

THE ADOPTION OF BUSINESS PRACTICES BY
PARTICIPANTS IN THE SMALL BUSINESS
MANAGEMENT TRAINING PROGRAMME

by

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ABSTRACT

This study is an evaluation of the educational effectiveness of three courses in the Small Business Management Training Programme conducted in several districts of the Lower Mainland of British Columbia. The evaluation utilizes the concept of adoption to determine the degree to which respondents have made use of the specified business skills and techniques taught within the courses.

The study also attempts to measure the reaction of respondents to the courses in general, and to the instructors and course contents specifically.

Data for the analysis were collected by interviewing a random sample of participants in each course from the population of participants in the Lower Mainland of B.C.

There was a significant increase in the degree of adoption among respondents in all courses following participation in the programme. Gains in the degree of adoption were significant at the 1 per cent level of confidence. An analysis of adoption for each specific technique within each course indicates that the degree of adoption was not uniform among these techniques.

An analysis of variance among means of adoption scores in relation to several characteristics of respondents indicated that three characteristics, namely education, the relationship of the respondent to the business, and the number of employees in the respondent's business, had a

significant relationship to the degree to which respondents adopted the techniques. Differences among means were significant for the three characteristics at the 5 per cent level of confidence.

The recorded scores on the three scales used to measure reactions to course, instructor, and course content respectively indicated a favourable reaction in each case and for each course.

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CHAPTER I

INTRODUCTION

I. THE SMALL BUSINESS MANAGEMENT

TRAINING PROGRAMME

Several studies of small business problems conducted in recent years have made it increasingly clear that lack of managerial experience is the chief cause of failure and slow growth among small businesses.¹ To alleviate this situation an education programme was initiated to provide owner/managers of small businesses with the fundamentals necessary for effective management in every area of business operation.²

This Small Business Management Training Programme is the responsibility of the Management Development Unit of the Department of Manpower and Immigration. The Management Development Unit originated in the Department of Trade and Commerce as the Training Division of the Small Business Branch and was later transferred to the Department of Labour

¹ K.B. Mayer and S. Goldstein: The First Two Years: Problems of Small Business Growth and Survival. Washington, D.C., Small Business Administration, Research Series No. 2.

² D.S. Conger, Chief of Small Business Management Training Division: Report on Canadian Small Business Management Training Programme; for Productivity Division OECD Conference on the collective actions taken by small and medium-sized enterprises to adapt themselves to new market conditions. 1964, p. 2.

as a means of utilizing the Technical and Vocational Assistance Agreements. This provided the Division with means of making both funds and materials available to the provincial governments for conducting training courses.³

In its "Introduction to Prospective Course Writers" the Department of Manpower and Immigration states that the courses within the programme are intended to meet the needs of owner/managers of businesses, supervisory personnel, farmers, and employees in the marketing and merchandising fields. They are designed to serve four primary functions:

1. To provide individuals with an approach to solving the problems arising in a particular subject area;
2. To point out what skills and techniques may be applied;
3. To motivate the individuals to use these techniques and skills where they are applicable;
4. To develop skill in dealing with their problems utilizing the knowledge and techniques presented in the course.

There are no prerequisites to attend courses, consequently the course material must be intelligible to persons who have little or no formal education. There are no examinations, and certificates based only on attendance are given at the completion of a course.⁴

The manual suggests that in order to promote the

³D.C. Cowan, Head, Management Development Unit, in a personal letter to the writer. September 27th, 1966.

programme, it is desirable to allow as many as possible to participate as course leaders. Such prospective course leaders may come from a variety of occupations such as the professions, industrial and commercial enterprises, trade and business associations, or federal and provincial government departments. It can be assumed that course leaders will be knowledgeable in the course material but may not necessarily be trained as an instructor.

The courses are designed for discussion groups ranging from fifteen to twenty-five participants using the case method of presentation. Materials supplied for each course consists of:

1. Case material - given to the participants as preparation for each session;
2. Teaching notes - which outline the strategy to be used in presenting the subject matter in the case material; and
3. Readings - to be given to the participants as a summary and for future reference.

Courses presently available vary in length between five and fifteen sessions. Ten sessions are considered to be an ideal length, since most courses are given between

⁴Department of Manpower and Immigration: Introduction: A pamphlet to acquaint prospective course writers with the aims and requirements of courses prepared for the Small Business Management Training Programme, Ottawa. Department of Manpower and Immigration, Undated. p. 1.

Labour Day and Christmas or from New Year's Day to Easter. Courses of ten sessions involve twenty to twenty-five hours of class time.^{5,6}

The selection of content is made by the Management Development Unit of the Department of Manpower and Immigration. This is determined by requests for specific courses, the extent to which the content may effect economic growth, and the availability of competent persons to prepare the required materials.⁷ Course preparation is authorized by a contract between the Minister of Manpower and Immigration and an author selected by the Management Development Division who prepares and submits an outline of the proposed course.⁸

The programme is managed by provincial governments which have the constitutional responsibility for education. Provinces participating in the programme have appointed a superintendent of small business management training who is responsible to promote, organize, supervise, and evaluate courses. These superintendents are given training by the Small Business Management Division to qualify them for these

⁵Department of Manpower and Immigration, op. cit., pp. 2-3.

⁶All courses evaluated in this study were taught for ten sessions.

⁷D.C. Cowan: op. cit.

⁸Department of Manpower and Immigration, op. cit., p. 8.

responsibilities. Eight of ten provinces and one of two territories offered the courses during 1964-5.⁹

The selection of specific courses to be offered in a given community for a particular group is made by the superintendent of the provincial government and/or his representative in concert with a sponsoring organization. In British Columbia the local school boards act as sponsor for the programme and offer these courses in adult evening classes.^{10,11}

II. PURPOSE OF THE STUDY

This study is designed to measure the degree to which the objectives of the Small Business Management Programme are being attained thereby evaluating the educational effectiveness of the programme.

III. HYPOTHESIS

There is no statistically significant difference in the degree of adoption of specified skills and techniques before and after participation in the Small Business Management Programme.

⁹D.S. Conger: loc. cit.

¹⁰D.C. Cowan: op. cit.

¹¹British Columbia is the only participating province which uses the public school adult education organization for this purpose.

IV. SCOPE OF THE STUDY

It was intended originally that the study be limited to owner/managers of small businesses as defined in the Report on Canadian Small Business Management Training Programme.¹² A pilot survey indicated that the majority of participants were not in that category, consequently the study will include a sample of all participants in the programme, subject to the limitations described below.

The study will be limited to those School Districts in the Lower Mainland of British Columbia in which the programme has been identified within the total Adult Education programme of the district. These districts are New Westminster, Coquitlam, Chilliwack, Surrey, Richmond, Burnaby, and Langley.

It will also be limited to those courses within the programme which were completed before the end of the Fall Session, 1965.

V. REVIEW OF THE LITERATURE

Literature on the concept of adoption

In such an evaluation, the problem is to determine the degree of adoption by participants of the business skills and techniques specified within the courses of the

¹²D.S. Conger: loc. cit.

programme. The adoption process has been described by Everett M. Rogers as the mental process through which an individual passes from first learning about an innovation to final acceptance. This process should be distinguished from the diffusion process which is the spread of a new idea from its source of invention or creation to its ultimate users or adopters.¹³

In 1943, Ryan and Gross¹⁴ noted that the process of adopting a new idea could be separated in several stages. They distinguished between "awareness" of the idea; "conviction of its usefulness, trial, acceptance;" and "complete adoption of the innovation."

Wilkenning,¹⁵ on the other hand, noted that an individual's decision to adopt an innovation was composed of stages which he described as learning, deciding, and acting over a period of time. Thus, the adoption of a specific practice is not the result of a single decision to act but, the result of a series of action and thought decisions. As a result Wilkenning identified four adoption stages: awareness, obtaining information, conviction and trial, and adoption.

¹³Everett M. Rogers, Diffusion of Innovations, New York: Free Press, 1962, pp. 12-20.

¹⁴Bryce Ryan and Neal C. Gross: "The Diffusion of Hybrid Seed Corn in Two Iowa Communities". Rural Sociology 8: 15-24, (1943).

¹⁵Eugene A. Wilkenning: Acceptance of Improved Farm Practices, North Carolina Agricultural Experimental Station Technical Bulletin 90. 1952.

In 1955 a committee of rural sociologists¹⁶ settled on five stages in the adoption process which Beal, Rogers, and Bohlen¹⁷ studied and concluded that they were a valid conceptualization of the adoption process. These five stages were: awareness, information, application, trial, and adoption.

Both Rogers¹⁸ and Lionberger¹⁹ have refined the five stages in the adoption process and these have been generally accepted for purposes of research. Their stages are as follows:

1. Awareness: At this stage a person first learns about a new idea, product or practice.
2. Interest: At this stage, a person becomes interested in new ideas and seeks additional information about it, to determine its possible usefulness and applicability.
3. Evaluation: At this stage a person weighs the information and evidence accumulated in previous stages, mentally applies the idea to his present and anticipated future situation, and then decides whether or not to try it.

¹⁶North Central Rural Sociological Sub-Committee for the Study of Diffusion of Farm Practices, How Farm People Accept New Ideas, Ames, Iowa Agricultural Extension Service Special Report 15, 1955.

¹⁷G.M. Beal, E.M. Rogers, and I.M. Bohlen, Validity of the Concept of Stages in the Adoption Practice. Rural Sociology 22: 166-168, (June 1957).

¹⁸E.M. Rogers: op. cit., p. 17.

¹⁹H.F. Lionberger: Adoption of New Ideas and Practices, Ames, Iowa, State University Press, 1960, pp. 21-32.

4. Trial: At this stage the individual uses the innovation on a small scale in order to determine its utility in his own situation.
5. Adoption: At this stage the individual decides that the innovation is good enough for full scale and continued use, and a complete change is made with that end in view.

