other competing institutions. It was quite clear that neither group placed much effort into finding other institutions that offered equivalent courses. (Table 24)

TABLE 24  
SEARCH PROCEDURES

	<u>General Participants</u>	<u>Professional Participants</u>	<u>Combined</u>
Yes	18.75%	23.19%	26.96%
No	<u>81.25</u>	<u>76.81</u>	<u>73.04</u>
Total	100.00%	100.00%	100.00%
	N = 69	N = 48	N = 117

p = no significant difference; d.f. = 1;  $\chi^2 = 1.54$

Both groups showed little awareness (25.0%) about courses offered by other educational institutions. (Table 25) This result closely related to the participants' search procedures, where only 27% of the participants even bothered to look for alternative educational institutions. There appeared to be little doubt about the effect of the University of British Columbia's "image" on their decision-making.

The participants who were aware of other educational institutions offering equivalent courses indicated an average of 2.13 competitive courses. (s.d. = 2.03) This figure varied between 2.00 courses (s.d. = 1.06) for general participants, and 2.29 courses (s.d. = 2.88) for professional participants. These variations between the two groups were not statistically significant.

TABLE 25  
AWARENESS LEVEL OF PARTICIPANTS

	<u>General Participants</u>	<u>Professional Participants</u>	<u>Combined</u>
Yes	26.5%	23.4%	25.0%
No	<u>73.5</u>	<u>76.6</u>	<u>75.0</u>
Total	100.0%	100.0%	100.0%
	N = 68	N = 47	N = 115

p = no significant difference; d.f. = 1;  $\chi^2 = 1.48$

Based on the information related to lack of participant "search" and "awareness", Hypothesis 4.7 is rejected for both groups.

#### Pricing Responses

Participants were asked to indicate high and low price thresholds for the course they were attending. This question gave the first clear evidence, other than the demographic statistics, that the general and professional participants represented two distinct marketing groups. It also indicated that a different pricing attitude separated the two groups of participants. (Table 26)

TABLE 26  
COURSE PRICE CONSIDERATIONS  
A HOTELLING-T<sup>2</sup> ANALYSIS

<u>Price Factors</u>	<u>General Participants</u>	<u>Professional Participants</u>	<u>Difference Between The Means</u>
High Price Threshold	\$ 46.20	\$ 66.22	- 20.03 <sup>1</sup>
Low Price Threshold	12.47	20.64	- 8.17 <sup>1</sup>
Ability to Judge Fees	5.31 points <sup>2</sup>	5.49 points	- .18

<sup>1</sup>p<.05 (significant difference)

<sup>2</sup>where: 5 = "fair" and 7 = "good"

Although both groups indicated that a price range existed, the general group's high threshold price (\$46.20) was below the average price for the courses themselves (\$52.10). Furthermore, only 71.4% answered the threshold price question, whereas 91.8% of the professional group responded. Some 68.6% of the general group responded to the low price threshold, with 79.6% of the professional group responding to this threshold price.

The second differentiation between the groups occurred in the average prices and standard deviations. The professional group had a tighter price range (\$41.20 average price and an \$11.80 standard deviation) than the general group (\$52.10 average price and a \$71.90 standard deviation).

Pricing attitudes of the professional group varied distinctly from the general group. The price range existed for the professional group (\$66.20 to \$20.60) which reflected the first part of threshold pricing theory. The average price for each course was between the upper and lower thresholds (\$41.20) which reflected the second portion of threshold pricing theory. As mentioned previously, the general group reacted as the first portion of the theory indicated and had a price range (\$46.20 to \$12.50); however, the average course price fell out of this range (\$51.10).

In summary, the general participants were willing to pay the given course fee, but felt that such courses should be priced somewhat lower than at present. Professional participants appeared to take a more "price and imputed quality" approach. They defined a price-value relationship and tended to feel that professional courses, in order to be worth their while, should have been priced at some level other than free to ensure quality. Hypothesis 4.2 is therefore accepted for professional participants and accepted in a qualified sense for general participants. Hypothesis 4.1 is accepted for both groups.

The participants' self-perceived ability to judge a course's value and place in the competitive market was further enhanced by this self-perceived ability to estimate a course's price. (Table 26) Although the scores were somewhat lower than those presented in Table 19 (Pre-judgement abilities) the responses were into the "fair" category. Once again, both groups had a relatively high self-appraisal of their abilities to judge course offerings even though their shopping methodologies did not substantiate this perception. (Hypothesis 4.5)



### Attitudes Toward Continuing Education

Responses to a question regarding general attitudes about continuing education suggested that it was highly regarded by both groups of participants, with little variation between or within the groups. The mean rating on a nine point attitude scale was 8.34 for general course participants and 8.45 for professional course respondents. The standard deviations were 1.02 and 0.94 respectively. The hotelling- $t^2$  value was not statistically significant. As the mean scores were close to the maximum obtainable, both groups clearly possessed strongly favourable attitudes toward continuing education.

Attitudes toward continuing education were also analyzed using the Adolph and Whaley scale (1967). A score of 8.60 was the maximum obtainable on that scale, and the group of respondents used in the construction of that scale had a mean score of 6.97 (s.d. = .54). By comparison, the participants in professional courses had a mean score of 7.02 (s.d. = 0.49) and general interest course participants had a mean score of 6.94 (s.d. = 0.58). These data support the generalized attitude measure reported above, and indicate strongly favourable attitudes on the part of both groups of participants. Hypothesis 4.8 is therefore accepted.

### SUMMARY

A hotelling- $t^2$  analysis was performed on the total data to give an overview of the socio-economic, price, attitude, judgement and other responses demonstrated by the respondents.

Significant differences between the two groups occurred in eight out of the ten socio-economic variables: age, formal schooling, employability, occupational status, distance travelled to the course, marital status, location of residence, and income levels. Significant differences between the sex composition of the groups and the number of dependents per respondent in each group were found not to exist.

All other judgemental questions concerning the respondents' ability to determine the value of other institutions, and potential courses, economic and personal need levels, and continuing education per se were found not to differ between the two groups. Both groups had a low response to the amount of search they conducted before taking a course. They had basically the same reasons for not searching for other competing institutions, and both groups were equally unaware of similar courses being offered by other local educational institutions.

Professional participants had a greater tendency to acquire outside financial aid. The significant difference related to this variable was the source of the financial aid. General participants received most of their aid from relatives (87%) and professional participants received aid from school districts (90.0%).

The major source of differences between the two groups, other than their socio-economic characteristics, was their reaction to the price threshold concept. It is quite clear that professional participants embraced the "price and imputed quality" foundation of threshold pricing, whereas the general participants accepted price thresholds as given but still felt that their courses should have been given at a lower price.

The "price and imputed quality" factor, although major for one group, was minimized for the other; that is, the general course participants. Although both groups had the same basic judgemental attitudes about continuing education, their demographic characteristics and their price attitude variance caused the groups to be defined as two distinct consumer markets for the services offered by the University of British Columbia Centre for Continuing Education. Hypothesis 4.9 is therefore accepted.

## CHAPTER V

## THRESHOLD PRICING AND MARKET SEGMENTATION

## INTRODUCTION

The previous chapters explored and elaborated the conceptual and research framework for this study. That participants in professional non-credit education courses appeared significantly different from their general non-credit course counterparts led to a closer examination of participants attending professional non-credit education courses, with particular reference to market segment considerations.

Two hundred and forty-two participants in eleven courses completed the questionnaire. This selected course range and participant size allowed a definition of selected socio-economic factors, education and community participation characteristics, and a general pricing attitude--all in greater detail than in the pilot study.

## PURPOSE

This study builds upon the previous two studies. Its main purpose is to give continuing education administrators one specific framework for developing definable market segments as expressed through participants' pricing attitudes, that is, high and low price threshold determinations. Secondly, hypotheses derived from the previous projects

and literature review are formulated to respond directly to the research question. (see p. 4) Thirdly, a detailed analysis of participants attending professional non-credit education courses at the Centre for Continuing Education is presented to describe this "market mix". (Stanton and Sommers, pp. 25-26)

Lastly, the results of hypotheses testing and description of the participants led to considerations for further research on continuing education participant reactions to program price strategies and resultant course prices.

#### RESEARCH HYPOTHESES

Hypothesis 5.1: There will be a significant difference between the price of the non-credit professional education courses and the participant designated upper bound price for these courses. (reference: Hypothesis 4.1)

Hypothesis 5.2: There will be a significant difference between the price of the non-credit professional education courses and the participant designated lower bound price for these courses. (reference: Hypothesis 4.1)

Hypothesis 5.3: Participants will designate significantly more non-zero dollar (\$) lower bound prices than zero dollar (\$) lower bound prices. (reference: Hypothesis 4.2)

Hypothesis 5.4: Participants' scores concerning their self-perceived ability to pre-judge courses, competition and course fees will be significantly and positively associated with their attempts to search for and be aware of similar course offerings. (reference: Hypothesis 4.5)

Hypothesis 5.5: There will be no significant difference between the participants' attitude score about continuing education and the scores obtained in a previous study by Adolph and Whaley. (reference: Hypothesis 4.8)

The following hypotheses expand on the information gained from the pilot study and pricing literature. The hypotheses will test for more detailed relationships between the price threshold scores and various socio-economic, attitude and participation scores.

Hypothesis 5.6: High and low price threshold scores will correlate significantly and positively with the participants':

Wealth

Hypothesis 5.6a: Employability status.

Hypothesis 5.6b: Job status score (Blisshen Index).

Hypothesis 5.6c: Income.

Hypothesis 5.6d: Receiving of fee payments from an outside source.

Commitment to Continuing Education

Hypothesis 5.6e: Total hours devoted to continuing education.

Hypothesis 5.6f: Personal need score. (Shapiro, p. 22)

Hypothesis 5.6g: Economic need score. (Shapiro, p. 22)

Hypothesis 5.6h: Attitude toward continuing education score.  
(Adolph and Whaley Index)

Hypothesis 5.6i: Place of residence.

Hypothesis 5.7: High and low price threshold scores will correlate significantly and positively with the price of courses. (Fouillé, p. 96; Emry, p. 100)

Hypothesis 5.8: High price threshold scores will correlate significantly and negatively with the participants':

Hypothesis 5.8a: Attitudes about each of the four related educational institutions, that is, community colleges, adult night schools, community centres and proprietary schools.

(Enis and Stafford)

Hypothesis 5.8b: Ability to predict the course fee. (Shapiro, p. 20)

Hypothesis 5.8c: Ability to pre-judge the course characteristics.

(Shapiro, p. 20)

Hypothesis 5.8d: Ability to judge a competing course.

Hypothesis 5.9: The three participant segments (high, average, low) identified for the upper bound price threshold will have significantly different multiple discriminant classifications.

Hypothesis 5.10: The three participant segments (high, average, low) identified for the lower bound price threshold will have significantly different multiple discriminant classifications.

Hypothesis 5.11: The three participant segments (high, average, low) will have associated multiple discriminant classifications between the upper and lower bound price thresholds:

Hypothesis 5.11a: The upper bound high price consumer segment will not differ significantly from the lower bound high price consumer segment.

Hypothesis 5.11b: The upper bound average price consumer segment will not differ significantly from the lower bound average price consumer segment.

Hypothesis 5.11c: The upper bound low price consumer segment will not differ significantly from the lower bound low price consumer segment.

#### PROCEDURE

The following eleven professional education non-credit short courses offered by the Centre were used for this study:

- Classroom Management For Teachers
- Computer Course For High School Teachers
- The Adult And Learning Child In Group Settings
- Music and Movement: Realizing Your Own Creativity
- The Young Child In Society
- Exploring Creativity With Young Children
- Teaching With Feelings: Understanding Emotions
- Elements of Instruction
- Technology of Instruction
- Reading Improvement
- Writing Improvement

All participants in each course completed the major study questionnaire.

(Appendix D)

#### Distribution and Collection Procedure

Permission was obtained from the course instructor to explain the study's objectives and to give completion instructions and a pick-up schedule to the participants. This explanation was accomplished on the



first day of class. The participants took the questionnaire home and returned it on the following class day. The major study questionnaire caused no apparent conceptual or completion problems for the participants.

### Data Analysis

Three separate computer programs were used to test hypotheses and provide a description of the participants attending the courses. MV-TAB and TRIP were used to develop descriptive data, including percentage distributions, t-tests, means, standard deviations and correlation coefficients. BMD:07M was used to derive market segmentations, multiple regression descriptions of the segmentations, and significant difference criteria for each market segment.

### RESPONDENTS' SOCIO-ECONOMIC COMPOSITION

Participants attending professional non-credit education courses at the Centre averaged 31 years of age (s.d. = 10.6 years); were responsible for more than one dependent; attended 14 years of formal schooling (s.d. = 4.7 years); obtained 62.1 points (s.d. = 13.4 points) on the Blishen Occupational Status Index; travelled an average of 13.8 miles (s.d. = 15.5 miles) to attend the classes, and had an average income of \$14,473 (s.d. = \$8,699). Sixty-nine per cent of the respondents declared \$12,000 or greater annual incomes. (Table 27)

TABLE 27  
SOCIO-ECONOMIC COMPOSITION OF PARTICIPANTS

<u>Socio-Economic Factors</u>	<u>Mean Scores</u>	<u>Standard Deviations</u>	<u>Number of Respondents</u>
Age	30.96 years	10.63 years	190
Dependents	1.28 persons	1.95 persons	231
Formal Schooling	13.60 years	4.69 years	230
Occupational Status	62.12 points	13.43 points	204
Distance Travelled	13.83 miles	15.49 miles	242
Income	\$14,473	\$8,699	214

Participants had a greater tendency to be married (57%) rather than single (37%) or "other" (6%). More males (55%) than females (45%) attended the Centre's summer program; however, wide variations occurred among the separate courses. Seventy per cent of the participants indicated they were employed at the time of course attendance while 30% were unemployed.

