

**AN INVESTIGATION OF CONSUMER KNOWLEDGE, ATTITUDES AND BEHAVIOUR
OF QUEBEC ENGLISH PUBLIC CEPEP STUDENTS AS A BASIS FOR
CONSUMER EDUCATION CURRICULUM DEVELOPMENT**

by

Betty Stafford Smith

A thesis submitted to
the Faculty of Graduate Studies and Research
in partial fulfillment of the requirements for
the degree of Doctor of Philosophy.

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Department of Secondary Education,
McGill University, Montréal, Canada.

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PLANNING CONSUMER EDUCATION: A STUDY OF SELECTED QUEBEC CEGEP STUDENTS

ABSTRACT

The consumer knowledge, attitudes and behaviour of a probability sample of English public CEGEP (Grades XII and XIII) students in the province of Quebec is investigated to provide a basis for the development of consumer education curricula. Results indicate that consumer knowledge and/or self assessment is low in the area of personal finances, credit usage and consumer protection. Language and sex are significantly associated with consumer knowledge scores; lower scores are more likely if a language other than French or English was spoken in the childhood home, and if the student is female. Previous courses taken with consumer related content significantly improved consumer knowledge scores. Respondents are aware of their level of consumer knowledge based on self assessment and knowledge scores obtained. Generally, respondents judge school and the family as the most useful sources of consumer knowledge; the contribution of the family is not valued highly by respondents who spoke a language other than French or English at home. Support for courses in consumer education is almost unanimous.

RÉSUMÉ

Cette étude rapporte un sondage sur les connaissances, l'attitude et le comportement d'un échantillonnage aléatoire d'étudiants des CEGEPs publics anglais du Québec en vue de formuler un programme d'éducation du consommateur. Les connaissances et l'évaluation personnelle des connaissances sont faibles sur les sujets suivants: la finance personnelle, l'usage du crédit et la protection du consommateur. La langue et le sexe sont associés de manière significative avec le nombre de réponses justes: le nombre de points obtenus étant moins élevé chez les sujets féminins et chez ceux dont la langue maternelle est autre que le français ou l'anglais. Les sujets ayant suivi des cours touchant à l'éducation du consommateur obtiennent de meilleurs résultats. Les sujets sont bon juges de leur niveau de connaissances, si on compare leur propre évaluation aux résultats obtenus. En général, les sujets considèrent que l'école et la famille sont les meilleures sources de connaissances, quoique les sujets de langue autre que le français et l'anglais n'accordent pas autant d'importance au rôle de la famille. Les cours en éducation du consommateur sont considérés comme désirables presque à l'unanimité.

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My gratitude is extended to Marilyn Rigelhof for painstakingly proof reading my thesis, and Elizabeth Jennaway Eaman for her support and interest which has led to the research presently being duplicated using an equivalent sample from the French CEGEP population.

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B.S.S.

CLAIMS TO ORIGINALITY

No previous survey has been conducted to investigate the consumer knowledge, attitudes and behaviour of the English CEGEP population in Quebec. A search of the literature in the public domain in Canada and the United States did not reveal any studies with similar research objectives, that is to investigate a target population as a basis for introducing consumer education into the public school curriculum.

In Canada, and particularly in the province of Quebec, the needs in public education are substantially influenced by the nature of the population. Quebec is a multi-cultural society, with a substantial first or second generation immigrant population. Students enrolled in English public CEGEPs are taught in English, however the language at home can be English, French or of the students' country of origin. Therefore, the research is unique to such circumstances and necessary if curriculum development is to be cognizant of the needs of the society.

The Quebec questionnaire was designed to determine the general level of knowledge, attitudes and behaviour concerning selected topics in consumer education. A useful source was found in an extensive study of 17 year-olds conducted by the Education Commission of the States, Denver, Colorado in 1978. A large set of items was developed in the United States study that could be used by others to assess or aid planning of consumer education programs. The survey questionnaire developed for the research for this thesis was able to select and adapt some of these well tested items for use in Quebec.

Using the results obtained, the researcher has developed a short questionnaire which can be used to classify future CEGEP students who are disadvantaged concerning consumer knowledge, or those students who are capable of benefiting from an enriched consumer education program.

The investigation is opportune because of recent developments in research in the field, and an increasing recognition of the importance of consumer education. Some examples of this recognition are:

- Level II (Grade VIII) Home Economics, which is now a compulsory course in Quebec, emphasizes the consumer education component.

- the development of new approaches and classifications for consumer education content has provided guidelines for curriculum development.

- the European Bureau of Consumer Organizations, with representation from the ten member states of the European Economic Community, reports considerable support for consumer education in member countries and therefore recommends the adoption of consumer education programs in the schools. (CERN, 1982)

- the United Nations, through the Social and Economic Council, started consultations with member countries in 1982 which culminated in the initial draft of Consumer Protection Guidelines released in April, 1985. The draft includes a statement of general principles and guidelines in which the provision of consumer education is put forward as a legitimate need in all member countries. The United Nations recommends that consumer education become an integral part of the basic curriculum of the educational system.