A recent study by Verner and Millerd²⁰ examined the adoption behaviour of a sample of orchardists in the Okanagan Valley of British Columbia. This study related research variables such as formal education, adult education, experience, and socio-economic factors to the rate of adoption among the orchardists.

Welch and Verner²¹ used the concept of adoption in comparing the efficacy of two methods for the diffusion of knowledge about new practices to a sample of restaurateurs in Missouri. As this is one of the few studies in which a structured educational process has been used and evaluated it is similar in this respect to the present study. There are other similarities between these two studies which will be discussed under the Chapter on Methodology.

²⁰C. Verner and F.W. Millerd: Adult Education and the Adoption of Innovations, Rural Sociology Monograph No. 1. Department of Agricultural Economics, University of British Columbia, 1966. See Also F.W. Millerd: Adoption of Innovations by Okanagan Orchardists. Unpublished M.S.A. Thesis, University of British Columbia, 1965.

²¹J.M. Welch and C. Verner: "A Study of Two Methods for the Diffusion of Knowledge." Adult Education 12: 231-237, (Summer 1962).

Barrington investigated the diffusion of knowledge about, and the adoption of selected educational practices into teachers colleges in the U.S.A.²² whilst Allen carried out a similar study on the adoption of educational practices in selected school systems.²³

Bonsor conducted two studies in Tennessee to measure the effectiveness of various media for the diffusion of information in relation to the degree of adoption. The first showed a more marked improvement in the rate of adoption of farm practices within communities having community clubs²⁴ and the second that the degree of adoption of homemaking practices by farm women was greater within communities having community clubs.²⁵

VI. DEFINITIONS

Small Businesses are those in which one or two people make all the critical decisions without the aid of specialist

²²T.M. Barrington: The Introduction of Selective Educational Practices into Teachers' Colleges and Their Laboratory Schools. New York. Columbia University Teachers College, Bureau of Publications. 1953.

²³H.E. Allen: The Diffusion of Educational Practices in the School Systems of the Metropolitan School Study Council. Ed.D. Thesis. New York. Columbia University Teachers College. 1956.

²⁴H.G. Bonsor: Better Farming Practices Through Rural Community Organizations. Knoxville, Tennessee Agricultural Experimental Station Bulletin 286. 1958.

²⁵H.G. Bonsor: Better Homemaking Practices Through Rural Community Organizations. Knoxville, Tennessee Agricultural Experimental Station Bulletin 287. 1958.

personnel within the firm. This definition reveals the basic nature of small business, that is, one or two people have to be competent in each aspect of business management.

The programme is the Small Business Management Training Programme.

The adoption process is the mental process through which an individual passes from first learning about an innovation to final adoption.

An innovation is an idea perceived as new by individuals.

Adoption is a decision to use and continue using an innovation.

The diffusion process is the spread of an innovation from its source of invention or creation to its ultimate users or adopters.

CHAPTER II

METHODOLOGY

In discussing the evaluative process in adult education, Thiede makes the point:

Knowing where we've been and where we're going - the degree to which we are attaining our goals, the extent to which our efforts are productive, and what needs to be done to make them more productive - are questions of concern to competent professionals in all areas of life. The process of determining the extent to which objectives have been attained is evaluation.²⁶

This study uses the concept of adoption to evaluate the educational effectiveness of the Small Business Management Programme.

At the present time a total of ten courses are available from the Department of Manpower and Immigration. As some of these courses are not being offered by the School Districts to be included in the study, and as others were found not to be suitable for the type of analysis to be carried out, three courses only will be evaluated. These three courses are: Management Accounting, Marketing for Manufacturers, and Personnel. These are described as follows.^{27,28}

²⁶Wilson Thiede: "Evaluation and Adult Education," Adult Education, Outlines of an Emerging Field of University Study, ed. Gale Jensen, A.A. Liveright, Wilbur Hallenbeck, Adult Education Association of the U.S.A., 1964, p. 291.

²⁷D.S. Conger: op. cit., pp. 3-4.

²⁸Department of Manpower and Immigration, What Every

Management Accounting

This course is designed to help a small businessman, regardless of his type of business, to use information contained in his own account books to operate more profitably. Previous knowledge or experience in bookkeeping or accounting is not required for those taking the course.

The topics covered in this course include:

1. Identifying the information a small business owner needs to operate his business profitably.
2. Extracting this information from an Income Statement and Balance Sheet.
3. Discovering why a firm is short of cash, as well as possible courses of action to remedy the situation.
4. Pinpointing unprofitable areas of his business.
5. Identifying potential trouble spots quickly so that early action can be taken to eliminate them.

Marketing for Manufacturers

This course deals with certain proven techniques which can be put into effect by the small firm to help it compete more effectively.

The course covers a wide range of marketing problems

Businessman Wants to Know - The Way to Profits, Ottawa, Queens Printer and Controller of Stationery, 1966, Cat. No. L32-2566.

including:

1. Analysing the "buyer" of a product and using this knowledge in marketing decisions.
2. Deciding whether to add new products or drop old ones.
3. Choosing channels of distribution for a particular product.
4. Forming pricing policies.
5. Managing salesmen, including methods of compensation.
6. Advertising and promoting particular products.

Personnel

This course shows the small businessman how to get and keep the right kind of employees and to make the most profitable use of personnel.

Topics covered in the course include:

1. Assessing actual staff needs.
2. Attracting and hiring the right employees.
3. Setting pay rates.
4. Appraising employee effectiveness.
5. Persuading employees to accept responsibility.
6. Examining union-management relationships.

I. THE SAMPLE

The universe for this study consisted of 201 partici-

pants in all three courses to be evaluated. A stratified random sample of 25 per cent of this population was selected as adequate to achieve the aims of the study.

The sample was stratified by drawing a proportionate representation of the participants from each of the three courses using tables of random numbers in Kendall and Babington-Smith.²⁹ This is shown on Table I. An alternative sample of 10 per cent of the population was drawn, and used where any participant in the original sample could not be contacted.

TABLE I
SIZE AND PROPORTIONAL REPRESENTATION OF THE SAMPLE

Course	Population	Sample	%
Management Accounting	77	19	25
Personnel	80	20	25
Marketing for Manufacture	<u>44</u>	<u>11</u>	<u>25</u>
Total	<u>201</u>	<u>50</u>	<u>25</u>

II. PROCEDURE

Design for Measuring Adoption

The design of this study will follow that of Welch

²⁹M.G. Kendall and B. Babington-Smith: Tables of Random Sampling Numbers. Tracts for Computers No. 24. London. Cambridge University Press. 1951.

and Verner³⁰ who devised a means of measuring differences in the degree of adoption after the participants had been exposed to two diffusion processes. This procedure assigns a value of 0.2 to each of the five stages in the adoption process as identified earlier. Complete adoption of a practice by a participant would result in a score of 1.0 for that practice. Component stages will be assigned to the source from which each resulted. For example, if it were found that a participant had learned about the business technique from a prior source (score 0.2) and that interest in it had been aroused from that source (score 0.2) but that application of the technique to his business (score 0.2), the trial of it (score 0.2), and the final adoption of it (score 0.2), resulted from participation in the programme the resultant score would be

Adoption Score from prior sources (ASp)

$$= \text{Awareness (0.2)} + \text{Interest (0.2)} = 0.4$$

Adoption Score from study sources (ASs)

$$= \text{Application (0.2)} + \text{Trial (0.2)} + \text{Adoption (0.2)} \\ = 0.6$$

Total Adoption score (AS_t)

$$= \text{ASp (0.4)} + \text{ASs (0.6)} = 1.0$$

The total score for each participant, therefore, could range from zero (total unawareness of any of the recommended techniques) to 8.0 (total adoption of the eight

³⁰J.M. Welch and C. Verner: op. cit.

recommended techniques). All or any part of this score could be assigned to either prior influences or to participation in the programme.

The Pilot Survey

Moser states that

it is exceedingly difficult to plan a survey without a good deal of knowledge of its subject-matter, the population it is to cover, the way people will react to questions, and paradoxical though it sounds, even the answers they are likely to give... . How, without trial interviews, can one be sure that the questions will be as meaningful to the average respondent as to the survey expert? How is one to decide which questions are worth asking at all?³¹

A pilot study was carried out in March 1967, using a draft interview schedule. The main purposes of the pilot study were to determine certain characteristics of the population, to test people's reaction to the questions, and, particularly, to test their recognition of the operational objectives of each course.

As a result of this study the recommended techniques for each course were reduced from ten to eight to eliminate duplication and, for the same reason, the number of statements describing the respondents' reaction to the instructor and to the course content were reduced from twenty to fifteen. In all other respects the interview schedule appeared to be satisfactory both to the purpose of the

³¹C.A. Moser: Survey Methods in Social Investigation, London. W. Heineman, 1948. pp. 44-48.

survey and to the procedure being used.

Interviewing

The interviewing was conducted during April and May in 1967. An appointment was first made with each respondent by telephone and the interviews then carried out either in the respondent's home or at his place of work. The questions were asked in the same order and using the same wording as given in the interview schedule.

III. THE INTERVIEW SCHEDULE

A standardised, precoded interview schedule was used to record the data.³² This schedule was designed to record data on the adoption of business techniques in order to test the hypothesis and to obtain information on those factors which previous research has shown to be relevant to the adoption of innovations in general as well as those which are possibly relevant to the adoption of business innovations.

A brief description of each section of the interview schedule follows.

Characteristics of the Respondents

In this section questions were related to the respondent's age, marital status, number of children and education

³²See Appendix I.

level; business training at high school, vocational school, university, and through adult educational courses; adult education in subjects other than business; occupation;³³ relationship to business, number of years spent in this capacity; as well as work enjoyment, and social participation using the Chapin Scale.³⁴

Most of the categories which were believed relevant to the adoption of business innovations were suggested by Mayer and Goldstein, who carried out an investigation into the factors which appeared to affect small business formation. They found that educational level, previous business training, previous business experience and managerial "know-how" were important elements in the success or failure of the businesses investigated.³⁵

Characteristics of the Business

This section was concerned with determining the function of the business³⁶ and its type of organization; size of business as indicated by number of employees and by the total investment involved; the source and amount of

³³The classifications were those used in the Census of Canada, 1961. Volume 3.1.