Although the daily travelling distance averaged 13.8 miles, 24 per cent of the participants were not from the lower mainland but living on or near the campus for a course's duration. A presentation of permanent places of residence is given below. (Table 28)

TABLE 28  
RESPONDENTS' PLACE OF RESIDENCE

Vancouver	37.27%
North Shore	12.03
Burnaby	6.22
New Westminster	2.07
Port Coquitlam and Coquitlam	4.98
Richmond, Delta and Surrey	10.37
Lower Fraser Valley	2.49
Upper Fraser Valley	2.49
Other	<u>24.07</u>
	100.00%

In summary, participants attending the 1974 Centre summer program of courses were generally middle class Canadians. Most were above 30 years old, were college educated, held non-labouring jobs, and earned an above-average income.

#### PROGRAM AND INSTITUTIONAL RESPONSE PATTERNS

This study asked the respondents to present their attitudes about the following: (1) the course they were attending; (2) comparable courses in other educational institutions; (3) consumer search and awareness levels; (4) economic and personal needs related to the courses; (5) ability to judge among competing courses, and (6) attitudes about continuing education. The combination of participation data and marketing research information aided in the determination of factors affecting course price attitudes and the testing of Hypotheses 5.4 and 5.5.

### Program Response

The participants' expected satisfaction to be derived from a course was more personal (7.09 points) than economic (4.83 points). With 5.0 points signifying "average" and 7.0 points "above average", the participants appeared to be rather definite on this factor. (Table 29)

The participants' general self-rated ability to pre-judge courses (5.42 points), course fees (4.54 points) and competition (5.34 points) were all rather constant and rated at a "fair" level. Thus, they are somewhat ambivalent about themselves as consumers of the service. This observation would give some justification for classifying continuing education courses as "shopping goods". (Stanton and Sommers, p. 147)

These courses may therefore be rather susceptible to the psychological aspects of pricing, threshold price considerations and a price and imputed quality value judgement. (Enis and Stafford, p. 340)

TABLE 29

#### PROGRAM RESPONSES OF PROFESSIONAL COURSE PARTICIPANTS

<u>Factors</u>	<u>Mean Score</u>	<u>Standard Deviation</u>	<u>Number</u>
Personal need satisfaction	7.09	1.55	235
Economic need satisfaction	4.83	2.57	235
Pre-judgement ability	5.42	1.65	233
Ability to judge a competing course	5.34	1.68	227
Ability to predict a course fee	4.54	1.62	228

Two rather obvious reasons were found for the feelings of indecisiveness: (1) lack of "search" for alternatives courses given by competing educational institutions, and (2) lack of a general awareness about the availability of other courses. Only 37% of the participants attempted to search for alternative courses, and only 25% of the participants were aware of courses given by other institutions. These latter respondents noted just over one other competing institution.

Hypothesis 5.4: Participants' scores concerning their self-perceived ability to pre-judge courses, competition and course fees will be significantly and positively associated with participant attempts to search for and be aware of similar course offerings.

It has been stated that knowledge about the goods or services available on the market is directly related to the consumers' amount of search and level of competitive awareness. (Brown, 1971) Hypothesis 5.4 tested this relationship by relating the participants' search and awareness factors to their self-perceived abilities concerning continuing education services.

The participants were asked two questions: Did they search for any other services, and were they aware of any other services? The "yes" - "no" responses were given dummy variable designations and correlation coefficients between these two outcomes and the three consumer self-judgement factors were derived. (Table 30)

TABLE 30

## SHOPPING RELATIONSHIPS BETWEEN BEHAVIOUR AND SELF-JUDGEMENT

	<u>Search</u>	<u>Awareness</u>
	r	r
Pre-judgement ability	.081	.056
Ability to judge a competing course	.107 <sup>3</sup>	.220 <sup>1</sup>
Ability to predict a course fee	.136 <sup>2</sup>	.220 <sup>1</sup>

Where: 1 =  $p < .01$

2 =  $p < .05$

3 =  $p < .10$

Search and awareness, although positively related to ability to pre-judge a course's characteristics, were not statistically significant. Awareness of other courses was the dominating factor affecting the participants' feelings about their ability to judge other competing courses and predict course fees ( $p < .01$ ). The fact that participants actually took time to search for other courses significantly affected their perceived ability to predict a course fee ( $p < .05$ ), and, to a lesser degree, ability to judge competing courses ( $p < .10$ ). Hypothesis 5.4 is, except in the case of pre-judgement ability, therefore generally accepted.

The participants were asked why they attempted no search procedure. This was an open-ended question and the results are categorized below.  
(Table 31)

TABLE 31

## REASONS FOR LACK OF SEARCH

Assumed no other institutions offered the course	26%
No time to look	7
Previous experience made me feel the University of British Columbia was superior	13
Because of the instructor	1
Location of the University of British Columbia	16
No particular reason	17
Timing of offering	2
Advertising	1
Recommendation or ordered to go to the University of British Columbia	<u>17</u>
Total	100%

The University of British Columbia's "image" as a superior educational institution dominated directly or indirectly, the participants' reasons for not "shopping". Fifty-six per cent of the reasons related to "assumed no other institutions" (26%), "previous experience" (13%) and "recommended or ordered" (17%). If "location" (16%) is included, the total increases to 72%.

### Institutional Response

In order to give some scope to the comparison of institutions, participants were asked to rate four others. (Table 32) Although the results were somewhat inconclusive, it is apparent that no other institutional type is considered superior to the Centre for Continuing Education, and all, except community colleges, rate at the lower end of "no difference" or directly in "significantly worse".

TABLE 32  
PARTICIPANT ATTITUDE TOWARD OTHER INSTITUTIONS

<u>Institutional Type</u>	<u>Mean Score</u>	<u>Standard Deviation</u>	<u>Number of Respondents</u>
Community Colleges	4.97	1.07	236
High Schools	4.41	1.32	237
Community Centres	3.80	1.40	230
Private Schools	4.24	1.70	226

Where: 4.00 - 6.99 points = "no difference"

1.00 - 3.99 points = "significantly worse"

Participant attitudes about continuing education were rated at a mean of 7.57 (s.d. = 6.31) using the Adolph and Whaley scale (1967). A score of 8.70 is the maximum obtainable on that scale, and the original group of respondents used by Adolph and Whaley in the construction of that scale had a mean score of 6.97 (s.d. = .54).

Hypothesis 5.5: There will be no significant difference between the participants' attitude score about continuing education and the scores obtained in a previous study.  
(Adolph and Whaley, p. 153)

This hypothesis was tested using a "difference between means" test. (Freund and Williams, pp. 237-239) It was rejected. These data indicated a very favourable attitude about continuing education among the participants in professional courses.



### Summary

The courses offered through the Centre may be classified in marketing terms as "shopping goods". Their value, characteristics, price and competitive factors were not clearly understood by the users. The latter point was, to some extent, modified by the lack of search and low level of competitive awareness displayed by the participants.

(Hypothesis 5.5) It was also apparent that the perceived superior image of the University of British Columbia Centre for Continuing Education inhibits the users' desires to search for or be aware of alternative course offerings.

Finally, the participants had a very strong and positive attitude about continuing education (Hypothesis 5.6), and, in this respect, attended Centre courses with needs which were more personal than economic in nature.

### COMMUNITY AND EDUCATIONAL PARTICIPATION

Using the Chapin Social Participation Scale (Miller, 1970) for the community participation measurement, and a modified Chapin Scale for the educational participant measurement, the participants were scored relative to their involvement in the indicated activities.

The community participation score averaged 12.05 (s.d. = 15.27) and educational participation averaged 16.27 (s.d. = 14.72). In terms of Chapin's categories (Table 16), community participation would be rated

in the "skilled" category, and the education participation in the "clerical" category. The latitude present in the standard deviation scores indicated that individual responses were widely varied. The participation in educational activities (16.27 points) was significantly greater than participation in community activities (12.05 points). (t-prob. = .003; d.f. = 455) It should be pointed out, however, that the questionnaires were somewhat different and tested two separate participant dimensions. Overall participation rather than comparisons should therefore be the descriptor.

#### COURSE PRICE RESPONSE

The latter portion of this chapter is composed of two main sections. The first deals with the basic relationships that occurred between the price thresholds and various socio-economic, program and institutional factors. These relationships were used to test the various hypotheses derived from the literature review and the pilot study. The second section deals with problems relating to market segmentation. An attempt was made to derive distinct market classifications through the use of multiple discriminant analysis based on threshold price formulations.

Once the segmentations were identified, a description of the "top dollar" and average markets were presented. Such descriptions and segmentation processes should aid continuing education administrators in determining methods to develop a complete marketing mix (price, product, place and promotion) to attract specific markets to their institutions.

### Pricing and the Adult Participant

1. Relationships between a "standard" price and upper and lower bound prices.

Threshold pricing theory states that the price range which includes both the upper and lower bound prices should vary around a "standard" product price. For this study the "standard" product price was the mean price charged for all courses attended by the participants. The upper bound and lower bound prices were the mean scores obtained from the participants' response when they were asked to present both an upper and lower bound price for the course they were attending.

Although the literature does not specifically state that the upper and lower bound prices should vary significantly from the mean price of the good or service, it has been tested for such an occurrence. This would give some reliability to the observations made previously about the participants' "fair" or "acceptable" perception of the Centre's course prices. If there was a significant difference between the mean course price and the upper and lower bound prices, with particular reference to the upper bound price, then raising the course fees to some degree would not affect attendance to such an extent that total revenue would drop. In economic theory terms, the demand curve would be classified as "inelastic".

Hypothesis 5.1: There will be a significant difference between the price of the professional non-credit education courses and the participant designated upper bound price for these courses.

Hypothesis 5.2: There will be a significant difference between the price of the professional non-credit education courses and the participant designated lower bound price for these courses.

T-tests between the mean course price and the separate upper and lower bound mean prices were conducted. Given a t-prob. of  $<.001$  (d.f. = 259) between the mean course price and the mean upper bound price, Hypothesis 5.1 was therefore accepted. Hypothesis 5.2 was also accepted based on a t-prob.  $<.001$  (d.f. = 264) between the mean course price and the mean lower bound price.

Fouillé (p. 96) and Emry (p. 100) have observed that consumer determined upper and lower bound thresholds are functionally related to the price of the good or service under discussion, or at least some average of related goods. Therefore, if the good is perceived as being in a class of expensive items, then the threshold range will relate to that higher price framework. If the price class is perceived as inexpensive (gum, soda pop) then the threshold range will relate to that lower price level. To judge if continuing education courses also show this price class-threshold price relationship it was predicted that:

Hypothesis 5.7: High and low price threshold scores will significantly and positively correlate with the price of the courses.

The correlation coefficient between the mean course price and the participant determined mean upper bound price was  $r = .53$  ( $p < .01$ ); and between the mean course price and the mean lower bound price was  $r = .39$  ( $p < .01$ ). Hypothesis 5.7 was therefore accepted.

## 2. Relationships between threshold prices and participant factors

Participants' choice of both high and low price threshold bounds may be associated with their level of wealth and their commitment to continuing education. To test these two generalizations, nine separate hypotheses were developed, four related to wealth and five related to continuing education commitment.

### Wealth

High and low price threshold scores will correlate positively and significantly with the participants'

Hypothesis 5.6a: Employability status.

Hypothesis 5.6b: Job status score. (Blisshen Index)

Hypothesis 5.6c: Income.

Hypothesis 5.6d: Payment of fees by some other source.

TABLE 33

RELATIONSHIP BETWEEN THRESHOLD BOUND PRICES  
AND PARTICIPANT "WEALTH" FACTORS

	Upper Bound Price	Lower Bound Price
	r	r
Employability status	.35 <sup>1</sup>	.26 <sup>1</sup>
Job status score (Blisshen Index)	.32 <sup>1</sup>	.24 <sup>1</sup>
Income	.18 <sup>2</sup>	.13 <sup>3</sup>
Payment of fees by some other source	.18 <sup>1</sup>	.11

Where: 1 =  $p < .01$ ; 2 =  $p < .02$ ; 3 =  $p < .10$

The participants' choice of an upper bound price is clearly related to all four "wealth" factors. The lower bound price had the same relationship as the upper bound price as far as employability status and job status score was concerned ( $p < .01$ ). The relationship was not quite as strong with the income ( $p < .10$  versus  $p < .02$ ) and fee payment ( $p =$  not significant versus  $p < .01$ ) factors.

#### Commitment to Continuing Education

High and low price threshold scores will correlate positively and significantly with the participants'

Hypothesis 5.6e: Total hours devoted to continuing education.

Hypothesis 5.6f: Personal need score.

Hypothesis 5.6g: Economic need score.

Hypothesis 5.6h: Attitude toward continuing education. (Adolph and Whaley Index)

Hypothesis 5.6i: Place of residence.

Commitment to continuing education consisted of five factors. It was expected that strength of involvement in continuing education would be related to total hours devoted to continuing education (Hypothesis 5.6e), attitude toward continuing education (Hypothesis 5.6h) and place of residence (Hypothesis 5.6i). Place of residence rather than distance travelled was used because the latter was obscured by so many participants from beyond the lower mainland. Participants were divided into two groups: those who resided in the lower mainland and those who resided elsewhere. (see Table 28) Both groups were given dummy variable designations for test purposes.

Personal need (Hypothesis 5.6f) and economic need (Hypothesis 5.6g) are a form of more direct commitment with the specific course and the type of value the participant expected to derive from that course.

TABLE 34  
RELATIONSHIP BETWEEN THRESHOLD BOUND PRICES AND  
PARTICIPANT COMMITMENT TO CONTINUING EDUCATION

	Upper Bound Price	Lower Bound Price
	r	r
Total hours devoted to continuing education	.20 <sup>1</sup>	.22 <sup>1</sup>
Personal need score	.01	.09
Economic need score	.14 <sup>2</sup>	.13 <sup>3</sup>
Attitude toward continuing education	.04	.05
Place of residence	.33 <sup>1</sup>	.25 <sup>1</sup>

Where: 1 =  $p < .01$ ; 2 =  $p < .05$ ; 3 =  $p < .10$

Total hours devoted to continuing education ( $p < .01$ ), place of residence ( $p < .01$ ) and economic need score ( $.05 > p < .10$ ) significantly correlated with participant responses to both upper and lower bound price considerations. The Adolph and Whaley Index and personal need score appeared to have little associative value with respect to price boundaries.