³⁴F.S. Chapin: Social Participation Scale, University of Minnesota Press, 1952.

³⁵K.B. Mayer and S. Goldstein, op. cit., Chs. 10-12.

³⁶The classifications were those used in the Census of Canada, 1961. Volume 3.2.

non-business income; and the total family income.

The Programme

In this section, questions were asked about the course or courses taken, the session or sessions in which they were taken; and the stage of adoption reached for each recommended business technique. In addition, the respondent's attitudes to the course, to course content, and to the instructor were measured by attitude scales.

The recommended business techniques are, in effect, the objectives of each course expressed in behavioural or operational terms. These techniques have been abstracted from course material supplied by the Department of Manpower and Immigration.³⁷ Respondents appeared to have no difficulty in recognizing these items.

The scale used to determine respondents' reaction to the course is a Thurstone type scale devised by Kropp and Verner for the purpose of evaluating meetings.³⁸ The scales used to determine respondents' reaction to the instructor and to the course content are Likert type scales used to measure specific rather than general attitudes. The items

³⁷Department of Manpower and Immigration: Course Leaders' Guides in Management Accounting, Personnel and Marketing for Manufacturers. Ottawa. Management Development Division, Technical and Vocational Training Branch. Department of Manpower and Immigration. Undated.

³⁸R.P. Kropp and C. Verner: "An Attitude Scale Technique for Evaluating Meetings." Adult Education, 7: 212-215 (1957).

in these scales were found by asking students in adult education classes at the University of British Columbia to write down subjective reactions to the content of any course in which they had participated and to any instructors with whom they had studied.

IV. ANALYSIS OF THE DATA

The interview schedules were precoded for processing on the IBM 7040 computer of the Computing Centre at the University of British Columbia.

Univariate tabulations were made of the characteristics of the sample as indicated in the interview schedule. Tests of significance were carried out to determine if there was a significant relationship between participation in the programme and the adoption of techniques by the respondents. In addition further tests of significance were carried out to determine if there was any significant relationship between respondents' characteristics and the degree of adoption of the recommended techniques.

For each test of significance, a null hypothesis of no statistically significant difference was advanced using the 5 per cent level of significance. That is, if it is stated that there is no difference between the mean adoption scores before and after participation in the programme, there is a 5 per cent chance that there is a difference.

The following three statistical methods were used to

test for significance.

Standard Error of the difference between two sample means. This test compares the mean performance of two groups or of one group on two occasions.

Standard Error of the difference between means in small samples. This test is similar to the first, but used when the N's of the two samples are small (less than thirty).

Both of the above tests were one-tailed, as this study is concerned with the direction of the difference rather than with its existence in absolute terms.

Analysis of Variance. This test is used to determine the significance of the difference among means when more than two means are involved. In this study it is used to test the relationship of certain personal and business characteristics of respondents to their degree of adoption of the recommended techniques.

V. PLAN OF THE STUDY

The sequence of the remaining chapters of this study is as follows: description of the sample in terms of the distribution for each characteristic of the respondents; the distribution of adoption scores for each course and for all courses in total; the measurement of average and percentage increases in adoption scores following participation in the programme; the testing for significant differences in

adoption scores before and after participation in the programme; the testing for significant differences among adoption scores attributable to certain characteristics of respondents; an analysis of adoption score for each separate business technique; an analysis of scores on each of three attitude scales used to indicate respondents' reactions to the course, instructor and course content respectively and a chapter summarizing and concluding the study.

CHAPTER III

CHARACTERISTICS OF THE SAMPLE

Information on various characteristics which previous research has associated with the adoption and/or rejection of innovations and with success or failure in business, was obtained from each respondent. These characteristics were grouped into two categories: personal characteristics, and economic/business characteristics. Frequency distributions were derived for each characteristic within each course being evaluated and a percentage frequency distribution for all courses together.

I. PERSONAL CHARACTERISTICS

General

For all respondents, forty were male and ten female; seven were single, forty-one married and two widowed; sixteen had no children, twenty-five had one or two, eight had three or four and one had five.

Age

The distribution of the sample according to age showed 88 per cent of the respondents to be in the age groups 25-54. Only two respondents were under 25 years of age and only one was over 65. The median was in the 35 to 44 age group.

Analyzing the courses separately the distributions for Personnel and for Marketing for Manufacturers were slightly skewed towards the younger age groups. In both cases the median was in the 35 to 44 age group. The distribution for Management Accounting showed the median to be in the 45 to 54 age group. Only four respondents were over the age of 54 and these were all in the Management Accounting course. (Table II)

TABLE II
DISTRIBUTION OF THE SAMPLE BY COURSE
AND AGE GROUPINGS

COURSE	AGE GROUP						TOTAL
	Under 25:	25- 34:	35- 44:	45- 54:	55- 64:	Over 65:	
Personnel	2	7	5	6	0	0	20
Management Accounting	0	4	4	7	3	1	19
Marketing for Manufacturers	0	3	6	2	0	0	11
Total	2	14	15	15	3	1	50
Per cent	4	28	30	30	6	2	100

Education

The distribution by years of school completed showed that 50 per cent of the respondents had completed Grade 12 whilst 20 per cent had progressed beyond this stage in their formal education. Only 8 per cent of all respondents had

completed fewer than nine years of school.

The general pattern applied also to each course where approximately 50 per cent of respondents had completed Grade 12 or beyond.

TABLE III
YEARS OF SCHOOL COMPLETED BY SAMPLE
RESPONDENTS BY COURSE

COURSE	NO. OF YEARS OF EDUCATION							TOTAL
	Under 5	5- 8	9- 11	Grade 12	Sen. Matric.	Univ. Degree	Univ. Grad. Work	
Personnel	0	2	8	8	2	0	0	20
Management Accounting	0	2	7	6	2	2	0	19
Marketing for Manu- facturers	0	0	6	1	3	1	0	11
Total	0	4	21	15	7	3	0	50
Per Cent	0	8	42	30	14	6	0	100

Previous Business Training

All but one of the respondents had taken business training in some kind of institution before participating in this programme. Table IV shows in detail the type of institution and the numbers and per cent attending. The most popular method of training appears to have been adult education programmes. In addition, as an addendum, Table IV shows that 72 per cent of all respondents had participated in adult education courses in subjects other than business.

TABLE IV

PERCENTAGE DISTRIBUTION OF RESPONDENTS BY SOURCE OF
PREVIOUS BUSINESS TRAINING AND BY COURSE

COURSE	TYPE OF INSTITUTION				
	High School	Vocational School	University	Adult Education	Adult Education Courses in Other Subjects
Personnel	6:30%	3:15%	2:10%	7:35%	15:75%
Management Accounting	5:25%	3:15%	4:20%	11:55%	12:60%
Marketing for Manufacturers	3:30%	3:30%	3:30%	5:50%	9:90%
Total	14:28%	9:18%	9:18%	23:46%	36:72%

Social Participation

The respondents were not active participants in community organizations as indicated by the generally low participation scores recorded on the Chapin Scale. Most respondents attended and contributed to only one organization. Approximately 20 per cent reported that they were committee members or held office in any organization (Table V).

TABLE V
SOCIAL PARTICIPATION SCORE REPORTED BY
RESPONDENTS BY COURSE

COURSE	PARTICIPATION SCORE						TOTAL
	No Score:	1-4:	5-14:	15-24:	25-49:	50 and over:	
Personnel	8	0	7	4	0	1	20
Management Accounting	4	1	8	2	4	0	19
Marketing for Manufacturers	3	1	3	1	3	0	11
Total	15	2	18	7	7	1	50
Per cent	30	4	36	14	14	2	100

II. ECONOMIC AND BUSINESS CHARACTERISTICS

Relationship to Business

Thirty-eight per cent of the respondents either owned or were part owners of their business. Considered separately,

there were marked differences among the various courses. For both Personnel and Marketing for Manufacturers only 20 per cent of the respondents were owners or part owners whilst for Management Accounting almost 70 per cent of respondents were in this category.

These figures are somewhat misleading as eleven respondents within the Management Accounting were from the Chilliwack area, and of these nine or 82 per cent were owners or part owners of their businesses. Thus four or 50 per cent of the remaining respondents in Management Accounting were in this category. This suggests that there is a difference between participants in the programme who live in Metropolitan Vancouver area and those who live in small centres. Unfortunately this study is too limited in scope for any definite conclusions to be drawn in this respect.

TABLE VI
RELATIONSHIP OF RESPONDENTS TO THEIR
BUSINESS BY COURSE

COURSE	RELATIONSHIP					TOTAL
	Owner:	Part Owner:	Man-ager:	Other Ex-ecutive:	Other Employee	
Personnel	0	4	2	6	8	20
Management Accounting	5	8	2	3	1	19
Marketing for Manufacturers	1	1	1	3	5	11
Total	6	13	5	12	14	50
Per cent	12	26	10	24	28	100

Years in Present Capacity

Forty per cent of all respondents had worked 10 years or more in their present capacity. The median category was from 5 to 9 years. The pattern was similar for each course taken separately.

TABLE VII

DISTRIBUTION OF YEARS WORKED IN
PRESENT CAPACITY BY COURSE

COURSE	NUMBER OF YEARS					TOTAL
	1-2:	3-4:	5-9:	10-19:	20 or more:	
Personnel	3	3	6	7	1	20
Management Accounting	0	6	4	8	1	19
Marketing for Manufacturers	1	3	4	2	1	11
Total	4	12	14	17	3	50
Per cent	8	24	28	34	6	100

Function of the Business

The most frequently reported function of the business was 'Trade' with 46 per cent. Manufacturing received the next highest distribution with 30 per cent and these two categories combined accounted for 76 per cent of all business functions reported.

The 'Personnel' course drew respondents from a wider

range of business functions than did either of the other two courses with six categories of function being represented. Both Management Accounting and Marketing for Manufacturers drew from only three categories with Trade being the most common in the former and in the latter course. As might be expected Manufacturing was the most common category among respondents taking part in the Marketing for Manufacturers course. Almost 50 per cent of these respondents were in categories other than Manufacturing. Subjective comments volunteered by these respondents during interviewing suggest that they participated in this course because a more suitable course was not then available. (Table VIII)

Organization of the Business

Seventy-two per cent of the businesses reported by respondents were organized as limited liability companies with the remainder distributed about equally among the other categories.

Respondents from government departments participated only in the Personnel course and sole proprietors only in the Management Accounting course. All of the participants in the Marketing for Manufacturers course were from limited liability companies. (Table IX).

Number of Employees and Total Investment

Information obtained from these questions can give

TABLE VIII
FUNCTIONS OF THE BUSINESS BY COURSE

COURSE	F U N C T I O N						TOTAL
	Manufacturing	Construction	Transport, Communica- tion and other utilities	Trade	Community, Business and Personal Service	Public Adminis- tration	
Personnel	5	3	1	6	1	4	20
Management Accounting	4	0	0	13	2	0	19
Marketing for Manufacturers	6	0	1	4	0	0	11
Total	15	3	2	23	3	4	50
Per cent	30	6	4	46	6	8	100

TABLE IX
DISTRIBUTION OF RESPONDENTS BY ORGANIZATION
OF THE BUSINESS BY COURSE

COURSE	O R G A N I Z A T I O N				TOTAL
	Sole Propri- etorship	Partnership	Limited Liability Co.	Government Department	
Personnel	0	2	14	4	20
Management Accounting	5	3	11	0	19
Marketing for Manufacturers	0	0	11	0	11
Total	5	5	36	4	50
Per Cent	10	10	72	8	100

only an indication of relative size among the businesses or respondents. Their usefulness is further limited by the number of respondents who were either unwilling or unable to give information regarding the total investment in their business.

Fifty percent of all businesses had 15 or more employees, 42 per cent being within the functions of Manufacturing and Trade. Forty-four per cent of respondents failed to answer the question on total investment. Thirty-four per cent of all businesses had a total investment of \$50,000 or more; 28 per cent being within the functions of Manufacturing and Trade.

TABLE X
FREQUENCY DISTRIBUTION OF NUMBER OF EMPLOYEES
BY FUNCTION OF BUSINESS

FUNCTION	NUMBER				
	1- 2:	3- 4:	5- 9:	10- 14:	15 or more
Manufacturing	0	0	2	1	12
Construction	0	0	2	1	0
Transport, Communication and other utilities	1	0	0	1	0
Trade	5	4	3	2	9
Community, Business and Personal Service	2	0	0	1	0
Public Administration	0	0	0	0	4
Total	8	4	7	6	25
Per cent	16	8	14	12	50

TABLE XI
DISTRIBUTION OF TOTAL INVESTMENT BY
FUNCTION OF BUSINESS

FUNCTION	I N V E S T M E N T						
	Under \$2499:	\$2500- \$4999:	\$5000- \$9999:	\$10000- \$24999:	\$25000- \$50000:	Over \$50000:	No Re- sponse
Manufacturing	0	0	0	0	2	7	6
Construction	0	0	1		1	1	0
Transport, etc	0	0	0	0	0	2	0
Trade	1	2	0	3	1	7	9
Community Business, etc	0	0	0	0	0	0	3
Public Admin- istration	0	0	0	0	0	0	4
Total	1	2	1	3	4	17	22
Per cent	2	4	2	6	8	34	44

Income

Both the modal and median categories of income was the \$5,000 to \$7,499 range. No respondent had a family income of less than \$2,500 or more than \$14,999. Seventy-six per cent of all respondents had no income from sources other than their business, 14 per cent had half as much or less and only 4 per cent had more than this.

TABLE XII
DISTRIBUTION OF FAMILY INCOME

Income Range	Number of Respondents	Percent
less than \$2,500	0	0
\$2,500-\$4,999	5	10
\$5,000-\$7,499	19	38
\$7,500-\$9,999	12	24
\$10,000-\$14,999	6	12
\$15,000-\$24,999	0	0
Over \$25,000	0	0
No Response	8	16
Total	50	100%

CHAPTER IV

THE MEASUREMENT OF ADOPTION

The degree of adoption of business techniques by participants in the programme appeared to be influenced by certain of the personal and business characteristics of the respondents discussed in the last Chapter. Factors which might influence a businessman's decision to adopt an innovation, stem from his own background and from the situation which he occupies in the business. In particular, his educational background, business training, and experience will influence his ability to assimilate material and to assess its relevance to his own operation. Moreover his position within the business will influence his authority to innovate.

This Chapter first measures the degree of adoption by all respondents in accordance with the procedure discussed in Chapter II and then tests these measurements in order to determine whether there has been any statistically significant change in the adoption of the techniques which might be attributed to participation in the programme. Thirdly, the adoption scores are analyzed in relation to those personal and business characteristics of the respondents which might have influenced their decision to adopt an innovation. Finally, an attempt is made to analyze the attitudes of respondents towards the courses, contents of

courses, and the instructors.

I. RESULTS OF MEASUREMENTS

For all respondents in all courses the mean percentage increase in adoption score, following participation in the programme was 181 per cent. The mean adoption score from prior scores (ASp) was 1.6; from study sources (ASs) 2.9; and from all sources (ASt) 4.5. The mean adoption score from study sources (2.9) represents the mean increase in adoption resulting from participation in the educational process of the programme.³⁹ The standard deviations for ASp, ASs, and ASt scores were 1.9, 1.6, and 1.9 respectively, but the co-efficients of variation, 119 per cent, 55 per cent, and 42 per cent respectively, show a relatively smaller dispersion of individual scores around the mean following participation. (Table XIII)

Respondents in the Management Accounting course showed a much greater mean percentage increase in adoption score (291 per cent) than respondents in either Personnel (132 per cent) or Marketing for Manufacturers (179 per cent). The mean score from prior sources of 1.1 was lower than the mean score for all courses reflecting the general lack of knowledge among respondents within this area. The relatively high co-efficient of variation for this score (173 per cent)

³⁹See Chapter 11, pp. 14-17, Design for Measuring Adoption.

TABLE XIII

GROUPED FREQUENCY DISTRIBUTION OF ADOPTION
SCORES FOR ALL RESPONDENTS IN ALL COURSES

SCORE	FREQUENCY		
	ASp	ASs	ASt
0.0 - 0.8	24	6	1
1.0 - 1.8	10	8	5
2.0 - 2.8	3	10	5
3.0 - 3.8	7	12	9
4.0 - 4.8	1	8	4
5.0 - 5.8	1	4	14
6.0 - 6.8	4	2	5
7.0 - 8.0	0	0	7
Total	50	50	50

Arithmetic Mean 1.6 2.9 4.5

Per cent Increase 181%

$$\left(\frac{ASs}{ASp}\right)$$

Standard
Deviation 1.9 1.6 1.9

Co-efficient of
Variation 119% 55% 42%

$$\left(\frac{100S.D.}{AM.}\right)$$

indicates a wide range of knowledge among respondents prior to participating in the course. Despite the high percentage increase for this course the mean adoption score from all sources (4.3) is slightly below the mean for all courses and this probably reflects the highly technical nature of this field and the consequent inability of some respondents, particularly those without a prior knowledge of accounting, to assimilate or assess the content during the course.

(Table XIV)

TABLE XIV
ADOPTION SCORES FOR RESPONDENTS IN
MANAGEMENT ACCOUNTING COURSE

	ASp	ASs	ASt
Arithmetic Mean	1.1	3.2	4.3
Per cent Increase		291%	
Standard Deviation	1.9	1.6	1.9
Co-efficient of Variation	173%	50%	44%

The percentage increase in the adoption score for respondents in the Personnel course was 132 per cent, the lowest increase of the three courses. However, both the adoption score from prior sources and from all sources were relatively high at 2.2 and 5.1 respectively. This probably reflects the respondents' familiarity with this field prior to participating in the course. The relatively low co-efficient of variation (82 per cent) for the adoption score

from prior sources indicates a common level of knowledge among respondents before participating in this course.

(Table XV)

TABLE XV
ADOPTION SCORES FOR RESPONDENTS
IN PERSONNEL COURSE

	ASp	ASs	ASt
Arithmetic Mean	2.2	2.9	5.1
Per cent Increase	132%		
Standard Deviation	1.8	1.6	1.7
Co-efficient of Variation	82%	55%	33%

The percentage increase in the adoption score for respondents in the Marketing for Manufacturers course was 179 per cent. The adoption scores from study sources (2.5) and from all sources (3.9) were the lowest for the three courses and reflect the fact that only six out of the eleven respondents were actually engaged in manufacturing. (Table XVI)

TABLE XVI
ADOPTION SCORES FOR RESPONDENTS IN
MARKETING FOR MANUFACTURERS COURSE

	ASp	ASs	ASt
Arithmetic Mean	1.4	2.5	3.9
Per cent Increase	179%		
Standard Deviation	1.4	1.0	1.8
Co-efficient of Variation	100%	40%	46%

II. SIGNIFICANCE OF MEASUREMENTS

As the mean of the ASp score represents the mean adoption score of respondents before participating in the programme and the mean of the ASst score, the mean adoption score of respondents after participating in the programme, the difference between these means represents the gain in the degree of adoption due to the participation in the programme. The significance of this gain was estimated by a one-tailed "t" test, for large samples in the case of all courses, and for small samples in the case of each separate course.⁴⁰

In the case of all courses together the observed value of "t" was 11.8, "t" being significant at 2.4 at the .01 level. For the Personnel course the observed and significant values of "t" respectively were 5.3 and 2.55; for Management Accounting 5.3 and 2.57; and for Marketing for Manufacturers 7.81 and 2.82. In all cases the observed value of "t" was greater than the significant value at the .01 level, indicating that there had been a significant gain in the degree of adoption by respondents following participation in the programme. Thus the null hypothesis may be rejected.