### 3. Some negative considerations

To this point, positive participant factors related to the upper and lower bound price determination have been tested. There are, however, some potentially negative factors which should be considered. The first negative factor would be participant attitude about other educational institutions; that is, the more positive they are about the educational offering of a competing institution the less likely they would show any direction toward a high level for the upper bound price schedule for Centre courses. Ability to predict course fees, pre-judge course characteristics and judge competition would also be negatively related to participant desire to present high upper bound prices since confidence in their judgement would suppress extremely high price presentations.

It was hypothesized that high price threshold scores would correlate negatively and significantly with the participants'

Hypothesis 5.8a: Attitudes about each of the four related educational institutions.

Hypothesis 5.8b: Ability to predict their course fee.

Hypothesis 5.8c: Ability to pre-judge the course characteristics.

Hypothesis 5.8d: Ability to judge a competing course.



TABLE 35

## SOME NEGATIVE RELATIONSHIPS TOWARD UPPER BOUND PRICES

	r
Community College	.07
High School	-.18 <sup>1</sup>
Community Centre	-.16 <sup>2</sup>
Private Profit-making School	-.14 <sup>3</sup>
Pre-judgement Ability	-.22 <sup>1</sup>
Ability to predict a course fee	-.13 <sup>3</sup>
Ability to judge a competing course	-.03

Where: 1 =  $p < .01$

2 =  $p < .02$

3 =  $p < .05$

Other than the community college and ability to judge a competing course which were not significant, all other factors were negatively and significantly related to participants' determination of a high price bound score. Attitudes about their pre-judgement ability and high schools had the highest negative correlation ( $p < .01$ ), followed by community centres ( $p < .02$ ), private profit-making schools ( $p < .05$ ), and ability to predict a course's fee ( $p < .05$ ). Clearly a positive attitude about other institutions affected the maximum that participants would be willing to pay for a course.

### Price and Imputed Quality

One of the foundations of threshold pricing is the acceptance of a price and imputed quality attitude by a consumer of products or services. It was assumed that the individual, when asked to designate a lower bound price threshold, will not state a \$0 level. He will, in fact, begin to suspect the value of an item (or service) if it is available for free.

Hypothesis 5.3: Participants will designate significantly more non-zero dollar (\$) lower bound prices than zero dollar (\$) lower bound prices.

A simple count of those participants who stated a \$0 dollar lower bound price, as against all others, revealed that they were in the minority, constituting only 8.5% of the respondents. It would therefore appear that the price and imputed quality concept exists for the professional courses offered at the Centre.

### Summary

The tests of hypotheses determined that the "standard" program price was significantly different from the participant designated upper and lower bound price schedules (Hypotheses 5.1 and 5.2); that the threshold price structure significantly varied with the course price (Hypothesis 5.7); and that an apparent price and imputed quality attitude existed relative to the Centre's professional courses. (Hypothesis 5.3).

Participants' upper bound price designations were positively and significantly affected by: (1) the fact that they were employed rather than unemployed (Hypothesis 5.6a); (2) their job status score on the Blishen Index (Hypothesis 5.6b); (3) their income (Hypothesis 5.6c); (4) the fact that some other source paid their fees (Hypothesis 5.6d); (5) the number of hours devoted to continuing education over the last year (Hypothesis 5.6e); (6) their economic need score (Hypothesis 5.6g), and (7) their place of residence (Hypothesis 5.6i). Significant but negative relationships occurred relative to participants' attitudes about: (1) other educational institutions--high school adult programs, community centres and private profit-making schools--excluding community colleges (Hypothesis 5.8a); (2) ability to pre-judge course characteristics (Hypothesis 5.8c), and (3) ability to predict a course fee (Hypothesis 5.8b).

Participants' lower bound price choices were positively and significantly affected by: (1) the fact that they were employed (Hypothesis 5.6a); (2) their job status on the Blishen Index (Hypothesis 5.6b); (3) the number of hours devoted to continuing education over the last year (Hypothesis 5.6e); (4) their place of residence (Hypothesis 5.6e), and to a lesser degree, (5) their income (Hypothesis 5.6c), and (6) their economic need score (Hypothesis 5.6g).

In general, the theoretical foundations of threshold pricing appear to be applicable to professional continuing education courses offered by the Centre for Continuing Education.

## PRICE THRESHOLDS AND MARKET SEGMENTATION

The establishment of the existence of price thresholds which has occurred through the previous two chapters and prior section of this chapter must now be related to the market decision needs of continuing education administrators. An accepted procedure for this is found in marketing management and is referred to as "market segmentation".

(Kotler, pp. 165-168)

Market segmentation, the most recent idea for guiding marketing strategy, starts not with distinguishing product possibilities, but rather with distinguishing customer needs or interests. Market segmentation is the sub-dividing of a market into homogeneous subsets of customers, where any subset may conceivably be selected as a market target to be reached with a distinct marketing mix. The power of this concept is that in an age of intense competition for the mass market, individual sellers may prosper through creatively serving specific market segments (markettes, or little markets) whose needs are imperfectly satisfied by the mass-market offerings. (Kotler, p. 166)

Direct benefits to continuing education administrators from this marketing process include: (1) they are "in a better position to spot and compare marketing opportunities"; (p. 168) (2) they can use their "knowledge of the marketing response differences of the various market segments to guide the allocation of their total marketing budget"; (p. 168) and (3) they "can make finer adjustments of their product and marketing appeals". (p. 168)

### Basis for the Segmentation Process

Both the upper and the lower bound price schedules were the starting points for segmenting all the participants (market). It was hypothesized that three definable and statistically significant participant markets (referred to as markets) existed for the upper bound price threshold (Hypothesis 5.9) and the lower bound price threshold. (Hypothesis 5.10) These three market segments were called high, average and low. High was defined as that market which conceivably would be willing to pay the highest amount for continuing education services; low was that market which was not willing to pay the so-called "top dollar" for these services, and average was that market which appeared not to be committed to either extreme.

It was further hypothesized that the three market segments representing both price boundaries would not differ. (Hypotheses 5.11a, 5.11b, 5.11c) That is, the upper bound high price segment would be substantially the same as the lower bound high price segment, the upper average similar to the lower average, and the upper bound low price segment similar to the lower bound low price segment.

### Marketing Significance versus Statistical Significance

The procedure used for determining if the segments were significantly different was multiple discriminant analysis. If the segments were judged to be significantly different, then a description of each market was

presented. It was this market description that would interest the continuing education administrator as it gave the first clue to the development of a marketing mix.

Unfortunately, what is statistically significant may have no substantive significance for marketing decisions. Most market discriminant analyses start with a pre-determined market segmentation, for example, the individuals listening to three types of radio stations - rock, classical, and western. (Niassey, pp. 39-46) Data are acquired about each group and subjected to multiple discriminant analysis. The groups may prove to be significantly different, but the variables which caused the significant differences may be of little value for marketing decisions.

This study did not have the advantage of a pre-determined market segment classification as explained above. Rather, an attempt was made to define, from a clearly homogeneous market (all individuals in a price bound), three separate price-oriented markets. The process was somewhat subjective and the final groups used for segmentation discrimination reflected this exploratory framework. The multiple discriminant classifications proved to a large extent to be statistically significant, but caution must be exercised concerning their significance for marketing decisions.

## THE FINDINGS

Segmenting the Upper Bound Price Schedule

The first analysis attempted to develop three classifications for the homogeneous upper bound price boundary, and the discriminant classification was statistically significant ( $F\text{-prob.} < .001$ ). Seven predictor variables were assigned to the discriminant functions: awareness of the number of competing institutions; attitude toward continuing education; miles travelled to a class; attitude about a community centre; participation in local organizations (absolute number); marital status, and number of points received for participant payment of courses.

(Table 36)

The value of the discriminant coefficients were used to indicate the most important independent variables. Attitude about community centres had the highest rating for both linear functions of the independent variables. The actual predictive accuracy of the discriminant functions was classified as 61.61%. The classification was statistically significant ( $F\text{-prob.} < .001$ ) based on probability distributions of either 33.33% if three groups were considered, or 11.1% if all nine potential categories were considered.

From a marketing viewpoint, the differentiation between the upper bound high and low categories was somewhat unsatisfactory with only 15.9% of the upper bound high classified into high, and 36.1% of the upper bound low classified into low. The misclassifications into the average

TABLE 36<sup>1</sup>

SUMMARY OUTPUT FOR THREE-GROUP  
UPPER BOUND DISCRIMINANT ANALYSIS

<u>Step Number</u>	<u>Variable Entered</u>	<u>Variable Number</u>	<u>F-Value to Enter or to Remove</u>	<u>Degrees of Freedom</u>
1	Awareness - number of competing institutions	1	6.54	2; 208
2	Attitude toward continuing education	2	4.99	2; 207
3	Miles travelled to class	3	4.30	2; 206
4	Attitude about a community centre	4	4.39	2; 205
5	Participation in local organization	5	4.39	2; 204
6	Marital status	6	4.40	2; 203
7	Number of points for courses paid by participant	7	3.19	2; 202

DISCRIMINANT FUNCTIONS-COOLEY AND LOHNES COEFFICIENTS

<u>Variable Number</u>	<u>Function #1</u>	<u>Function #2</u>
1	.049	-.240
2	-.018	.045
3	-.189	.269
4	.883	.926
5	-.323	-.065
6	.055	.786
7	-.272	-.042

-Format for Tables 36, 37 is from: Green and Tull, p. 386.



## CLASSIFICATION MATRIX-PREDICTED

	Upper Bound High	Upper Bound Average	Upper Bound Low	Total
Upper Bound High	15.9%	70.5%	13.6%	100%
Upper Bound Average	5.0%	88.3%	6.7%	100%
Upper Bound Low	6.4%	57.5%	36.1%	100%

segment appeared to cause the greatest problem and gave some indication that, for marketing purposes, the participants may have been rather homogeneous. However, because of this study's exploratory nature the segmentation process is continued below in order to indicate both benefits and drawbacks from self-defined market groups. Hypothesis 5.9 was statistically accepted, but unacceptable for marketing decision purposes.

#### Segmenting the Lower Bound Price Schedule

The predictor variables for the lower bound discrimination process were: awareness of the number of competing institutions; ability to predict a course fee; income, and participation in organizations. Based on the value associated with the independent variable coefficients, the awareness of the number of competing institutions was the most powerful discriminant variable. (Table 37)

The classification matrix was statistically significant ( $F\text{-prob.} < .001$ ). Once again, the average category drew from the two other categories and left doubt as to the segmentation's worth relative to a marketing decision.

TABLE 37  
SUMMARY OUTPUT FOR THREE-GROUP  
DISCRIMINANT ANALYSIS-LOWER BOUND  
PRICE SCHEDULE

<u>Step Number</u>	<u>Variable Entered</u>	<u>Variable Number</u>	<u>F-Value to Enter or to Remove</u>	<u>Degrees of Freedom</u>
1	Awareness - number of competing institutions	1	10.89	2; 183
2	Ability to predict a course fee	2	4.02	2; 182
3	Income	3	4.11	2; 181
4	Points received for organization attendance	4	4.18	2; 180

DISCRIMINANT FUNCTIONS-COOLEY AND LOHNES COEFFICIENTS

<u>Variable Number</u>	<u>Function #1</u>	<u>Function #2</u>
1	-.988	.975
2	.149	-.062
3	.001	.005
4	-.051	-.212

CLASSIFICATION MATRIX-PREDICTED

	<u>Lower Bound High</u>	<u>Lower Bound Average</u>	<u>Lower Bound Low</u>	<u>Total</u>
Lower Bound High	0%	95.5%	4.5%	100.0%
Lower Bound Average	1.5%	93.3%	5.2%	100.0%
Lower Bound Low	3.3%	80.0%	16.7%	100.0%

Hypothesis 5.10 was accepted statistically and 69.9% of the cases were classified correctly, although one must conclude that the segmentation was unacceptable from a marketing viewpoint.

### Relationships Between the Three Upper Bound Sub-markets and the Three Lower Bound Sub-markets

The objective of the two previous sections was to determine if three separate sub-markets existed for both upper and lower bound price schedules. This section's objective was to determine if there were any uniformity of markets between the upper and lower bound high prices as one market, the average price group as a second market, and the low price group as a third market. In effect, the three sub-markets for both the upper and lower bound price schedules may represent separate markets, that is, the overall high, average and low price markets.

#### 1. The high price sub-market

A research hypothesis has been defined for this specific analysis:

Hypothesis 5.11a: The upper bound high price consumer segment will not differ significantly from the lower bound high price consumer segment.

The objective was not to attain substantially different groups but to assess the degree of uniformity between the high price sub-markets of both the upper and lower bound price schedules.

The results of the multiple discriminant analysis are presented in Table 38. Probabilities for predicted classification were 50%. The

number of cases that were correctly classified was only 65.15%. This rather small difference of 15.15% between chance selection and statistical selection, although significant ( $F\text{-prob.} < .01581$ ), and the overlap of the lower bound high price market segment onto the upper bound high segment (86.4%) indicates a rather homogeneous market of "top dollar" participants.

TABLE 38

SUMMARY OUTPUT FOR TWO-GROUP DISCRIMINANT ANALYSIS  
UPPER BOUND HIGH VERSUS LOWER BOUND HIGH PRICE SEGMENTS

<u>Step Number</u>	<u>Variable Entered</u>	<u>Variable Number</u>	<u>F-Value to Enter or to Remove</u>	<u>Degrees of Freedom</u>
1	Ability to predict a course fee	1	6.06	1; 64

DISCRIMINANT FUNCTIONS-COOLEY AND LOHNES COEFFICIENTS

<u>Variable</u>	<u>Function #1</u>
1	-1.0

CLASSIFICATION MATRIX-PREDICTED<sup>1</sup>

	<u>Upper Bound High</u>	<u>Lower Bound High</u>	<u>Total</u>
Upper Bound High	90.9%	9.1%	100.0%
Lower Bound High	86.4%	13.6%	100.0%

significant at  $F\text{-prob.} < .01581$  and 65.15% of the cases correctly classified.

Hypothesis 5.11a, although not statistically accepted, was considered acceptable given the nature of the study, the overlap of the two market segments, and the rather low (65.15%) statistical classification.