Table XVII shows the observed and significant values

⁴⁰H.E. Garnett: Statistics in Psychology and Education, 5th. Ed., New York, David McKay Co. Inc., 1965. pp. 212-225.

of "t" for all courses and for each course separately.

TABLE XVII
SIGNIFICANCE OF THE DIFFERENCES BETWEEN
MEANS OF ASp AND AS_t SCORES

COURSE	"t" (observed value)	Degrees of Freedom (N-2)	"t" (one-tailed) is significant at levels	
			.05	.01
All Courses in Total	<u>11.8</u>	48	1.68	2.40
Personnel	<u>5.3</u>	18	1.73	2.55
Management Accounting	<u>5.3</u>	17	1.74	2.57
Marketing for Manufacturers	<u>7.81</u>	9	1.83	2.82

Significant Values are indicated by underlining.

III. ANALYSIS OF ADOPTION SCORES IN RELATIONSHIP TO CHARACTERISTICS OF RESPONDENTS

This section analyzes adoption scores in relation to those characteristics of respondents discussed earlier which were thought to have an effect on the adoption of the business techniques studied. The characteristics used for this purpose are age, education, relationship of the respondent to his business, numbers of years spent in his present capacity, social participation, function of the business, number of employees in the business, and family income.

The analysis was made using a single factor analysis

of variance of the adoption score from study sources (ASs) only. The null hypothesis tested asserts that the dependent variable (i.e. the adoption score) for each independent variable (i.e. the characteristics of age, education, etc.) will differ only through fluctuations in sampling. To test this hypothesis in each case the "among groups" variance of means was divided by the variances of the scores within the groups and the resulting "F" ratio compared with given values of "F" at the desired level of significance.⁴²

Of the seven personal characteristics tested, a statistically significant relationship was found between adoption score and education, relationship to business, and number of employees (Table XVIII). These three characteristics were significant at the .05 level only. The null hypothesis of no significant difference among means may be accepted for all of the characteristics tested except these three. (Table XVIII)

Educational level, as measured by years of school completed, was one characteristic that was found to have a statistically significant relationship to adoption score. The mean adoption score (ASs) was highest among those respondents with twelve years of school completed. Respondents with more than twelve years of schooling had lower mean adoption scores but these were higher than those with

⁴²Ibid., pp. 276-288 and pp. 451-453.

TABLE XVIII
ANALYSIS OF VARIANCE AMONG MEANS

Characteristic	Source of Variation	Degrees of Freedom	Mean Square (Variance)	"F" (Variance Ratio)	Significant Values of "F"	
					.05	.01
Age	Among Means	5	2.33	0.87	2.42	3.45
	Within Groups	44	2.70			
Education	Among Means	4	6.50	<u>2.81</u>	2.58	3.77
	Within Groups	45	2.31			
Relationship to Business	Among Means	4	6.61	<u>2.87</u>	2.58	3.77
	Within Groups	45	2.30			
No. of Years In Present Capacity	Among Means	4	1.92	0.71	2.58	3.77
	Within Means	45	2.72			
Social Participation	Among Means	5	0.94	0.33	2.42	3.45
	Within Means	44	2.84			
Function of Business	Among Means	6	4.20	1.72	2.32	3.25
	Within Means	43	2.44			
Number of Employees	Among Means	4	8.12	<u>3.74</u>	2.58	3.77
	Within Groups	45	2.17			
Family Income	Among Means	3	1.27	0.46	2.85	4.33
		38	2.72			

Significant Values are indicated by underlining.

less than twelve years of school completed. Thus, the more education the more likely the adoption of innovations from study sources. (Table XIX)

TABLE XIX
NUMBER OF YEARS OF EDUCATION:
COMPARATIVE ADOPTION SCORES

Group	No. of Respondents	Mean Adoption Score (ASs)
5-8 years	4	2.0
9-11 years	21	2.4
Grade 12	14	4.0
Senior Matric.	8	3.2
University Degree	3	3.7

"Relationship to business," referring to the respondents' positions within their business, was a second characteristic that was found to have a statistically significant relationship to adoption score. The mean adoption score (ASs) was highest among those respondents who were sole owners of their business. Respondents who were part owners and managers had lower mean adoption scores but these were higher than those who were other executives and other employees. Thus the greater the degree of authority within the business the more likely the adoption of innovations from study sources (Table XX).

The number of employees within the respondents'

TABLE XX
RELATIONSHIP TO BUSINESS: COMPARATIVE
ADOPTION SCORES

GROUP	No. of Respondents	Mean Adoption Score (ASs)
Owner	6	4.1
Part Owner	13	3.6
Manager	5	3.3
Other Executive	12	2.8
Other Employee	14	2.0

businesses was the third characteristic that was found to have a statistically significant relationship to adoption score. The mean adoption score (ASs) was highest among those respondents with 3-4 employees. Respondents with 1-2 and 5-9 employees had lower mean adoption scores but these were higher than those with 10 or more employees. Thus the adoption of innovations from study sources is more likely to take place where the number of employees is relatively few. (Table XXI)

TABLE XXI
NUMBER OF EMPLOYEES: COMPARATIVE
ADOPTION SCORES

GROUP	No. of Respondents	Mean Adoption Score (ASs)
1-2 Employees	8	3.9
3-4 Employees	4	4.3
5-9 Employees	7	3.9
10-14 Employees	5	3.0
15 or more Employees	26	2.3

IV. ANALYSIS OF ATTITUDES

Three scales were used in an attempt to determine respondents' reactions to the course, the course content, and to the instructor.⁴³ On the Kropp-Verner scale for measuring respondents' attitudes to the course, the median score of each respondent was recorded, most respondents

⁴³See Ch. II. (III) pp. 20-21.

checking more than one statement.⁴⁴ On this scale the lower the score the more favourable the reaction.⁴⁵ Reactions ranged from the most favourable, "It was one of the most rewarding experiences I have had," to statement number 12, "It was not exactly what I needed," with a mean score of 6 for all courses and for each course separately.

The scores on the scale used for measuring respondents' reaction to the instructor showed an overall mean of 65 with little divergence among the course means. As the highest possible score was 75, the recorded score indicates a highly favourable reaction.⁴⁶

The scores on the scale used for measuring respondents' reaction to course content were generally lower than reaction to instructor scores. The overall mean was 59 and course means were 57 for Management Accounting and 61 for both Personnel and Marketing for Manufacturers. Nevertheless an average score of four per statement indicates a favourable reaction.⁴⁷ An attempt to analyze scores attributed to each statement was abandoned as no meaningful pattern emerged. Individual attitude scores for all respondents in all courses are shown in Table XXV in Appendix II.

⁴⁴See Appendix I, p. 71. Statements Describing Reactions to Course.

⁴⁵R.P. Kropp and C. Verner, loc. cit.

⁴⁶See Appendix I, p. 72. Statements Describing Reaction to Instructor.

⁴⁷See Appendix I, p. 74. Statements Describing Reaction to Course Content.

CHAPTER V

SUMMARY AND CONCLUSIONS

This study analyzes the adoption of certain specified business skills and techniques by participants in the Small Business Management Training Programme, as a means of evaluating the educational effectiveness of the programme. In addition, it seeks to indicate the reaction of participants to the course, the instructor and to the course content.

The Small Business Management Programme evolved from the need for decision making skills in a number of functional areas of management, and is the responsibility of the Management Development Unit of the Department of Manpower and Immigration. The programme is managed by provincial governments which have the constitutional responsibility for education. In British Columbia the local School Boards sponsor the programme and offer the courses in adult evening classes.

Data for the above analysis were collected from a sample of participants in each of 3 courses offered in the Lower Mainland of British Columbia. These 3 courses were Personnel, Management Accounting, and Marketing for Manufacturers.

Many studies using the concept of adoption have been carried out mainly in the field of rural sociology. Consequently a great deal of literature on the concept and the

application of the adoption process is available. Some of the works pertinent to this study were reviewed.

I. CHARACTERISTICS OF THE SAMPLE

Data were collected on personal, and on business and economic characteristics of the respondents, and on the degree of adoption of the specified techniques. The degree of adoption of each technique was expressed as a numerical score.

The distribution of the sample according to age approximated the normal curve. The median age group was 35-44 years. An analysis of variance among the means of the various groups of each characteristic measured indicated that there was no significant difference in adoption score with respect to the age distribution of respondents.

Fifty per cent of all respondents had completed Grade 12. Only 8 per cent had completed fewer than 9 years in school. For this characteristic, an analysis of variance indicated that there was a significant difference in adoption scores with respect to years of education. The "F" ratio was significant at the 5 per cent level.

With respect to business training, all but one of the respondents had attended some type of institution prior to participating in this programme. The most common method of training was in adult education classes. In view of the overwhelming participation of respondents in previous

business training there was little point in carrying out further analysis of this characteristic.

Generally, participation in social and business organizations by respondents was low. There was no significant difference in adoption scores among groups within the characteristic.

Thirty-eight per cent of all respondents were either owners or part owners of their businesses; 34 per cent were managers or other executives and 28 per cent other employees. Analysis of variance among means of groups within this characteristic indicated a significant difference in adoption scores among these groups. The mean score for the owner category for instance, was more than twice that for the other employee category.

The largest number of respondents were engaged in trade, 46 per cent giving this category as the function of their businesses. Trade and manufacturing together accounted for 76 per cent of all businesses. There was no significant difference in adoption scores in respect of this characteristic.

An attempt to determine size of business by number of employees and the total investment in the business was only partially successful as many respondents either were unable or unwilling to provide information on investment. Half of the businesses involved had 15 or more employees and analysis of variance indicated that size in this respect

had an effect on the adoption scores of respondents. There was a significant difference among the mean scores of the categories within this characteristic, the scores being lower in the 10-14 and 15 or more employee categories.

The median family income group was \$5,000 to \$7,499. Seventy-six per cent of all respondents had no income other than from business sources. There was no significant difference in adoption scores in respect of this characteristic.

II. THE MEASUREMENT OF ADOPTION

The educational effectiveness of the programme was measured by testing the significance of the differences between the means of the adoption score prior to participation in the programme (ASp), and the adoption score subsequent to participation (AS_t). This was done for all courses in total and for each course separately. A one-tailed 't' test for large samples was used to measure the difference for all courses in total and a similar test for small samples in the case of each course separately. In all cases there was a significant difference between the means of the two scores at the .01 level of confidence, indicating a significant gain in the adoption of the techniques following participation in the programme.

Three scales were used in the study to indicate the reaction of respondents to the course in general, to the instructor, and to the course content. The scoring indicated

a highly favourable reaction in all three cases.

III. CONCLUSIONS AND RECOMMENDATIONS

The study indicates that the Small Business Management Training Programme has been of substantial benefit to those businessmen who have participated in its courses. With few exceptions, the respondents expressed a high degree of satisfaction with the courses, instructors, and course contents. Subjective remarks made to the writer during interviews, however, indicated that some respondents found it difficult to assimilate course material during the relatively short time allowed for the course. This was especially so in Management Accounting. Several participants expressed the opinion that they would have better understood the content if they had had a prior knowledge of bookkeeping. This opinion might be reflected in the average adoption score from total sources (ASt) for this course which is considerably below that for the Personnel course, even though the ASs score is higher.

Again the relatively low ASs and ASt scores for the Marketing for Manufacturers course probably reflects the fact that only six of the eleven respondents in this course were engaged in manufacturing.

Many respondents expressed the wish for more courses within their own districts and showed interest in some of the newer courses.

Although this study has indicated a significant gain in the adoption of business practices following participation in the programme this, in itself, is only prima facie evidence of increased business efficiency. It suggests that the problem might be taken further and research conducted into the relative increases in business efficiency among participants and nonparticipants in the programme.

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APPENDIX I

THE INTERVIEW SCHEDULE

INTERVIEW SCHEDULE

The Rate of Adoption of Business Techniques in the
Small Business Management Training Program

Respondent's Name:

Name of Business:

Address:

Telephone Number:

Respondent's Code Number:

Record of Visits:

Introduction

I'm from the U.B.C. I am conducting a survey of participants in the Small Business Management Training Program and I would like to ask some questions about yourself and about your business. All information that you give me will be strictly confidential and will be used for statistical summaries only.

A. To begin, I would like to ask a few questions about yourself.

1. What is your age?

1	under 25	1	1
2	25 - 34		2
3	35 - 44		3
4	45 - 54		4
5	55 - 64		5
6	over 65		6

2. What is your marital status?

1	Single	2	1
2	Married		2
3	Widowed		3

3. How many children do you have?

1	None	3	1
2	1 - 2		2
3	3 - 4		3
4	5 or more		4

4. What was the highest year you completed in school?

1	less than 5	4	1
2	5 - 8		2
3	9 - 11		3
4	High School Diploma (Grade 12)		4
5	Senior Matriculation		5
6	University Degree		6
7	University graduate work		7

5. Have you taken any business courses in high school?

1	Yes	5	1
2	No		2

6. Have you taken any business courses at a vocational school?

1	yes	6	1
2	No		2

7. Have you taken any business courses at university?
- | | | | |
|---|-----|---|---|
| 1 | Yes | 7 | 1 |
| 2 | No | | 2 |
8. Have you taken any adult education courses in business before participating in this program?
- | | | | |
|---|-----|---|---|
| 1 | Yes | 8 | 1 |
| 2 | No | | 2 |
9. Have you taken any adult education courses in other subjects?
- | | | | |
|---|-----|---|---|
| 1 | Yes | 9 | 1 |
| 2 | No | | 2 |
10. What is your occupation?
- | | | | |
|---|----------------------------|----|---|
| 1 | Managerial | 10 | 1 |
| 2 | Professional and Technical | | 2 |
| 3 | Clerical | | 3 |
| 4 | Sales | | 4 |
| 5 | Service and Recreational | | 5 |
11. What is your relationship to your business?
- | | | | |
|---|-----------------|----|---|
| 1 | Owner | 11 | 1 |
| 2 | Part Owner | | 2 |
| 3 | Manager | | 3 |
| 4 | Other Executive | | 4 |
| 5 | Other Employee | | 5 |
12. How many years have you worked in this capacity?
- | | | | |
|---|------------|----|---|
| 1 | 1-2 | 12 | 1 |
| 2 | 3-4 | | 2 |
| 3 | 5-9 | | 3 |
| 4 | 10-19 | | 4 |
| 5 | 20 or more | | 5 |
13. Is your business your full-time occupation?
- | | | | |
|---|-----|----|---|
| 1 | Yes | | |
| 2 | No | 13 | 1 |
| | | | 2 |
14. Do you enjoy your work?
- | | | | |
|---|-----|----|---|
| 1 | Yes | 14 | 1 |
| 2 | No | | 2 |

15. Do you subscribe to any business magazines?

1	Yes	15	1
2	No		2

16. Social Participation Score

1	No Score	16	1
2	1 - 4		2
3	5 - 14		3
4	15 - 24		4
5	25 - 49		5
6	50 or more		6

Social Participation

Score	1	2	3	4	5
Organization	Membership	Attendance	Contribution	Committee Membership	Offices Held
1965					
1964					
1963					
TOTALS					

GRAND TOTAL = +3 PARTICIPATION SCORE

B. Next I would like to ask you about your business.

21. What is the chief function of the business?

1	Mines, Quarries, Oil Wells	21	1
2	Manufacturing		2
3	Construction		3
4	Transportation, Communication, Other facilities		4
5	Trade		5
6	Finance, Insurance, Real Estate		6
7	Community, Business, and Personal Service		7
8	Public Administration		8

22. Under what type of organization does the business operate?

1	Sole Proprietorship	22	1
2	Partnership		2
3	Limited Liability Company		3
4	Government Department		4

23. If partnership or company, how many active partners or directors in the business?

1	1	23	1
2	2		2
3	3		3
4	Over 3		4

24. How many have taken part in the program?

1	1	24	1
2	22		2
3	3		3
4	Over 3		4

25. How many paid employees other than owners were there in the business at end 1965?

1	1 - 2	25	1
2	3 - 4		2
3	5 - 9		3
4	10 - 14		4
5	15 or more		5

26. What was the total investment, including loans, in the business at end of 1965?

1	Under \$1,000	26	1
2	\$1000 - \$2,499		2
3	\$2500 - \$4,999		3
4	\$5000 - \$7,499		4
5	\$7500 - \$9,999		5
6	\$10000 - \$14,999		6

26. (continued)

7	\$15000 - \$24,999	26	7
8	\$25000 - \$49,999		8
9	Over \$50,000		9

27. Did you receive income from sources other than your business last year? If so, how is this income related to your income from business?

1	No income from other sources	27	1
2	Half as much or less		2
3	Less than, but greater than half as much		3
4	Equal to		4
5	Greater but less than twice as much		5
6	Twice as much or greater		6

28. In what range would your 1965 total family income fall?

1	Less than \$2,500	28	1
2	\$2,500 - \$4,499		2
3	\$5,000 - \$7,499		3
4	\$7,500 - \$9,999		4
5	\$10,000 - \$14,999		5
6	\$15,000 - \$24,999		6
7	Over \$25,000		7

C. Now I would like to ask you some questions about the program.

In which course or courses have you participated?

29.	Management Accounting	29	1
30.	Personnel	30	1
31.	Marketing for Manufacturers	31	1
32.	When did you take the course?		
	Fall, 1964	32	1
	Spring, 1965		2
	Fall, 1965		3
	Spring, 1966		4
	Fall, 1966		5

I will now read to you some business techniques recommended in the course. I want you to tell me whether you are aware of each of these practices. If so, what progress, if any, have you made towards the adoption of each?

Stage of Adoption	Cumulative Score	Definition
Awareness	0.2	The first knowledge about a new practice.
Interest	0.4	The active seeking of extensive and detailed information about the idea to determine its possible usefulness and applicability.
Evaluation	0.6	Weighing and sifting the acquired information and evidence in the light of the existing conditions into which the practice would have to fit.
Trial	0.8	The tentative trying out of the practice.
Adoption	1.0	The full-scale integration of the practice into the on-going operate.

Read from the appropriate course schedule showing the recommended techniques.

Hand respondent "Attitude to Course" scale.

I would like to find out how you feel about the course. Which of these statements most accurately describe your personal reaction to the course?

Hand respondent "Attitude to Course Content" scale.

Would you please read the instructions and complete this part of the schedule?

Hand Respondent "Attitude to Instructor".

Would you please read the instructions and complete this part of the schedule?

Management Accounting

Recommended Techniques

In the right-hand margin, opposite each practice enter the appropriate score.

	ASp	Score ASs	ASt
1. Departmentalised Profit & Loss Statement to determine the contribution to net profit of each department.			
2. Comparative Profit & Loss Statement, showing the contribution to net profit of each department for each year.			
3. Financial statement showing ratio of net profit after owner's salary, to net worth (Return on capital invested).			
4. Statement showing ratio of quick assets to current liabilities.			
5. Analysis of costs into fixed and variable, and calculation of a break-even point.			
6. Forecasted Profit & Loss Statement or Operating Budget for each department for the current financial year.			
7. Projected Balance Sheet for the current financial year.			
8. Monthly Cash & Operating Statements for the purpose of budget control.			
TOTALS	40	41	42

Personnel

Recommended Techniques

In the right-hand margin, opposite each practice enter the appropriate score.

Score	
ASp	ASs ASt

1. Preparing job descriptions for employees based on duties to be performed.
2. Establishing employee specifications based on qualifications required by each employee.
3. Establishing a training program for all employees.
4. Establishing an employee performance appraisal plan.
5. Indicating to subordinates the extent of this responsibility and authority.
6. Acquiring a knowledge of wage rates paid by other employees in the same line of business.
7. Keeping personal record files for all employees.
8. Providing for a manager successor.