Only one independent variable had a high enough F-value to be retained in the linear discriminant function. Ability to predict a course fee accounted for the complete statistical classification matrix in Table 38.

## 2. Description of the high price sub-market

Beyond the hypotheses testing relative to threshold price theory and the conceptual determination of market segments based on a threshold pricing format, this study's concern was to describe a potentially lucrative market for continuing education administrators --the high price or "top dollar" market. The description presented in the following paragraphs includes previously discussed socio-economic variables, as well as participant responses to various program, institutional and participant factors as the latter relate to the "top dollar" market.

### Socio-economic variables

These participants had an average age of 30.9 years (s.d. = 11.8 years); were responsible for more than one dependent (s.d. = 1.8 dependents); had had 13.8 years of schooling (s.d. = 2.3 years); received 62.0 points on the Blisshen Index (s.d. = 14.9 points), and had an average income of \$14,949 (s.d. = \$8,005) with 78% declaring an income of greater than \$12,000 per year. They travelled an average of 12.1 miles

(s.d. = 15.2 miles) to class, resided outside of Vancouver (56% versus 44%), were employed (71% versus 29%), and were married (51.5%) rather than single (36.4%) or other (12.1%). Females and males were evenly represented (50% for each category).

Program, institutional, and participation responses

They perceived the courses as satisfying a personal ( $\bar{X} = 7.2$ ; s.d. = 1.7) rather than an economic need ( $\bar{X} = 5.0$ ; s.d. = 2.5). Their judgemental abilities relative to course characteristics ( $\bar{X} = 5.3$ ; s.d. = 1.7), other institutions ( $\bar{X} = 5.2$ ; s.d. = 1.8), and course fee prediction ( $\bar{X} = 4.6$ ; s.d. = 1.6) were all comparable and classed as "fair".

Their attitude about community colleges ( $\bar{X} = 4.8$ ; s.d. = 1.3), high schools ( $\bar{X} = 4.1$ ; s.d. = 1.4), community centres ( $\bar{X} = 3.5$ ; s.d. = 1.5) and private profit-making institutions ( $\bar{X} = 4.1$ ; s.d. = 1.7) left the University of British Columbia Centre for Continuing Education in a very superior position. All mean scores related to these other institutions were on the low end of the "no difference" attitude (4.00 - 6.99) or into the "significantly worse" (<4.00) attitude category.

Only 41% of the high price participants attempted any consumer search for alternative courses and only 18% were even aware of alternative locations.

Their attitude about continuing education was very favourable ( $\bar{X} = 7.1$  points; s.d. = .5 points). The low standard deviation indicated a high degree of attitude conformity. They participated in prior

continuing education events ( $\bar{X} = 14.3$  points; s.d. = 12.0 points) to a greater extent than community events ( $\bar{X} = 12.4$  Chapin points; 15.8 Chapin points). The sizable variation reflected in both standard deviations indicated wide individual differences.

### 3. The average price sub-market

A research hypothesis has been defined for this specific analysis:

Hypothesis 5.12b: The upper bound average price consumer segment will not differ significantly from the lower bound average price consumer segment.

As with the high price sub-market, a multiple discriminant test between the upper bound average price sub-market and the lower bound average price sub-market was conducted to determine if these two average markets had a high degree of uniformity. There was no classification matrix developed for the overall average price market. In other words, they were, as between the upper and lower bound price schedules, one and the same market. Hypothesis 5.11b is therefore accepted statistically ( $F\text{-prob.} > .05$ ) and within the exploratory structure of this study.

### 4. Description of the average price market

The description of this market follows the same twofold breakdown as the high price market.

#### Socio-economic variables

These participants had an average age of 29.9 years (s.d. = 10.8 years); were responsible for more than one dependent (s.d. = 2.2 dependents); had had 13.8 years of schooling (s.d. = 5.9 years); received

61.2 points on the Blishen Index (s.d. = 14.1 points), and had an average income of \$14,939 (s.d. = \$9,498). They travelled an average of 12.3 miles (s.d. = 13.2 miles) to class, resided outside of Vancouver (62.0% versus 38.0%), were employed (67.7% versus 31.3%), and were married (53.5%) rather than single (41.3%) or other (5.2%). There were more males (62.1%) than females (37.9%).

#### Program, institutional, and participation responses

They perceived the courses as satisfying a personal ( $\bar{X} = 7.1$ ; s.d. = 1.5) rather than an economic need ( $\bar{X} = 5.1$ ; s.d. = 2.5). Their judgemental abilities relative to course characteristics ( $\bar{X} = 5.4$ ; s.d. = 1.6), other institutions ( $\bar{X} = 5.3$ ; s.d. = 1.6), and course fee prediction ( $\bar{X} = 4.6$ ; s.d. = 1.5) were all classed in the "fair" range.

Their attitude about community colleges ( $\bar{X} = 5.0$ ; s.d. = 1.0), high schools ( $\bar{X} = 4.4$ ; s.d. = 1.3), community centres ( $\bar{X} = 3.8$ ; s.d. = 1.4), and private profit-making institutions ( $\bar{X} = 4.2$ ; s.d. = 1.7) varied from "significantly worse" to "no difference". Once again, no other institution was considered superior to the Centre.

Only 37% of the average price participants attempted any consumer search for alternative courses and only 28.9% were even aware of alternative locations.

Their attitude about continuing education was very favourable ( $\bar{X} = 8.0$  points; s.d. = 8.7 points), although the large standard deviation indicated a large variance within this price group.



They participated in prior continuing education events ( $\bar{X} = 15.8$  points; s.d. = 14.1 points) to a greater extent than community events ( $\bar{X} = 10.9$  Chapin points; s.d. = 13.6 Chapin points). The sizable variation reflected in both standard deviations indicated wide individual differences.

#### 5. The low price sub-market

A research hypothesis has been defined for this specific analysis:

Hypothesis 5.11c: The upper bound low price consumer segment will not differ significantly from the lower bound low price consumer segment.

As with the other two price sub-markets, a multiple discriminant analysis was conducted between the upper bound low price market segment and the lower bound price low price market segment. The objective was to determine some level of uniformity between the two sub-markets.

Unlike the other two tests, there was little or no uniformity. Statistically, the data were significantly separate ( $F\text{-prob.} < .001$ ). The classification matrix produced 76.62 correctly classified cases, and there was only a comparably minor overlap between the upper bound low market and the lower bound low market (19.1%). The overlap figure was somewhat higher between the lower bound low market and the upper bound low market (30.0%). (Table 39)

Hypothesis 5.11c would therefore have to be rejected both statistically and in an exploratory sense.

There were five discriminating variables: awareness of the number of competing institutions; ability to predict a course fee; attitude about a community centre; age of the participant, and the number of national organizations within which the participant held a membership. The most discriminating variable was the participants' awareness of the number of competing institutions.

Because the low price market segments were not considered uniform as between the upper and lower bound price schedules, a combined description of this market is not presented. From a marketing standpoint, a completely separate analysis of the two low price markets would be necessary and that is beyond the original purpose and scope of this study. In relation to the latter observation, it should be noted that uniformity considerations within the high or "top dollar" and the average markets constitute the most important as well as the largest portion of participants attending the Centre.

TABLE 39

SUMMARY OUTPUT FOR TWO-GROUP DISCRIMINANT ANALYSIS  
UPPER BOUND LOW VERSUS LOWER BOUND LOW PRICE SEGMENTS

<u>Step Number</u>	<u>Variable Entered</u>	<u>Variable Number</u>	<u>F-Value to Enter or to Remove</u>	<u>Degrees of Freedom</u>
1	Awareness - number of competing institutions	1	17.33	1; 75
2	Ability to predict a course fee	2	6.94	1; 74
3	Attitude about a community centre	3	6.46	1; 73
4	Age	4	4.51	1; 72
5	Number of national organization memberships	5	6.63	1; 71

## DISCRIMINANT FUNCTIONS-COOLEY AND LOHNES COEFFICIENTS

<u>Variable</u>	<u>Function #1</u>
1	.971
2	-.131
3	-.119
4	-.026
5	.162

CLASSIFICATION MATRIX-PREDICTED<sup>1</sup>

	<u>Upper Bound Low</u>	<u>Lower Bound Low</u>	<u>Total</u>
Upper Bound Low	80.99%	19.1%	100.0%
Lower Bound Low	30.0%	70.0%	100.0%

significant at F-prob.<.001 and 76.62% of the cases correctly classified.

Summary

The objective of this section was threefold: (1) to determine if an apparently homogeneous continuing education market could be segmented based upon participant derived upper and lower bound price schedules; (2) to determine if multiple discriminant analysis is an applicable statistical segmentation technique, and (3) to determine if the segmentation data derived from the above process would be usable for marketing decisions by continuing education administrators.

Objective one was developed to derive a "top dollar" market relative to professional education courses given at the Centre. Although the segmentation process was pursued based on participant derived price thresholds it appeared that this form of segmentation development proved unworkable and forms of segmentation other than the "top dollar" framework should be considered.

The use of multiple discriminant analysis to determine the segmentation classifications and significant independent variables was more than adequate. It is suggested that this statistical methodology be pursued using other segmentation frameworks.

Although the data were statistically valid, the results, due to misclassification into the "average" segments, proved to be unworkable for marketing decisions. It was obvious that care must be taken when translating statistically significant information into a decision framework for marketing.

## MARKETING CONSIDERATIONS FOR CONTINUING EDUCATION ADMINISTRATORS

Various continuing education-related marketing considerations are presented within a structure formulated by the study's major purpose, and the application of a specific marketing technique to data derived from the study's participants.

The study's major purpose as stated in Chapter I was to determine if the theoretical foundations described in threshold pricing were applicable to continuing education courses, in particular, those of the University of British Columbia Centre for Continuing Education. Based on results derived from Chapters III, IV and V it would appear that a threshold pricing attitude exists for participants attending both professional and general courses, with particular emphasis given to professional participants. This threshold pricing attitude has specific marketing outcomes for continuing education:

1. Price should not be considered as the sole purchasing determinant. In the development of a marketing strategy for various courses, the continuing education administrator should now begin to realize that course price is only one of many consumer purchase decision "cues" or criteria. Course length, for example, was shown to be a general purchase determinant. The consumer image of the educational institution also affected consumer attitude about the value of a course. This latter cue was especially reflected in rather low search and awareness levels exhibited by Centre participants;

2. Consumer acceptance of a price and imputed quality attitude about continuing education courses also expands the marketing scope of continuing education administrators. No longer must administrators take a philosophical or administrative stand that the "cheaper the better" is a total, complete or truly valid marketing strategy. In fact, just the opposite may be true. It was clear for both general and professional courses that the participants may have suspected course quality or value if too low a price was advertised;

3. A market corollary to the above is the "state of the economy". Given the high inflation rate and budget restrictions faced by continuing education institutions, and given the fact that most participants are generally aware of both situations, this would be an ideal time to consider rather large (relatively and absolutely) course fee increases for a wide range of professional courses;

4. There were a large number of participants taking professional education courses who had their fees paid by some other institution (34.19%). This point, along with an inflationary psychology, institutional budgetary needs and a participant-based price and imputed quality consensus, would indicate that a more aggressive pricing strategy should be considered. Furthermore, participants' incomes have risen and are rising at faster rates than course fees. In economic terms, this simply means that participants have more discretionary income to spend on equivalent consumption goods such as stage plays, movies, or courses given by other institutions. Therefore, the Centre's revenue should reflect these various income increases, institutionally paid tuitions, and non-price consumption cues.

5. The existence of "rough" price thresholds rather than elegantly defined demand curves expands continuing education administrators' price marketing strategy. They do not have to attempt to determine one "good" or completely acceptable course fee. Rather the range between the upper and lower bound thresholds allows a wider pricing latitude and a greater opportunity to increase total revenue. This latter point occurs because the administrators have a consumer determined price range with which to base normal cost related pricing schedules. They could note if a course price fell to either extreme of the price range and then decide whether the course price would be acceptable.

Although the five examples given above do not exhaust the marketing considerations related to the study's purpose, they should give directions to continuing education administrators relative to an expanding use of a consumer based pricing strategy.

The second marketing outcome is the applicability of multiple discriminant analysis to market segment creation as determined from participant responses to threshold price schedules. Although the general use of multiple discriminant analysis in marketing has been amply proven by various marketing research authors, it was Morrison who delineated the implementation problems:

"When the analysis is finished, three questions need to be answered. How well did we classify the individuals? Which variables were most effective in discriminating among the different classes? How can the answers to the first two questions be used to help set and implement marketing plans? This last point is important because one can often do a study and get excellent classification, identify the variables that do the discriminating, and yet have very little idea as to how these results can be used."  
(p. 2-442)

Morrison's three generalized implementation problems assumed, as have most authors, that the market segmentations were pre-determined. This study, however, was not given pre-determined market segments. Rather, a homogeneous group of participants taking professional education courses at the Centre were divided based on responses to questions related to upper and lower bound price thresholds for specific courses. Given this explanation about the reformulation of the segmentation procedure, a response to Morrison's implementation paradigm is presented below.

Classification of individuals within each bound price schedule was, from a marketing viewpoint, somewhat inadequate. The classification did not produce mutually exhaustive segments, although the preliminary classification did produce three statistically significant different segments. When the three upper and lower bound segments were recombined to produce three overall market segments: "top dollar", average, and low, the same basic misclassification problem, except for the average market, occurred. In response to Morrison's first questions: "How well did we classify the individuals?", the response would have to be rather poorly.

Morrison's question about the independent variables which discriminate most effectively was pursued for the sake of the study's exploratory nature although the misclassification results tended to negate the findings.

The third implementation question may be answered at two levels, one related to this study, and the second related to generalized needs of continuing education administrators. As far as the first is concerned



the marketing applicability is rather limited. The segmentation procedure was not totally successful. Although the groups were, for the most part, statistically adequate, any marketing value based on the regression coefficients and segment descriptions was not that valuable. From a price strategy viewpoint it would appear that participants attending professional education courses at the Centre are a rather homogeneous population.