TOTALS

50

51

52

Marketing for Manufacturers

Recommended Techniques

In the right-hand margin, opposite each practice enter the appropriate score.

	Score		
	ASp	ASs	ASt

1. Carrying out consumer analysis in order to establish the identity of potential customer for all of your products.
2. Assessing the ratio of your sales to the total industry sales for all products.
3. Calculating "Break-Even" points for all products.
4. Analysing in terms of profitability, the probable effect of introducing new products.
5. Assessing in terms of profitability, the probable effects of using alternative distribution channels.
6. Assessing the probable effect on profit of a decision to change prices.
7. Periodically reviewing the level and method of Salesmen's compensation.
8. Assessing available advertising alternatives in terms of relative costs and effectiveness.

TOTALS

60

61

62

Statements describing reactions to course.

I would like to find out how you feel about the course. Which of these statements most accurately describes your personal reaction to the course?

01. It was one of the most rewarding experiences I have ever had.
02. Exactly what I wanted.
03. I intend to take another course in the near future.
04. It provided the kind of experience that I am able to apply to my own situation.
05. It helped me personally.
06. It solved some problems for me.
07. I think it served its purpose.
08. It had some merits.
09. It was fair.
10. It was neither very good nor very poor.
11. I was mildly disappointed.
12. I was not exactly what I needed.
13. It was too general.
14. It did not take any new ideas away.
15. It did not hold my interest.
16. It was much too superficial.
17. I was dissatisfied.
18. It was very poorly planned.
19. I didn't learn a thing.
20. It was a complete waste of time.

SCORE 70

Statement describing reaction to instructor.

I would like to determine your degree of satisfaction with the way in which the instructor managed the course. The following items indicate behaviour which might be expected of an instructor. You are asked to indicate in respect of each item whether you are 1 Very Satisfied; 2 Moderately Satisfied; 3 Undecided; 4 Moderately Dissatisfied; 5 Very Dissatisfied; that the instructor

	Very Satisfied	Moderately Satisfied	Undecided	Moderately Dissatisfied	Very Dissatisfied
01. Showed that he had a good knowledge of the subject matter of the course?	5	4	3	2	1
02. Acquired a knowledge of the business interests of all members of the course?	5	4	3	2	1
03. Stated clearly the objectives of each session?	5	4	3	2	1
04. Used a variety of teaching techniques in conducting the class?	5	4	3	2	1
05. Utilised class time fully?	5	4	3	2	1
06. Discussed the application of the subject to your business operation?	5	4	3	2	1
07. Encouraged students to pursue further study of subject matter on their own?	5	4	3	2	1
08. Retained your interest throughout the course?	5	4	3	2	1
09. Summarised the work of each session at the close of the class?	5	4	3	2	1
10. Created a friendly atmosphere in the class?	5	4	3	2	1

Statements describing reactions to instructor (continued).

	Very Satisfied	Moderately Satisfied	Undecided	Moderately Dissatisfied	Very Dissatisfied
11. Encouraged members to participate in each session?	5	4	3	2	1
12. Gave adequate answers to class questions?	5	4	3	2	1
13. Made the subject matter easily understandable?	5	4	3	2	1
14. Brought out clearly the principles involved in each session?	5	4	3	2	1
15. Had adequate control of the class?	5	4	3	2	1
SCORE	80				

Statements describing reaction to course content.

I would like to determine your reaction to the content of the course. In respect of each item please indicate whether you
 1 Strongly Agree; 2 Agree; 3 Are Undecided; 4 Disagree; 5 Strongly Disagree.

	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
01. It was relevant to my situation.	5	4	3	2	1
02. It was too technical for me.	1	2	3	4	5
03. I found it helpful in solving my problems.	5	4	3	2	1
04. It was too theoretical.	1	2	3	4	5
05. There was too much material for the time allotted.	1	2	3	4	5
06. I was able to adapt it to my business.	5	4	3	2	1
07. No clear concepts emerged.	1	2	3	4	5
08. There was too much detail.	1	2	3	4	5
09. I found it interesting.	5	4	3	2	1
10. It was superficial.	1	2	3	4	5
11. It was out of date.	1	2	3	4	5
12. It was just what I wanted.	5	4	3	2	1
13. I was able to understand it.	5	4	3	2	1
14. It had no value for me.	1	2	3	4	5
15. It was useful.	5	4	3	2	1

SCORE 90

APPENDIX II

TABLES OF INDIVIDUAL ADOPTION SCORES
FOR EACH RECOMMENDED TECHNIQUE
AND OF
INDIVIDUAL ATTITUDE SCORES

TABLE XXII

INDIVIDUAL ADOPTION SCORES FOR EACH RECOMMENDED
TECHNIQUE IN THE PERSONNEL COURSE

No.	Recommended Technique											
	ASp	ASs ¹	ASt	ASp	ASs ²	ASt	ASp	ASs ³	ASt	ASp	ASs ⁴	ASt
1	0.0	1.0	1.0	0.0	1.0	1.0	0.6	0.4	1.0	1.0	0.0	1.0
2	0.2	0.8	1.0	0.2	0.8	2.0	0.0	1.0	1.0	0.0	0.2	0.2
3	1.0	0.0	1.0	0.0	0.2	0.2	1.0	0.0	1.0	0.0	0.2	0.2
4	0.0	1.0	1.0	0.2	0.2	0.4	0.2	0.4	0.6	0.0	0.4	0.4
5	0.0	0.6	0.6	0.0	0.2	0.2	0.0	0.2	0.2	0.0	0.2	0.2
6	0.0	0.2	0.2	0.0	0.2	0.2	1.0	0.0	1.0	1.0	0.0	1.0
7	0.0	1.0	1.0	0.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0
8	0.4	0.6	1.0	0.0	1.0	1.0	1.0	0.0	1.0	0.2	0.8	1.0
9	0.2	0.8	1.0	0.2	0.0	0.2	1.0	0.0	1.0	1.0	0.0	1.0
10	0.0	0.2	0.2	0.0	0.4	0.4	0.0	0.2	0.2	0.0	0.2	0.2
11	0.2	0.8	1.0	0.2	0.0	0.2	0.0	1.0	1.0	0.2	0.8	1.0
12	0.0	0.2	0.2	0.0	0.2	0.2	1.0	0.0	1.0	1.0	0.0	1.0
13	0.0	0.8	1.0	0.0	0.2	0.2	0.2	0.8	1.0	0.0	0.2	0.2
14	0.0	0.2	0.2	0.0	0.2	0.2	0.0	0.2	0.2	0.0	0.2	0.2
15	1.0	0.0	1.0	0.0	0.2	0.2	1.0	0.0	1.0	0.0	0.2	0.2
16	0.2	0.8	1.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	0.6	0.6
17	0.6	0.4	1.0	0.0	0.2	0.2	0.2	0.2	0.4	0.0	0.2	0.2
18	0.0	0.2	0.2	0.0	0.2	0.2	0.0	1.0	1.0	0.0	0.4	0.4
19	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0
20	0.2	0.4	0.6	0.2	0.8	1.0	0.0	0.2	0.2	0.2	0.8	1.0
TS*	5.2	10.0	15.2	3.0	7.0	10.0	10.0	5.6	15.6	6.6	5.4	12.0

*Total Score

TABLE XXII (continued)

No.	Recommended Technique											
	ASp	ASs ⁵	ASt	ASp	ASs ⁶	ASt	ASp	ASs ⁷	ASt	ASp	ASs ⁸	ASt
1	1.0	0.0	1.0	0.0	1.0	1.0	1.0	0.0	1.0	0.0	0.0	0.0
2	0.2	0.8	1.0	0.2	0.8	1.0	0.0	1.0	1.0	0.2	0.0	0.2
3	0.2	0.8	1.0	1.0	0.0	1.0	0.0	0.2	0.2	0.0	0.6	0.6
4	0.2	0.4	0.6	0.2	0.0	0.2	0.0	0.8	0.8	1.0	0.0	1.0
5	0.0	0.2	0.2	0.0	0.2	0.2	0.0	0.2	0.2	0.0	0.2	0.2
6	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	0.0	0.0
7	0.6	0.4	1.0	0.0	0.2	0.2	0.0	1.0	1.0	0.0	1.0	1.0
8	0.4	0.6	1.0	0.0	1.0	1.0	1.0	0.0	1.0	0.2	0.8	1.0
9	0.2	0.8	1.0	0.2	0.8	1.0	0.2	0.8	1.0	0.0	0.2	0.2
10	0.0	1.0	1.0	0.0	1.0	1.0	0.0	0.2	0.2	0.0	0.2	0.2
11	0.2	0.8	1.0	0.0	0.0	0.2	0.2	0.8	1.0	0.0	0.2	0.2
12	1.0	0.0	1.0	0.0	0.2	0.2	1.0	0.0	1.0	0.0	0.2	0.2
13	0.0	0.2	0.2	0.2	0.8	1.0	0.2	0.8	1.0	0.2	0.8	1.0
14	0.0	0.2	0.2	0.0	0.2	0.2	0.0	0.2	0.2	0.0	0.2	0.2
15	0.0	0.2	0.2	0.0	0.2	0.2	0.0	0.2	0.2	0.0	0.2	0.2
16	0.2	0.8	1.0	1.0	0.0	1.0	0.0	0.8	1.0	0.2	0.2	0.4
17	1.0	0.0	1.0	0.0	0.2	0.2	0.0	0.2	0.2	0.0	0.0	0.0
18	0.0	1.0	1.0	0.0	1.0	1.0	0.0	0.2	0.2	0.0	1.0	1.0
19	1.0	0.0	1.0	0.2	0.0	0.2	1.0	0.0	1.0	0.2	0.0	0.2
20	0.0	0.2	0.2	1.0	0.0	1.0	0.0	0.2	0.2	0.0	0.2	0.2
TS*	7.2	8.4	15.6	5.2	7.6	12.8	5.8	7.6	13.4	2.0	6.0	8.0

*Total Score

TABLE XXIII
INDIVIDUAL ADOPTION SCORES FOR EACH RECOMMENDED
TECHNIQUE IN THE MANAGEMENT ACCOUNTING COURSE

No.	Recommended Technique											
	ASp	ASs ¹	ASt	ASp	ASs ²	ASt	ASp	ASs ³	ASt	ASp	ASs ⁴	ASt
1	0.6	0.4	1.0	0.6	0.4	1.0	1.0	0.0	1.0	1.0	0.0	1.0
2	0.0	1.0	1.0	0.0	0.2	0.2	0.0	0.4	0.4	0.0	0.4	0.4
3	1.0	0.0	1.0	0.2	0.8	1.0	1.0	0.0	1.0	0.2	0.2	0.4
4	0.0	1.0	1.0	0.0	0.8	0.8	0.0	1.0	1.0	0.0	0.2	0.2
5	1.0	0.0	1.0	0.4	0.6	1.0	1.0	0.0	1.0	1.0	0.0	1.0
6	0.0	0.4	0.4	0.0	0.4	0.4	0.0	0.2	0.2	0.0	1.0	1.0
7	1.0	0.0	1.0	0.2	0.0	0.2	0.2	0.0	0.2	1.0	0.0	1.0
8	0.0	0.4	0.4	0.0	0.2	0.2	0.0	0.4	0.4	0.0	0.4	0.4
9	0.2	0.8	1.0	0.2	0.8	1.0	0.2	0.8	1.0	0.0	1.0	1.0
10	0.0	0.2	0.2	0.0	0.4	0.4	0.0	0.2	0.2	0.0	0.2	0.2
11	0.0	0.2	0.2	0.0	0.2	0.2	0.0	0.8	0.8	0.0	0.8	0.8
12	0.2	0.8	1.0	0.0	1.0	1.0	0.2	0.8	1.0	0.2	0.8	1.0
13	0.0	0.2	0.2	0.0	0.2	0.2	0.0	0.2	0.2	0.0	0.2	0.2
14	0.0	0.4	0.4	0.0	0.4	0.4	0.0	0.2	0.2	0.0	0.0	0.0
15	0.2	0.8	1.0	0.2	0.8	1.0	0.0	0.4	0.4	0.2	0.8	1.0
16	0.0	0.2	0.2	0.0	0.2	0.2	0.0	0.2	0.2	0.0	0.2	0.2
17	0.0	0.2	0.2	0.0	0.2	0.2	0.0	0.2	0.2	0.0	0.4	0.4
18	0.0	0.4	0.4	0.0	0.4	0.4	0.0	0.4	0.4	0.0	0.4	0.4
19	0.2	0.4	0.6	0.2	0.4	0.6	0.2	0.8	1.0	0.0	1.0	1.0
TS*	4.4	7.8	12.2	2.0	8.4	10.4	3.8	7.0	10.8	3.6	8.0	11.6

*Total Score

TABLE XXIII (continued)

No.	Recommended Technique											
	ASp	ASs ⁵	ASt	ASp	ASs ⁶	ASt	ASp	ASs ⁷	ASt	ASp	ASs ⁸	ASt
1	0.2	0.8	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0
2	0.0	0.4	0.4	0.0	0.4	0.4	0.0	0.4	0.4	0.0	1.0	1.0
3	0.2	0.0	0.2	0.2	0.4	0.6	0.2	0.4	0.6	0.2	0.4	0.6
4	0.0	1.0	1.0	0.0	0.2	0.2	0.0	0.2	0.2	0.0	0.8	0.8
5	0.0	0.2	0.2	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0
6	0.0	0.2	0.2	0.0	0.2	0.2	0.0	0.2	0.2	0.0	0.2	0.2
7	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0
8	0.0	0.2	0.2	0.0	0.2	0.2	0.0	0.2	0.2	0.0	1.0	1.0
9	0.0	1.0	1.0	0.0	0.6	0.6	0.0	0.4	0.4	0.0	1.0	1.0
10	0.0	0.2	0.2	0.2	0.8	1.0	0.2	0.0	0.2	0.0	0.2	0.2
11	0.2	0.2	0.4	0.0	0.4	0.4	0.0	0.0	0.0	0.0	1.0	1.0
12	0.0	0.6	0.6	0.2	0.8	1.0	0.2	0.8	1.0	0.0	0.4	0.4
13	0.0	0.2	0.2	0.0	0.2	0.2	0.0	0.2	0.2	0.0	0.2	0.2
14	0.0	1.0	1.0	0.0	1.0	1.0	0.0	0.2	0.2	0.0	0.2	0.2
15	0.0	0.2	0.2	0.0	0.2	0.2	0.0	0.2	0.2	0.4	0.6	1.0
16	0.0	0.2	0.2	0.0	0.2	0.2	0.0	0.2	0.2	0.0	0.2	0.2
17	0.0	0.8	0.8	0.0	0.2	0.2	0.0	0.2	0.2	0.0	0.2	0.2
18	0.0	0.4	0.4	0.0	0.4	0.4	0.0	0.4	0.4	0.0	0.4	0.4
19	0.2	0.6	0.8	0.0	0.4	0.4	0.0	0.4	0.4	0.0	1.0	1.0
TS*	1.8	8.2	10.0	3.6	6.6	10.2	3.6	4.4	8.0	3.6	8.8	12.4

*Total Score

TABLE XXIV

INDIVIDUAL ADOPTION SCORES FOR EACH RECOMMENDED TECHNIQUE
IN THE MARKETING FOR MANUFACTURES COURSE

No.	Recommended Technique											
	ASp	ASs ¹	ASt	ASp	ASs ²	ASt	ASp	ASs ³	ASt	ASp	ASs ⁴	ASt
1	0.0	0.4	0.4	0.4	0.6	1.0	0.0	0.2	0.2	0.0	0.2	0.2
2	0.2	0.8	1.0	0.0	1.0	1.0	0.0	0.2	0.2	0.0	0.2	0.2
3	0.0	0.2	0.2	0.0	0.2	0.2	0.0	0.2	0.2	0.0	0.2	0.2
4	1.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0
5	0.0	0.2	0.2	0.0	0.2	0.2	0.0	0.2	0.2	0.0	0.2	0.2
6	0.2	0.8	1.0	1.0	0.0	1.0	0.0	0.0	0.0	0.4	0.6	1.0
7	0.0	1.0	1.0	0.0	0.2	0.2	0.0	1.0	1.0	0.0	0.2	0.2
8	0.0	0.2	0.2	0.0	0.2	0.2	0.0	0.2	0.2	0.0	0.2	0.2
9	0.0	1.0	1.0	0.0	0.2	0.2	0.0	0.2	0.2	0.0	0.2	0.2
10	0.2	0.6	0.8	0.2	0.8	1.0	0.2	0.0	0.2	0.4	0.6	1.0
11	0.2	0.8	1.0	0.0	0.6	0.6	0.2	0.6	0.8	0.2	0.6	0.8
TS*	1.8	6.0	7.8	1.6	4.0	5.6	1.4	0.8	4.2	2.0	3.2	5.2

*Total Score

TABLE XXIV (continued)

No.	Recommended Technique											
	ASp	ASs ⁵	ASt	ASp	ASs ⁶	ASt	ASp	ASs ⁷	ASt	ASp	ASs ⁸	ASt
1	0.0	0.2	0.2	0.2	0.8	1.0	0.0	0.2	0.2	0.0	0.4	0.4
2	0.0	0.2	0.2	0.2	0.8	1.0	0.2	0.0	0.2	0.0	0.2	0.2
3	0.0	0.2	0.2	0.0	0.4	0.4	0.0	0.2	0.2	0.0	0.2	0.2
4	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	0.0	0.0
5	0.0	0.2	0.2	0.0	0.2	0.2	0.0	0.2	0.2	0.0	0.2	0.2
6	0.2	0.0	0.2	0.2	0.8	1.0	1.0	0.0	1.0	0.0	0.0	0.0
7	0.0	0.2	0.2	1.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0
8	0.0	0.2	0.2	0.0	0.2	0.2	0.0	0.2	0.2	0.0	0.2	0.2
9	0.0	0.2	0.2	0.0	0.2	0.2	0.0	0.2	0.2	0.4	0.4	0.8
10	0.2	0.8	1.0	0.2	0.2	0.4	0.4	0.0	0.4	0.4	0.0	0.4
11	0.0	1.0	1.0	0.2	0.4	0.6	0.2	0.2	0.4	0.2	0.2	0.4
TS*	1.4	3.2	4.6	3.0	4.0	7.0	2.8	2.2	5.0	1.0	2.8	4.8

*Total Score

TABLE XXV

INDIVIDUAL ATTITUDE SCORES FOR ALL RESPONDENTS IN ALL COURSES

Course	Personnel			Management Accounting			Marketing for Manufacturers		
Scale Respon- dent	Course	Instructor	Course Content	Course	Instructor	Course Content	Course	Instructor	Course Content
1	7	63	60	7	70	65	6	73	54
2	4	72	66	4	75	70	5	55	50
3	8	57	59	8	60	57	7	75	69
4	7	75	68	4	40	57	7	66	53
5	7	69	68	5	69	60	6	72	59
6	7	31	46	6	59	54	5	64	73
7	5	57	58	5	69	56	4	75	62
8	4	70	71	6	71	48	7	66	59
9	5	60	60	5	68	57	6	75	66
10	6	60	60	5	62	57	5	68	61
11	5	69	69	12	59	50	5	63	64
12	5	73	68	1	68	67			
13	6	71	65	12	57	49			
14	8	53	46	7	68	51			
15	7	61	56	5	69	65			
16	7	65	59	5	62	52			
17	8	56	40	9	70	40			
18	5	75	58	6	69	55			
19	6	56	59	5	63	64			
20	6	74	74						
MEANS	6	63	61	6	65	57	6	68	61
GRAND MEANS	6	65	59						