At the second level, the use of market segmentation and the use of multiple discriminant analysis to analyze the segments may be more interesting and more valid. That is, if as other authors have stated, the marketing manager, or for our purposes, the continuing education administrator, is given rather self-evident market segmentations (based on type of course for example) then the segmentation results could be more valuable for marketing mix needs. The segmentation data made available through multiple discriminant analysis would allow continuing education administrators to determine a number of market-related factors. These factors would include the vast array of marketing information available in a demographic, attitude, or some other form. This would allow the administrator to develop a participant profile which in turn would aid in the use of a valid marketing mix. In conclusion, administrators would acquire information leading to a more systematized method of course development, determining course prices, location of presentation and promotional techniques.

## SUMMARY

Chapter V had three primary objectives: (1) to describe the participants attending professional education non-credit courses during the Centre for Continuing Education summer session; (2) to validate the threshold pricing's theoretical framework relative to public sector services (education courses), and (3) to determine if three statistically significant market segments (high, average, low) could be derived from two homogeneous markets (upper bound and lower bound price thresholds), and that the segmented markets potentially aid continuing education administrators in determining a marketing strategy.

The participant description included forty-three variables covering socio-economic, attitude and participation factors. Prior to this study, price threshold studies and theory building related solely to goods (not services) from the private industry sector. This study attempted to advance the analysis and test the theory relative to services and the public sector of the economy. It survived the transference with statistical ease.

The outgrowth of market segments derived from the participants' pricing attitudes adequately substantiated statistically different market classifications (high, average, low) within both upper and lower price boundaries; however, the segments' marketing significance proved to be less valuable. A description of the two overall markets (high and average) was presented to give a socio-economic and participant reaction overview to these segments.

Marketing implementation of threshold pricing theory and participant determined market segments developed through multiple discriminant analysis was explored. It was clear that threshold price considerations opened a vast array of continuing education marketing strategies. The participant determined price segmentations were not as successful. The marketing implementations were clear but it was suggested that other forms of market segmentation be considered, although the use of a multiple discriminant technique to analyze these segments would still remain an appropriate statistical tool.

## CHAPTER VI

## SUMMARY AND CONCLUSIONS

## INTRODUCTION

This chapter draws together the previous five chapters through a summary of the presented material. Conclusions derived from the findings and hypotheses follow the summary. Implications with respect to the marketing management needs of continuing education administrators as these needs relate to threshold pricing, market segmentation and the marketing mix complete the chapter.

## SUMMARY

Continuing education administrators may be compared with their marketing management counterparts in business and industry. Both are faced with market identification and satisfaction problems. Both must successfully compete for a portion of the consumer's budget in order to remain viable as service-producing institutions.

To resolve these marketing problems, continuing education administrators must present courses to the market at the proper time, in the proper location, with an adequate amount of publicity, and with an acceptable price. Although four factors within the marketing mix (product, place, promotion and price) bear equal weight, the main focus of this project has been with price. Continuing educators must look

beyond the "backward costing" approach to pricing and begin to adopt a marketing concept framework. That is, they must try to find out what consumers are willing to pay and then determine if that price covers both fixed and variable costs.

Several pricing methods, including two with a theoretical foundation (economic and threshold) and one with a marketing management foundation, were reviewed. Because of its potentially broad applicability to the marketing of continuing education services, threshold pricing was used as the basis of this study. The general problem was to determine that threshold pricing not only existed for continuing education courses, but was applicable to the actual administrative decision-making structure. A research problem was defined: "do price thresholds actually occur around a 'standard' price for continuing education courses?"

The research design for this study was classified by Green and Tull as an exploratory design combined with a descriptive design. It was considered exploratory because the results led to "more precise formulation of problems, including the identification of relevant variables and the formulation of new hypotheses". (pp. 73-4) It was considered descriptive because the study was involved in "the description of the extent of association between two or more variables", (p. 74) whereby these associations became useful for predictive and speculative purposes.

Based on a review of the literature and discussions with several continuing educators, it was decided to conduct three separate studies --each building upon the other. The first two studies were formulated

using exploratory hypotheses developed from the literature review. The third study was framed in research hypotheses and attempted to integrate the theoretical foundations of threshold pricing with the use of market segmentation analysis.

The first study analyzed the price decision model used in the University of British Columbia Centre for Continuing Education to determine if their pricing model fit into a generalized three-part price strategy paradigm. The third price strategy, or the combined marketing and backward costing strategy, was used. The study also analyzed consumer reaction to this pricing strategy and found that little or no adverse effect on enrolment could be detected. It was determined through the use of multiple regression and partial correlation statistical techniques that course length played a major negative role in deterring enrolment. Within the structure of threshold price theory, it was therefore suggested that the Centre's pricing strategy produced participant perceived "fair" or "acceptable" prices and that these prices did not approach any upper or lower boundary.

The second, or pilot study, was developed to answer both administrative and analytical problems as they related to the major study. Administratively, it was necessary to determine the various distribution, acquisition and analysis problems that must be overcome. Analytically, it was necessary to determine with various exploratory hypotheses, the theoretical framework presented through threshold pricing. It was also necessary to determine if the so-called general participant market was

the same as or different from the professional participant market. They proved to be rather distinct markets, and it was decided to study the professional rather than the general market in the major study.

The third study was the culmination of the previous two studies and used research rather than exploratory hypotheses. It was determined that professional continuing education courses readily followed the theory of threshold pricing. Significance tests were generally confirmed for a variety of research hypotheses. Participant derived pricing-based market segmentation tests using a multiple discriminant technique enabled the discernment of three statistically separate markets (high-average-low) for both the upper and lower price boundaries. When the two high, two average and two low scores were combined to produce an overall high (or "top dollar") market, average market and low market, the first two produced identifiably uniform entities, but the low overall market was not uniformly classified. Although the segmented markets were statistically acceptable, an overlap of cases classified into the average segment did not allow adequate data formulation for marketing decisions. It was suggested that the use of multiple discriminant analysis provided more than enough data for a wide range of marketing decisions, but that such decisions and data formulation should be developed using other forms of participation segmentation. In conclusion, the third study clearly indicated that threshold pricing was applicable and workable as a marketing mix technique for continuing education administrators.

## CONCLUSIONS

The presentation of conclusions follows the hypotheses presented in each chapter. Inasmuch as the hypotheses were divided into exploratory and research, the conclusions follow the same division.

### Exploratory Hypotheses

The University of British Columbia Centre for Continuing Education's pricing strategy for courses coincided with its own pricing philosophy (Hypothesis 3.1) as well as the pricing attitudes generally expressed within the field of adult education (Hypothesis 3.2). Participant decision-making concerning attendance indicated that length of course, not price, significantly affected potential attendance in a negative way. (Hypothesis 3.3)

The existence of upper and lower bound price thresholds for both general and professional course participants was clearly confirmed for the latter, although somewhat less clearly for the former. The same outcome occurred for the price and imputed quality concept. (Hypotheses 4.1, 4.2)

Continuing education participants had a high propensity toward participation in continuing education and community organizations. The general participants were more involved with educational participation, the professional participants with community participation. (Hypotheses 4.3, 4.4)



Continuing education participants perceived themselves as having a good self-image concerning their abilities to discriminate among course offerings, and were consistent when judging the value of courses offered by other educational institutions. (Hypotheses 4.5, 4.6) They also had a high regard for continuing education itself. (Hypothesis 4.8)

Continuing education participants did not comparison shop for alternative courses given by other educational institutions. (Hypothesis 4.7) This finding is probably related to the overall superior image of the University of British Columbia as an educational institution.

Finally, it was determined that general and professional course participants represented two distinct markets and should be studied separately. (Hypothesis 4.9)

### Research Hypotheses

Statistically significant differences occurred between participant-designated mean upper and lower bound prices and the mean course prices. (Hypotheses 5.1, 5.2) This observation confirmed that price thresholds do exist for public sector continuing education services. That the high and low price thresholds significantly and positively correlated with the course price merely gave further evidence for the existence of threshold. (Hypothesis 5.7) The concept of price and imputed quality was amply exhibited (Hypothesis 5.3) and disproved a commonly-held notion that participants want free programs.

Participants' desire to search for and become aware of alternative courses provided by other educational institutions significantly affected their self-perceived ability to judge a competing course and predict a course fee. (Hypothesis 5.4) This may be interpreted to mean that consumer self-confidence relative to shopping behaviour rises when search is conducted.

Participants showed a high propensity for both educational participation and community organization participation. This point was re-confirmed with their highly favourable attitudes toward continuing education. (Hypothesis 5.5)

Various "wealth" factors correlated significantly and positively with the participants' choice of upper and lower bound prices. Employability status (Hypothesis 6a) and Blisshen scores (Hypothesis 6b) were the strongest correlates, followed by participant income (Hypothesis 6c) and the fact that participants had their fees paid by another person or organization. (Hypothesis 6d)

It was further suggested that "commitment to continuing education" factors would have a significant and positive effect on the participants' choice of upper and lower bound thresholds. Total hours devoted to continuing education, (Hypothesis 6e) economic need score, (Hypothesis 6f) and place of residence were significant factors. (Hypothesis 6g) Personal need score, (Hypothesis 6h) and attitude toward continuing education (Hypothesis 6i) were not significant correlates.

Negative factors were also presented relative to their effect on the upper bound price. Attitude toward high schools, community centres and private profit-making schools significantly and negatively affected

participants' high price designation. (Hypothesis 5.8a) Pre-judgement ability (Hypothesis 5.8b) and ability to predict a course fee, (Hypothesis 5.8c) but not ability to judge a competing course, (Hypothesis 5.8d) also had negative effects.

The market segmentation process divided the upper and lower homogeneous boundaries into three statistically separate sub-markets (high-average-low). (Hypotheses 5.10, 5.11) When the division and reformulation took place to determine if there were three separate and definable markets called the "top dollar" (high) market, average market and low market, the segmentation process adequately identified the first two markets (Hypotheses 5.12a, 5.12b) but not the low market. (Hypothesis 5.12c) Unfortunately, the value of this specific segmentation process for marketing decision-making was of less value than the segmentation process itself.

## IMPLICATIONS

There were three major perspectives derived from this study within which continuing education administrators may develop, select and evaluate marketing price strategies. These perspectives and their potential effect on professional non-credit course pricing are discussed in this section.

### 1. Continuing education courses as "shopping goods"

Throughout the study it became clear that continuing education non-credit professional and, to the same extent, general courses could be classified as "shopping goods". The courses represented this marketing

category for four reasons: (1) the participants definitely lacked "full knowledge of pertinent product features"; (Stanton and Sommers, p. 147) (2) there were few, if any, bases for price comparison; (3) once the participants felt that they had found the right course, they were not too worried about the price, provided it was reasonable and fell within some participant defined threshold, and (4) the importance of the retailer (university) and its image were very important.

The marketing price implications related to the shopping goods classification are considerable. Because there were few bases for comparison, that is, little or no direct competition, and because the participants appeared generally incapable of acquiring full knowledge about comparative course characteristics, once they found the "right course" there was a good chance that the course was purchased. In both marketing and economic terms this means that the demand for the service tends to be inelastic and that the price of any particular course could probably be significantly raised without a corresponding decrease in enrolment.

The value of the university's image is considerable for this "good's" classification. Since the comparison procedure was difficult, participants had a tendency to look for best approximations when deciding on value to be received. The perceived quality of the institution was a strong influence on the shoppers' perception of the course's value. Given the above, the continuing education administrator should expect that "trading on" an institution's name could allow for course price increases without a significant enrolment loss, at least for participants already familiar with the institution.

The question then becomes: "Should the University of British Columbia Centre for Continuing Education administrators take advantage of the shopping goods category assumptions?" The response to questions concerning participants' inability to make certain market judgements, their lack of search for and awareness of competitive institutions, and their dependency on the "image" of the University of British Columbia weigh heavily in the Centre's favour. Clearly, it is in a dominant pricing position. The general demand for the Centre's services is rather inelastic and the participants perceived no viable competition.

Although the Centre could probably raise its course prices substantially without a corresponding enrolment decrease, it remains to be determined whether the shopping goods classification is applicable to other forms of continuing education offered by other universities, community colleges, high school adult programs, community centres, and proprietary schools. It could be that the Centre is in a unique marketing position, not generalizable to other institutions offering continuing education.

## 2. The existence of threshold prices in continuing education

A unilateral pricing strategy that depends solely on a backward costing approach to course prices has two major faults: (1) it may create a pricing schedule that falls out of a consumer acceptable price threshold, and (2) it may not allow the institution to gain the highest possible revenue from courses. By considering that the price of a course is not just a cost for the consumer, but also a "cue" as to the course's value, then alternative consumer-oriented pricing strategies which are not so mechanical as formula-based strategies could be considered.

The use of definable price limits for specific courses or groups of related courses provides an understanding of consumer pricing behaviour that has wider boundaries and therefore greater potential for marketing price decisions.

The variations between the upper bound mean and lower bound mean price schedules, when they were compared with the mean course price schedule, clearly indicated that the Centre had a definite opportunity to change a number of course prices if they wished. However, with their formula-based fee structure most Centre administrators were unable to know how the majority of participants would react to course price changes (particularly increases). Their decision flexibility was reduced and, as a consequence, their marketing efficiency was reduced.

Although price thresholds were statistically definable and a price and imputed quality factor attributed to the Centre's educational offerings, it is not known if this pricing theory is generalized throughout continuing education. The general applicability of threshold pricing in education would need to be examined by re-testing the positive and negative participant factors related to the upper bound price threshold as well as the variations between the threshold bounds and course means.

### 3. The use of market segmentation

Threshold price considerations and goods classification paradigms are adequate frameworks for pricing strategy; however, the key marketing question remains: "Who are the consumers?" or, in the case of continuing education: "Who are the participants?"

Market segmentation increases the awareness of the continuing education administrators relative to heterogeneous markets faced by their institution. The efficient and effective use of threshold pricing methods within a goods classification can only be attained if administrators understand who the participants are, when they would likely purchase the service, and why and where they would purchase the service. Unfortunately, any large organization that presents a variety of goods or services to the public cannot assume that the market is homogeneous. Various sub-markets must be identified for a marketing mix to be effective.

One form of market segmentation was identified for this study. Although the outcome of this segmentation process produced statistically identifiable markets, the marketing importance of these sub-markets can only be realized when a continuing education administrator acts by developing a marketing mix and evaluating the results relative to the standard procedures used previously. Other forms of market segmentation (demographic, psychological, economic) need to be developed for the Centre as well as other institutional forms of continuing education. It is only through expanded market research that the utility of various marketing techniques can be tested.

## SELECTED BIBLIOGRAPHY

1. Adam, Daniel. "Consumer Reaction to Price." in Bernard Taylor and Gordon Wills, Editors. Pricing Strategy. Princeton, N.J.: Brandon Systems Press, 1970, pp. 75-88.
2. Adolph, T. and R.F. Whaley. "Attitudes Toward Adult Education." Adult Education, Vol. 17 (Spring, 1967), pp. 150-158.
3. Andrews, P.R. and E.R. Valenzi. "Combining Price, Brand and Store Cues to Form an Impression of Product Quality." Conference of the American Psychological Association, 1971, pp. 649-650.
4. Backman, Jules. "Pricing." in George Schwartz, Editor. Science in Marketing. New York: John Wiley and Sons, 1965, pp. 250-280.
5. Bartels, Robert. "Development of Marketing Thought: A Brief History." in George Schwartz, editor. op. cit., pp. 386-397.
6. Blishen, Bernard R. "The Construction and Use of an Occupational Class Scale." Canadian Journal of Economics and Political Science, Vol. 24 (November, 1958), pp. 519-531.
7. Bliss, Perry, Editor. Marketing and the Behavioral Sciences. Boston: Allyn and Bacon, Inc., 1964.
8. Bjerning, James and Paul Seagreaves. UBC - TRIP: Triangular Regression Package. Vancouver, B.C.: U.B.C. Computing Centre, 1972.
9. Borden, Neil. "The Concept of the Marketing Mix." in George Schwartz, Editor. op. cit., pp. 386-397.
10. Boshier, Roger. "Motivational Orientations of Adult Education Participants: A Factor Analytic Exploration of Houle's Typology." Adult Education, Vol. 21 (Spring, 1967), pp. 3-27.
11. Brandow, G.E. and A.K. Potter. "An Application of Linear Discriminant Function." Rural Sociology, Vol. 18 (1953), pp. 321-326.
12. Brown, F.E. "Price Perception and Store Patronage." Proceedings, Fall Conference, American Marketing Association, (1968), pp. 371-376.
13. \_\_\_\_\_. "Who Perceives Supermarket Prices More Validly?" Journal of Marketing Research, Vol. 8 (February, 1971), pp. 110-113.



14. Bucklin, Louis P. "Retail Strategy and the Classification of Consumer Goods." Journal of Marketing, (October, 1962), pp. 50-55.
15. Buchanan, W. Wray and H.C. Barksdale. "Marketing's Broadening Concept Is Real In University Extension." Adult Education, Vol. 25, No. 1 (1974), pp. 34-46.
16. Cooper, Peter. "Subjective Economics: Factors in a Psychology of Spending." in Taylor and Wills, Editors. op. cit., pp. 112-121.
17. \_\_\_\_\_. "The Begrudging Index and the Subjective Value of Money." in Taylor and Wills, Editors. op. cit., pp. 122-131.
18. Copeland, Melvin T. Principles of Merchandising. New York: McGraw-Hill Book Company, 1924.
19. Darden, Bill R. "An Operational Approach to Product Pricing." Journal of Marketing, (April, 1968), pp. 29-33.
20. Dean, Joel. "Problems of Product-Line Pricing." Journal of Marketing, (January, 1950), pp. 416-424.
21. Dickinson, Gary and Marvin Lamoureux. "Evaluating Educative Temporary Systems." Adult Education, Vol. 25, No. 2 (Winter, 1975), pp. 81-89.
22. Dommermuth, William P. and Edward W. Cundiff. "Shopping Goods, Shopping Centres and Selling Strategies." Journal of Marketing, (October, 1967), pp. 32-36.
23. Dorfman, Robert. The Price System. Englewood Cliffs, N.J.: Prentice-Hall, 1964.
24. Emry, Fred. "Some Psychological Aspects of Price." in Taylor and Wills, Editors. op. cit., pp. 98-111.
25. Engel, James F., David T. Kollat and Roger D. Blackwell. Consumer Behavior, Second Edition. Toronto: Holt, Rinehart and Winston, Inc., 1973.
26. Enis, Ben and James Stafford. "Consumers' Perception of Product Quality as a Function of Various Information Inputs." Proceedings, Fall Conference, American Marketing Association, (1969), pp. 340-344.
27. Enis, Ben and James Stafford. "The Price-Quality Relationship: An Extension." Journal of Marketing Research, (November, 1969), pp. 436-488.

28. ERICH. Vancouver, B.C.: University of British Columbia Computing Centre, 1974, 1975.
29. Field, G.A., J. Douglas and L.X. Torpey. "Price Determination in Practice." in Taylor and Wills. op. cit., pp. 261-286.
30. Fouill  , Pierre. "The Subjective Evaluation of Price: Methodological Aspects." in Taylor and Wills. op. cit., pp. 89-97.
31. Friedman, Lawrence. "Psychological Pricing in the Food Industry." in Almarin Phillips and Oliver Williamson, Editors. Prices: Issues in Theory, Practice, and Public Policy, Philadelphia: University of Pennsylvania Press, 1967, pp. 187-201.
32. Gabor, Andre and Clive Granger. "Price Sensitivity of the Consumer." Journal of Advertising Research, Vol. 4 (December, 1964), pp. 40-44.
33. \_\_\_\_\_. "The Pricing of New Products." Scientific Business, Vol. 3 (August, 1965), pp. 141-150.
34. \_\_\_\_\_. "The Attitude of the Consumer to Price." in Taylor and Wills. op. cit., pp. 132-151.
35. Gabor, Andre, Clive Granger and Anthony Sowter. "Comments on Psychophysics of Prices." Journal of Marketing Research, Vol. 8 (May, 1971), pp. 251-252.
36. Gardner, David. "An Experimental Investigation of the Price-Quality Relationship." Journal of Retailing, Vol. 46 (Fall, 1970), pp. 24-41.
37. \_\_\_\_\_. "Is There a Generalized Price-Quality Relationship?" Journal of Marketing Research, Vol. 8 (May, 1971), pp. 241-243.
38. George, William Ross. "Marketing In The Service Industries." Unpublished Doctoral Dissertation, Athens, Georgia: University of Georgia, 1972.
39. Green, Paul E. and Donald S. Tull. Research For Marketing Decisions, Second Edition. Englewood Cliffs: Prentice-Hall, 1970.
40. Harper, Donald V. Price Policy and Procedures. New York: Harcourt, Brace and World, Inc., 1966.
41. Helson, Harry. Adaption-Level Theory. New York: Harper and Row, 1964.
42. Holton, Richard H. "The Distinction Between Convenience Goods, Shopping Goods, and Specialty Goods." Journal of Marketing, (July, 1958), pp. 53-56.

43. Hope, Keith. Methods of Multivariate Analysis. London: University of London Press, 1968.
44. Howard, John A. Marketing Theory. Boston: Allyn and Bacon, Inc., 1965.
45. Huegy, H.W. "Price Decisions and Marketing Policies." in Taylor and Wills. op. cit., pp. 295-305.
46. James, Barrie. "A Contemporary Approach to New Product Pricing." in Taylor and Wills. op. cit., pp. 521-533.
47. Karmen, Joseph and Robert Tolman. "Psychophysics of Prices." Journal of Marketing Research, Vol. 7 (February, 1970), pp. 27-35.
48. \_\_\_\_\_. "Psychophysics of Prices: A Reaffirmation." Journal of Marketing Research, Vol. 8 (May, 1971), pp. 252-257.
49. Katona, George. "Rational Behavior and Economic Behavior." in Bliss. op. cit., pp. 57-75.
50. Kelley, Eugene and William Lazer, Editors. Managerial Marketing. Homewood, Ill.: Richard D. Irwin, 1967.
51. Kelley, H.P. "Cost-Price Squeeze: How to Establish Selling Prices." in Taylor and Wills. op. cit., pp. 370-380.
52. Kerlinger, Fred and Elazar Pedhazur. Multiple Regression in Behavioral Research. New York: Holt, Rinehart and Winston, 1973.
53. King, Robert L. "The Marketing Concept." in George Schwartz, Editor. Science In Marketing. New York: John Wiley and Sons, 1965.
54. Kotler, Philip. Marketing Management, Second Edition, Englewood Cliffs, N.J.: Prentice-Hall, 1972.
55. Lambert, Zarrel. "Price and Choice Behavior." Journal of Marketing Research, Vol. 9 (February, 1972), pp. 35-40.
56. \_\_\_\_\_. "Product Perception: An Important Variable in Price Strategy." Journal of Marketing, Vol. 34 (October, 1970), pp. 68-71.
57. Lamoureux, Marvin. "Adult Education: Some Economic Considerations." Unpublished Manuscript, Vancouver, B.C.: Adult Education Research Centre, University of B.C., 1973.

58. Lamoureux, Marvin. Planning, Programming and Budgeting Systems (PPBS) and Cost Benefit Analysis (CBA): Economic Considerations For Adult Education, Occasional Paper. Vancouver, B.C.: Pacific Adult Continuing Education Association, 1975.
59. Lamoureux, Marvin. "Pricing and Marketing In Adult Education." A Paper Presented to the Lower Mainland and Fraser Valley Continuing Education Administrators Association, Burnaby, B.C.: May 30, 1975.
60. \_\_\_\_\_. "Threshold Price Considerations For University Continuing Education Administrators." Unpublished Manuscript, Vancouver, B.C.: Adult Education Research Centre, University of B.C., 1974.
61. Lanzillotti, Robert F. "Pricing Objectives In Large Companies." American Economic Review, (December, 1958), pp. 921-940.
62. Leavitt, Harold. "A Note On Some Experimental Findings About the Meaning of Price." Journal of Business, Vol. 27 (July, 1954), pp. 205-210.
63. Leftwich, Richard. The Price System and Resource Allocation. New York: Holt, Rinehart and Winston, Inc., 1966.
64. Leslie, John W. "Realities of the Seventies: The Competitive Dollar." College and University Journal, (November, 1971), pp. 5-9.
65. Luce, Duncan and Howard Raiffa. Games and Decisions. New York: John Wiley and Sons, Inc., 1967.
66. McConnell, Douglas. "An Experimental Examination of the Price-Quality Relationship." Journal of Business, Vol. 41 (October, 1968), pp. 439-444.
67. \_\_\_\_\_. "The Development of Brand Loyalty: An Experimental Study." Journal of Marketing Research, Vol. 5 (February, 1968), pp. 13-19.
68. \_\_\_\_\_. "The Price-Quality Relationship In An Experimental Setting." Journal of Marketing Research, Vol. 5 (August, 1968), pp. 300-303.
69. Massey, William. "Discriminant Analysis of Audience Characteristics." Journal of Advertising Research, (March, 1965), pp. 39-46.
70. Miller, Delbert. Handbook of Research Design and Social Measurement. New York: David McKay, 1970.

71. Miller, Richard. "Dr. Weber and the Consumer." Journal of Marketing, Vol. 26 (January, 1962), pp. 57-61.
72. Monroe, Kent. "Buyers' Subjective Perception of Prices." Journal of Marketing Research, Vol. 10 (February, 1973), pp. 70-80.
73. \_\_\_\_\_. "Measuring Price Thresholds by Psychophysics and Latitudes of Acceptance." Journal of Marketing Research, Vol. 8 (November, 1971), pp. 460-464.
74. \_\_\_\_\_. "Psychophysics of Prices: A Reappraisal." Journal of Marketing Research, Vol. 8 (May, 1971), pp. 248-250.
75. Monroe, Kent and Peter LaPlaca. "What are the Benefits of Unit Pricing?" Journal of Marketing, Vol. 36 (July, 1972), pp. 16-22.
76. Monroe, Kent and M. Venkatesan. "The Concept of Price Limits and Psychophysical Measurement: A Laboratory Experiment." Proceedings, Fall Conference, American Marketing Association, 1969, pp. 345-351.
77. Morrison, Donald G. "Discriminant Analysis." in Robert Ferber, Editor. Handbook of Marketing Research. New York, N.Y.: McGraw-Hill Book Company, 1974, pp. 2-442 to 2-458.
78. Olander, Folke. "The Influence of Price on the Consumer's Evaluation of Products and Purchases." Taylor and Wills. op. cit., pp. 50-69.
79. Overall, John and James Klett. Applied Multivariate Analysis. Toronto: McGraw-Hill, 1972.
80. Oxenfeldt, Alfred R. "Multi-Stage Approach to Pricing." Harvard Business Review, (July-August, 1960), pp. 125-133.
81. \_\_\_\_\_. Pricing For Marketing Executives. Belmont, California: Wadsworth Publishing Co., 1966.
82. Parker, Donald D. The Marketing Of Consumer Services. Seattle, Washington: Bureau of Business Research, University of Washington, 1960.
83. Parsons, Talcott. "Suggestions for a Sociological Approach to the Theory of Organizations." in Amitai Etzioni, Editor. Complex Organizations. New York: Holt, Rinehart and Winston, Inc., 1962, pp. 35-47.
84. Pessmier, Edgar. "An Experimental Method for Estimating Demand." Journal of Business, Vol. 33 (October, 1960), pp. 373-383.

85. Pessmier, Edgar and Richard Teach. "Pricing Experiments, Scaling Consumer Preferences, and Predicting Consumer Behavior." Proceedings, Fall Conference, American Marketing Association, 1966, pp. 541-557.
86. Peterson, Kenneth. "The Influence of Evaluative Conditions and Pre-Conference Contact On Participants' Evaluation of a Conference." Unpublished Masters' Thesis, Vancouver: Adult Education Research Centre, University of British Columbia, 1971.
87. Peterson, Robert. "The Price-Perceived Quality Relationship: Experimental Evidence." Journal of Marketing Research, Vol. 7 (November, 1970), pp. 525-528.
88. Pratt, Robert W. "Consumer Behavior: Some Psychological Aspects." in Schwartz, Editor. op. cit., pp. 98-136.
89. Rae, Vithala. "Salience of Price in the Perception of Product Quality: A Multidimensional Measurement Approach." Proceedings, Fall Conference, American Marketing Association, 1971, pp. 571-577.
90. Rathmell, John M. Marketing In The Service Sector. Cambridge, Mass.: Winthrop Publishers, Inc., 1974.
91. Rich, Stuart and Subhash C. Jain. "Social Class and Life Cycle As Predictors of Shopping Behavior." in David Köllat, Roger Backwell and James Engel, Editors. Research in Consumer Behavior. New York: Holt, Rinehart and Winston, Inc., 1970, pp. 431-436.
92. Rogers, D.C. and H.S. Ruchlin. Economics and Education: Principles and Practices. New York: The Free Press, 1971.
93. Samuelson, P.A. and A. Scott. Economics: An Introductory Analysis. Toronto: McGraw-Hill, 1966.
94. Scitovsky, Tibor. "Some Consequences of the Habit of Judging Quality by Price." in Bliss, Editor. op. cit., pp. 477-485.
95. Shapiro, Benson. "The Psychology of Pricing." Harvard Business Review, Vol. 46 (July-August, 1968), pp. 14ff.
96. Smith, Edward and Charles Broome. "A Laboratory Experiment for Establishing Indifference Prices Between Brands of Consumer Products." Proceedings, Fall Conference, American Marketing Association, 1966, pp. 511-519.

97. \_\_\_\_\_. "Experimental Determination of the Effect of Price and Market-Standing Information on Consumers' Brand Preferences." Proceedings, Fall Conference, American Marketing Association, 1966, pp. 520-531.
98. Smith, Wendell R. "Product Differentiation and Market Segmentation." Journal of Marketing, (July, 1965), pp. 3-8.
99. Stanton, William J. and Montrose S. Sommers. Fundamentals of Marketing, Canadian Edition. Toronto: McGraw-Hill, 1972.
100. Stapel, Jan. "'Fair' or 'Psychological' Pricing?" Journal of Marketing Research, Vol. 9 (February, 1972), pp. 109-110.
101. Stewart, John B. "Product Development." in Schwartz. op. cit., pp. 163-212.
102. Stoetzel, Jean. "Psychological/Sociological Aspects of Price." in Taylor and Wills. op. cit., pp. 70-74.
103. Tull, Donald, R.A. Boring, and M.H. Gonsior. "A Note on the Relationship on Price and Imputed Quality." Journal of Business, Vol. 37 (April, 1964), pp. 186-191.
104. UBC - BMD074, Stepwise Discriminant Analysis. Vancouver, B.C.: University of British Columbia Computing Centre, 1973.
105. Verner, Coolie and Margaret Neyland. "Patterns of Attendance in Adult Night School Courses." Canadian Education and Research Digest, Vol. 6 (September, 1966), pp. 230-240.
106. Webster, J.R., Frederick. Social Aspects of Marketing. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1974.
107. Wells, William and Leonard LoSciuto. "Direct Observations of Purchasing Behavior." Journal of Marketing Research, Vol. 3 (August, 1966), pp. 227-233.
108. Wentz, Theodore. "Realism in Pricing Analysis." in Gordon and Wills, Editors. op. cit., pp. 356-369.
109. Wetmore, Wayne C. and Gary Dickinson. "An Economic Approach to the Evaluation of General Interest Adult Education Programs." Unpublished Manuscript, Vancouver, B.C.: Adult Education Research Centre, University of B.C., 1974.

# INTERVIEWS

1. Blunt, Adrian. Adult Education Research Centre, University of British Columbia, Vancouver, B.C., January 10, 1975.
2. Buttedahl, Knute. Associate Director, Centre for Continuing Education, University of British Columbia, Vancouver, B.C., February 14, 1974.
3. Rusnell, Dale. Adult Education Research Centre, University of British Columbia, Vancouver, B.C., July 4, 1974.
4. Verner, Dr. Coolie. Professor of Adult Education, Adult Education Research Centre, University of British Columbia, Vancouver, B.C., April 3, 1974.



APPENDICES

APPENDIX A -- Guidelines For Honoraria, Expenses And Fees

APPENDIX B -- Course Expense Sheet

APPENDIX C -- Pilot Study Questionnaire

APPENDIX D -- Major Study Questionnaire

GUIDELINES FOR HONORARIA, EXPENSES AND FEESHONORARIA AND ALLOWABLE EXPENSES

- A. Faculty and local off-campus resource people  
- for programs located on Campus, Vancouver, West Vancouver,  
North Vancouver, Burnaby, New Westminster and Richmond) -

<u>Type of Session</u>	<u>Remuneration</u>	<u>Expenses</u>
1. Evening Classes	\$25.00 per evening	Two or more lectures: \$5.00 per evening deducted from remuneration and paid by separate expense cheque
(a) General Courses		
(b) Professional Courses	\$22.50 per hour	
2. Seminars, Short Courses		
(a) Single presentation (i.e. one hour plus discussion or panel participation	\$25.00 to \$35.00	<u>Accommodation:</u>  Itemized expenses up to \$25.00 per day.
(b) "(a)" plus continued involvement	\$35.00 to \$50.00	<u>Travel:</u>  Car mileage at 10¢ per mile (up to a maximum equivalent to air economy fare), economy air, train, ferry
(c) half day involvement	\$35.00 to \$50.00	
(d) half day plus continued involvement	\$40.00 to \$75.00	
(e) continuous all day involvement	\$100.00	

- B. Visitors: Faculty and non-Faculty  
- covers outside visitors participating in Vancouver  
area programs, as well as local people being sent  
out into Province) -

Base remuneration upon seminar and short course rates above, plus  
additional (if required) to compensate for time spent in travelling.

NEGOTIABLE.

II. REGISTRATION FEES

Minimum for all types of instruction  
- Evening classes, Seminars, Short courses, Conferences -

(a) General Courses \$1.25 per hour of instruction

(b) Professional Courses \$2.50 per hour of instruction

NOTE: Cost of materials, meals, etc. to be added to fee.

III. MARKERS' REMUNERATION (Minimums)

\$2.00 per hour for objective test items.

\$3.00 per hour for test items which require marker to use professional judgment.

IV. CHAIRMEN

A. Faculty 0 to \$10.00 per evening  
0 to \$50.00 per day

B. Students \$7.50 per evening or half day  
\$15.00 for a full day

V. INVIGILATING

Invigilating examinations \$5.00 per hour

VI. SATURDAY EMPLOYMENT

No "weekend differential" for Saturday employment.

Title:

## APPENDIX B

Supervisor:

Short Course/Seminar Dates:

Or Term Classes; Date of First Meeting:

Total Hours of Instruction:

No. of Sessions:

Location:

Fee: \$

Names of Resource People:	Budget	Date	Description	Requisition	\$
Honoraria					
Travel Expenses					
Publicity					
Printing					
Advertisements					
Rental & Janitor					
Audio Visual Services					
Special Food Services					
Supervisor's Expense & Travel					
Registration Staff					
Payroll					
Expenses					
Other Expenses					
(List program materials, xeroxing, proceedings, etc.)					
Contingencies (to cover items not					
SUB-TOTAL predicted above)					
Mark up Items:					
Mimeographing Expenses					
Envelopes & Postage					
Overhead \$30 per course					
Supervisor's Mark-up					
TOTAL Anticipated Expenses					
Anticipated Revenue					
@ \$					
@ \$					
Grant or Subsidy					
TOTAL Revenue Anticipated					
BALANCE					

COMMENTS

Date of Submission:

Approved:

## 1974 CONTINUING EDUCATION PARTICIPATION STUDY

U.B.C. ADULT EDUCATION RESEARCH CENTRE

1. What is your marital status? Single\_\_ Married\_\_ Other\_\_ (2.) Your Sex? Female\_\_ Male\_\_ (3.) Age\_\_

4. Number of Dependents?\_\_ (5.) Number of years of formal schooling?\_\_

6. What is your present occupation?(if unemployed, retired, housewife or student, please indicate):

7. If you are unemployed, retired, a housewife, student or otherwise not involved in a job please indicate your most recent occupation?\_\_

8. What is the distance you normally have to travel to get to each session of the programme you are now attending?\_\_ miles.

9. In what city do you presently reside?\_\_

10. Please indicate the name of the street or avenue where you presently reside?\_\_

11. Please indicate the nearest cross-street or avenue where you presently reside?\_\_

12. What is your total income for 1973?(note: if you are a dependent, or if your income was part of a combined family unit such as husband and wife, please use the income for the combined family unit):

less than \$2,000__	\$ 6,000 to \$ 7,999__	\$12,000 to \$14,999__
\$2,000 to \$3,999__	\$ 8,000 to \$ 9,999__	\$15,000 to \$19,999__
\$4,000 to \$5,999__	\$10,000 to \$11,999__	\$20,000 or greater__

13. What was your total net worth on January 1, 1974?(note: this is defined as total personal assets minus total personal liabilities -- if you are a dependent, or if your net worth was part of a combined family unit such as a husband and wife, please use the combined family net worth figure):

less than \$50,000__	\$150,000 to \$199,000__	\$300,000 to \$349,000__
\$ 50,000 to \$ 99,000__	\$200,000 to \$249,000__	\$350,000 to \$399,000__
\$100,000 to \$149,000__	\$250,000 to \$299,000__	\$400,000 or greater__

THE FOLLOWING QUESTIONS (numbers 14 to 23) REFER TO THE PROGRAMME YOU ARE PRESENTLY ATTENDING THROUGH THE U.B.C. CONTINUING EDUCATION CENTRE

14. Considering the amount of time and effort you devote to planning(deciding about) the purchase of various personal goods, please indicate a specific personal good that closely equals the amount of time and effort you devoted to planning whether or not you were going to attend this programme:

15. Please rate the time and effort devoted to planning(deciding about) the purchase of the item mentioned in Question #14 above relative to the amount of time and effort you generally devote to the purchase of other personal goods:

(circle only one of the numbers)

Considerable	More Than Usual	The Usual Amount	Less Than Usual	Very Little
9	8	7	6	5
4	3	2	1	

16. How would you rate the importance of this programme in satisfying a personal need or needs?

Very Important	Above Average	Average Importance	Below Average	Unimportant
9	8	7	6	5
4	3	2	1	

17. How would you rate the importance of this programme in satisfying an economic or financial need(s)?

Very Important	Above Average	Average Importance	Below Average	Unimportant
9	8	7	6	5
4	3	2	1	

18. Before you started attending this programme how would you have rated your ability to correctly pre-judge the programme's characteristics, that is, programme content, objectives, quality, etc.?

Very Good	Good	Fair	Poor	Very Poor
9	8	7	6	5
4	3	2	1	

19. If a programme like this was offered at the institutions listed below, how different would you expect it to be?

(a) a community college:

Significantly Better	No Different	Significantly Worse
9	8	7
6	5	4
3	2	1

(b) a high school adult education institution:

Significantly Better	No Different	Significantly Worse
9	8	7
6	5	4
3	2	1

(c) a community centre:

Significantly Better			No Different			Significantly Worse		
9	8	7	6	5	4	3	2	1

53 \_\_\_\_\_

(d) a private profit-making institution:

Significantly Better			No Different			Significantly Worse		
9	8	7	6	5	4	3	2	1

54 \_\_\_\_\_

20. When you were thinking about attending this programme did you attempt to find out if some other local educational institution offered a similar programme? Yes \_\_\_\_\_ No \_\_\_\_\_  
If NO, why not? \_\_\_\_\_

55-56 \_\_\_\_\_

21. When you were thinking about attending this programme were you actually aware of similar programmes being offered by other local educational institutions? Yes \_\_\_\_\_ No \_\_\_\_\_  
If YES, how many institutions were involved? \_\_\_\_\_

57 \_\_\_\_\_

58-59 \_\_\_\_\_

22. Is some other person, group, institution, etc. paying for all or some portion of your programme fee(tuition)? Yes \_\_\_\_\_ No \_\_\_\_\_. If YES, who is the other party? \_\_\_\_\_

60-61 \_\_\_\_\_

23. When you were thinking about attending this programme:

62-63 \_\_\_\_\_

(a) above what fee(tuition) would you have considered it too expensive? \$ \_\_\_\_\_

64 \_\_\_\_\_

(b) below what fee(tuition) would you have felt that it may have been of poor quality? \$ \_\_\_\_\_

65-66 \_\_\_\_\_

24. How would you rate your ability to judge the difference between similar types of continuing education programmes that you may be interested in but which are offered by different local educational institutions?

67-68 \_\_\_\_\_

Very Good		Good		Fair		Poor		Very Poor	
9	8	7	6	5	4	3	2	1	

69-70 \_\_\_\_\_

71-72 \_\_\_\_\_

25. How would you rate your ability to correctly guess the fee for a continuing education programme that you may be interested in assuming that the programme description did not include the fee?

73-74 \_\_\_\_\_

Very Good		Good		Fair		Poor		Very Poor	
9	8	7	6	5	4	3	2	1	

75 \_\_\_\_\_

26. "My general attitude toward continuing education could be classified as:"

76 \_\_\_\_\_

Strongly Favorable to Continuing Education			Neutral			Strongly Against Continuing Education		
9	8	7	6	5	4	3	2	1

77 \_\_\_\_\_

27. Please make an "X" beside only those statement with which you agree:

(a) Continuing education is the answer to unemployment:

78-80 \_\_\_\_\_

(b) Continuing education requires too much time and effort:

(c) Adults learn as easily as children:

(d) The benefits of continuing education are too obscure to justify it:

(e) The need for continuing education must exist since there are people who have benefited by it:

1 2

(f) Continuing education broadens the mind:

2-3 \_\_\_\_\_

(g) Continuing education increased one's self-confidence:

(h) Learning ability remains constant throughout one's lifetime:

(i) Continuing education is just as important as the education of children:

4-5 \_\_\_\_\_

(j) Adults cannot memorize as easily as children:

(k) Continuing education never has and never will do anything for me:

6-7 \_\_\_\_\_

(l) Continuing education fulfills personality needs:

(m) Continuing education is unnecessary since one can get all the information needed from books:

8-9 \_\_\_\_\_

(n) I think the controversy over continuing education is a little exaggerated as to the seriousness of the need:

(o) Canada should invest far more money in continuing education

10-11 \_\_\_\_\_

(p) The need for continuing education is greatly exaggerated by those who stand to gain most from it, like teachers and politicians:

12-13 \_\_\_\_\_

(q) Continuing education is fine if you have the time:

(r) Most continuing education programmes are too expensive:

14 \_\_\_\_\_

(s) We are investing just about the right amount of money in our continuing education programmes;

(t) Continuing education courses lack content and waste time on non-essentials:

(u) Continuing one's education has become too much of a status symbol:

(v) Learning ability reaches a peak before middle-age and declines only slightly thereafter:

(w) Continuing education must be terminated immediately:

(x) Continuing education is just another liability to the taxpayers:

28. WE WOULD LIKE TO KNOW ABOUT YOUR RECENT CONTINUING EDUCATION PARTICIPATION ACTIVITIES:

INSTRUCTIONS: We would like you to list all the continuing education programmes in which you have participated since JULY 1, 1973. You should include all programmes offered by religious, educational, political, community centre, governmental, etc. institutions, as well as any in-service or on-the-job training you have taken through your place of employment. Include any programmes that you are presently attending. Please read the separate instructions for each column as represented in TABLE I below:

15-16

17-18

19-20

21-22

23-24

25-26

27-28

29-30

21 22

22 24

25 26

COLUMN 1: write-in the name of the institution - if you wish to keep this anonymous please do so but continue to fill-in the rest of the columns for the unnamed institution.

COLUMN 2: write-in a "G" if the programme was of general interest, or a "P" if it was a professional programme relating to your career(present or future).

COLUMN 3: enter an "X" if you completed the programme, or for those programmes you are now attending, you intend to complete -- otherwise leave the column blank.

COLUMN 4: enter an "X" if you receive no reimbursement for the fee(tuition) whatsoever - otherwise leave the column blank(that is,if you are partially ot totally reimbursed)

COLUMN 5: enter an "X" if you formally participated in the instruction of the programme, - otherwise leave the column blank.

COLUMN 6: enter an "X" if you formally helped in the planning or development of the programme - otherwise leave the column blank.

COLUMN 7: indicate the total number of instruction hours for the programme.

TABLE I

[illegible]

29. WE WOULD LIKE TO KNOW YOUR ORGANIZATIONAL ACTIVITIES AT THIS TIME:

INSTRUCTIONS: Please read the definition below and follow the instructions for each column as represented in TABLE II below.

DEFINITION: An organization means some active and organized grouping, usually but not necessarily in the community or neighborhood of residence, such as a club, lodge, business, political, professional, religious organization, labour union, etc. NOTE: please list only those organizations with which you are presently involved.

COLUMN 1: write-in the name of the organization -- if you wish to keep this anonymous please do so but continue to fill-in the rest of the columns for the unnamed organization.

COLUMN 2: enter the letter "L" if the membership is in a local group, or the letter "N" if the membership is in a local unit of some provincial, national or international group.

COLUMN 3: enter in this column the mere fact of attendance by an "X" - leave blank if not attending.

COLUMN 4: enter in this column the mere fact of financial contributions, including dues or membership fees by an "X" - leave blank if you are not making financial contributions.

COLUMN 5: enter in this column the mere fact of committee membership with an "X" - leave blank if you are not a committee member.

COLUMN 6: enter in this column the mere fact that you hold an office with an "X" - leave blank if you do not hold an office

TABLE II

ORGANIZATIONS

Columns:

1

2

3

4

5

6

37-38

39-40

41-42

43-44

45-46

47-48

49-50

51-52

53

54-80

1 3

2-3

4-5

6-7

8-9

10-11

12-13

14-15

16-17

18-19

20-21

22-23

24-25

26-27

28-30

31-33

34-36

37-39

40-80



# APPENDIX D

1. What is your marital status? Single <input type="checkbox"/> Married <input type="checkbox"/> Other <input type="checkbox"/>	1-2 4															
(2) Your sex? Female <input type="checkbox"/> Male <input type="checkbox"/> (3) Age <input type="text"/>	3-4															
4. Number of dependents? <input type="text"/> (5) Number of years of formal schooling? <input type="text"/>	5-6															
	7-8															
	9-10															
	11-12															
	13															
	14-15															
	16-17															
	18-19															
6. What is your present occupation? (If unemployed, retired, housewife or student, please indicate):	20-21															
	22-23															
	24-25															
	26-27															
7. If you are unemployed, retired, a housewife, student or otherwise not involved in a job please indicate your most recent occupation.																
8. What is the distance you normally have to travel to get to each session of the programme related to this study? <input type="text"/> miles.	28-29															
9. In what city do you presently reside? <input type="text"/>	30-31															
10. What is your total income for 1974? (Note: If you are a dependent, or if your income was part of a combined family unit such as husband and wife, please use the income for the combined family unit): \$ <input type="text"/>	32-33															
11. Other than the programme related to this study, have you attended any continuing education courses since February 1, 1974? This would include any programme offered by religious, educational, political, community, business, and governmental institutions, as well as any on-the-job or in-service courses. Yes <input type="checkbox"/> No <input type="checkbox"/>	34-35															
12. Are you presently involved in organizational or community activities? This would include membership or activity related to a club, lodge, or political, professional, religious, union, etc. organization Yes <input type="checkbox"/> No <input type="checkbox"/>	36-37															
	38															
	39-40															
	41-42															
The following questions (numbers 13 to 20) refer to the programme related to this study.																
13. How would you rate the importance of this programme in satisfying a personal need or needs?	43-47															
<table border="0"> <tr> <td>Very Important</td> <td>Above Average</td> <td>Average Importance</td> <td>Below Average</td> <td>Unimportant</td> </tr> <tr> <td>9</td> <td>8</td> <td>7</td> <td>6</td> <td>5</td> </tr> <tr> <td>4</td> <td>3</td> <td>2</td> <td>1</td> <td></td> </tr> </table>	Very Important	Above Average	Average Importance	Below Average	Unimportant	9	8	7	6	5	4	3	2	1		48
Very Important	Above Average	Average Importance	Below Average	Unimportant												
9	8	7	6	5												
4	3	2	1													
14. How would you rate the importance of this programme in satisfying an economic or financial need(s)?																
<table border="0"> <tr> <td>Very Important</td> <td>Above Average</td> <td>Average Importance</td> <td>Below Average</td> <td>Unimportant</td> </tr> <tr> <td>9</td> <td>8</td> <td>7</td> <td>6</td> <td>5</td> </tr> <tr> <td>4</td> <td>3</td> <td>2</td> <td>1</td> <td></td> </tr> </table>	Very Important	Above Average	Average Importance	Below Average	Unimportant	9	8	7	6	5	4	3	2	1		49
Very Important	Above Average	Average Importance	Below Average	Unimportant												
9	8	7	6	5												
4	3	2	1													
15. Before you started attending this programme how would you have rated your ability to correctly pre-judge the programme's characteristics, that is, programme content, objectives, quality, etc.?																
<table border="0"> <tr> <td>Very Good</td> <td>Good</td> <td>Fair</td> <td>Poor</td> <td>Very Poor</td> </tr> <tr> <td>9</td> <td>8</td> <td>7</td> <td>6</td> <td>5</td> </tr> <tr> <td>4</td> <td>3</td> <td>2</td> <td>1</td> <td></td> </tr> </table>	Very Good	Good	Fair	Poor	Very Poor	9	8	7	6	5	4	3	2	1		50
Very Good	Good	Fair	Poor	Very Poor												
9	8	7	6	5												
4	3	2	1													
16. If a programme like this was offered at the institutions listed below, how different would you expect it to be?																
(a) a community college:																
<table border="0"> <tr> <td>Significantly Better</td> <td>No Different</td> <td>Significantly Worse</td> </tr> <tr> <td>9</td> <td>8</td> <td>7</td> </tr> <tr> <td>6</td> <td>5</td> <td>4</td> </tr> <tr> <td>3</td> <td>2</td> <td>1</td> </tr> </table>	Significantly Better	No Different	Significantly Worse	9	8	7	6	5	4	3	2	1	51			
Significantly Better	No Different	Significantly Worse														
9	8	7														
6	5	4														
3	2	1														
(b) a high school adult education institution:																
<table border="0"> <tr> <td>Significantly Better</td> <td>No Different</td> <td>Significantly Worse</td> </tr> <tr> <td>9</td> <td>8</td> <td>7</td> </tr> <tr> <td>6</td> <td>5</td> <td>4</td> </tr> <tr> <td>3</td> <td>2</td> <td>1</td> </tr> </table>	Significantly Better	No Different	Significantly Worse	9	8	7	6	5	4	3	2	1	52			
Significantly Better	No Different	Significantly Worse														
9	8	7														
6	5	4														
3	2	1														

(c) a community centre:

Significantly Better			No Different		Significantly Worse			
9	8	7	6	5	4	3	2	1

53 \_

(d) a private profit-making institution:

Significantly Better			No Different		Significantly Worse			
9	8	7	6	5	4	3	2	1

54 \_

17. When you were thinking about attending this programme did you attempt to find out if some other local educational institute offered a similar programme? Yes \_\_\_ No \_\_\_  
If NO, why not? \_\_\_\_\_

55 \_

56 \_

57 \_

18. When you were thinking about attending this programme were you actually aware of similar programmes being offered by other local educational institutions? Yes \_\_\_ No \_\_\_  
If YES, how many institutions were involved? \_\_\_\_\_

58 \_

59 \_

60 \_

61 \_

62 \_

63 \_

64 \_

19. Is some other person, group, institution, etc. paying for all or some portion of your programme fee (tuition)? Yes \_\_\_ No \_\_\_. If YES, who is the other party? \_\_\_\_\_

20. When you were thinking about attending this programme:

(a) above what fee (tuition) would you have considered it too expensive? \$ \_\_\_\_\_

65-66 \_

67-68 \_

69 \_

(b) below what fee (tuition) would you have felt that it may have been of poor quality? \$ \_\_\_\_\_

70-71 \_

72-73 \_

74 \_

21. How would you rate your ability to judge the difference between similar types of continuing education programmes that you may be interested in but which are offered by different local educational institutions?

Very Good		Good		Fair		Poor		Very Poor	
9	8	7	6	5	4	3	2	1	

75 \_

22. How would you rate your ability to correctly guess the fee for a continuing education programme that you may be interested in assuming that the programme description did not include the fee?

Very Good		Good		Fair		Poor		Very Poor	
9	8	7	6	5	4	3	2	1	

76 \_

23. "My general attitude toward continuing education could be classified as:"

Strongly Favorable to Continuing Education			Neutral		Strongly Against Continuing Education			
9	8	7	6	5	4	3	2	1

77 \_

24. Please make an "X" beside only those statements with which you agree:

78-80

(a) Continuing education is the answer to unemployment: \_\_\_\_\_

1 5 \_

(b) Continuing education requires too much time and effort: \_\_\_\_\_

2-3 \_

(c) Adults learn as easily as children: \_\_\_\_\_

4-5 \_

(d) The benefits of continuing education are too obscure to justify it: \_\_\_\_\_

6-7 \_

(e) The need for continuing education must exist since there are people who have benefited by it: \_\_\_\_\_

8-9 \_

(f) Continuing education broadens the mind: \_\_\_\_\_

10-11 \_

(g) Continuing education increases one's self-confidence: \_\_\_\_\_

12-13 \_

(h) Learning ability remains constant throughout one's lifetime: \_\_\_\_\_

14 \_

(i) Continuing education is just as important as the education of children: \_\_\_\_\_

(j) Adults cannot memorize as easily as children: \_\_\_\_\_

(k) Continuing education never has and never will do anything for me: \_\_\_\_\_

(l) Continuing education fulfills personality needs: \_\_\_\_\_

(m) Continuing education is unnecessary since one can get all the information needed from books: \_\_\_\_\_

(n) I think the controversy over continuing education is a little exaggerated as to the seriousness of the need: \_\_\_\_\_

(o) B.C. should invest far more money in continuing education: \_\_\_\_\_

(p) The need for continuing education is greatly exaggerated by those who stand to gain most from it, like teachers and politicians: \_\_\_\_\_

(q) Continuing education is fine if you have the time: \_\_\_\_\_

(r) Most continuing education programmes are too expensive: \_\_\_\_\_

(s) ~~When investing about the right amount of money in our~~ continuing education programmes: \_\_\_\_\_

(t) Continuing education courses lack content and waste time on non-essentials: \_\_\_\_\_

(u) Continuing one's education has become too much of a status symbol: \_\_\_\_\_

(v) Learning ability reaches a peak before middle-age and declines only slightly thereafter: \_\_\_\_\_

(w) Continuing education must be terminated immediately: \_\_\_\_\_

(x) Continuing education is just another liability to the taxpayers: \_\_\_\_\_

37-38

39-40

41-42 \_\_\_\_\_

43-44

45-46

47-48

49-50

51-52

53

53 -

54 - 80

1-2. 6

3-4 \_\_\_\_\_

5-6

7-8

9-10

11-12

13-14

15-16

17-18

19-20

19-20

21-22

23-24 \_ \_

25-26

27-28 \_ \_

29-30 \_ \_

31-32

35-36 — —

39-40

43-44

47-48 - -

51-52 - -

55-56 - -

59-60 - -

61-80

1

L

100

\_\_\_\_\_

1

1

↑

22

1

1

1

1

**INSTRUCTIONS:**

COLUMN 1: write in the name of the institution - if you wish to keep this anonymous please do so but continue to fill in the rest of the columns for the unnamed institution.

COLUMN 2: write in a "G" if the programme was of general interest, or a "P" if it was a professional programme relating to your career (present or future).

COLUMN 3: enter an "X" if you completed the programme, or for those programmes you are now attending, you expect to complete -- otherwise leave the column blank.

COLUMN 4: enter an "X" if you receive no reimbursement for the fee (tuition) whatsoever - otherwise leave the column blank.

COLUMN 5: enter an "X" if you formally participated in the instruction of the programme - otherwise leave the column blank.

COLUMN 6: enter an "X" if you formally helped in the planning or development of the programme - otherwise leave the column blank.

COLUMN 7: indicate the total number of instruction hours for the programme.

TABLE I

[illegible]