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CHAPTER I

INTRODUCTION

The object of this research is to investigate the knowledge, attitudes and behaviour concerning consumer education of a random sample of students attending English public Collèges d'enseignement général et professionnel (CEGEP) in Quebec. The English public CEGEP population is a minority group within the Quebec CEGEP system. For this reason, the study is restricted in its scope and forms a foundation for a further study within the French CEGEP sector. When the investigation of a sample population of the French CEGEPs is completed, the results from these two studies will facilitate planning in curriculum development in consumer education at the CEGEP level.

The research has been motivated by social, economic and technological events which, though on-going for more than a century, have accelerated in the past three decades.

This chapter will include an overview of the philosophy and the circumstances which have generated the interest to incorporate consumer education into the school curriculum, and describe the specific objectives and purpose of this research. Since no studies with similar research objectives were found in the public domain, the literature reviewed in the second chapter has focussed on other studies which have influenced the research undertaken and some of the conclusions drawn. This non-traditional approach is described further in the introduction

to the review of literature. The chapter on methodology describes the methods and techniques used to conduct the investigation. A section is included to explain the Quebec education system in order to facilitate the reader's understanding of specific circumstances which affect curriculum planning in the English public CEGEPs.

The chapter on results and analysis is a report on the data collected and the results obtained using specified statistical procedures. The data obtained is presented without prejudice and without discussion or opinion. Some further results are presented in the Appendices in order to simplify the format of the thesis. The discussion given in Chapter V focusses on observations and interpretations of the data and discussion of specific items of interest. Emphasis is given to those results which may be of value in planning the introduction of a consumer education program in the Quebec CEGEPs. The significance of sex and language as an indicator of consumer knowledge is important and educators should be aware of such factors. However politically it is inexpedient to use these characteristics pedagogically to identify those who are disadvantaged, and less controversial methods are used based on performance rather than independent characteristics. The final chapter briefly summarizes major findings and the conclusions reached by the researcher.

Justification and Rationale

The structure of society and the marketplace has changed from being predominantly rural and relatively simple to predominantly urban.

This urban society is significantly more dependent on economic and technological influences and less immediately controlled by personal decisions and actions. The family unit has shrunk from the extended family of the rural community to the nuclear family typical of urban life. There is also a considerable increase in industrialized countries in the proportion of women in the workforce, one parent families and individuals choosing to live alone.

These fundamental changes in our society have affected the abilities required by each individual or family unit to function effectively within the society. The need for consumer education appears implicit in the new environment. Economic democracy and other factors such as protection of the environment, conservation and pollution which contribute to a nation's quality of life are all dependent on each individual's awareness and knowledge of the interaction between consumers, producers and government.

The changes in our social, economic and technological environment are the most significant to occur since the onset of the industrial revolution three centuries ago. Alvin Toffler in his book "The Third Wave" (1980) contends that the new civilization with new lifestyles, technologies and values, which is replacing the industrial society, needs new classifications and concepts. Toffler's concepts of prosumers and consumers is interesting and relevant in the context of considering the historical background and present need for consumer education.

Historical Background and Development

In the agricultural and preindustrial society, Toffler's First Wave, most members of society consumed what they produced: Toffler's **prosumers**. The industrial revolution, heralding Toffler's Second Wave, separated society into specialized roles as producers providing for other consumers: production was no longer for use but for exchange. Toffler's Third Wave, often referred to as the post-industrial society or the information society, has opened up the economy to include the **production for use** aspect once more. A member of society is inevitably both a **prosumer** and a **consumer**. The prosumer, producing for own use, is recognizable in Canada today in the direct, "contribution without pay" part of the economic system i.e. the do-it-yourself movement. The passive consumer becomes an active prosumer: using self-service gas pumps, the self-service supermarket and electronic banking services as part of typical marketplace behaviour.

In the last two or three decades, production of goods and ~~services for~~ consumption has been revolutionized by new technology and has created a complexity of products and a distribution system beyond the imagination of previous generations. Rational decision-making for the individual demands skills to seek out sufficient information; also, the knowledge and the ability to make effective use of this information as a guide in the marketplace. At the same time, the consumer's environment has been changing due to such factors as the economic climate: the prevalence of credit usage, the effects of inflation, fluctuating interest rates, high energy costs, higher levels of unemployment, declining living

standards and growing ecological concerns. Members of society have increased expectations of high quality and performance for goods and services whilst being more critical and sceptical of business, industry and government. (Brown, M., 1985; Brown, K., 1984, Bannister and Monsma, 1982)

Consumer education is a prerequisite for individuals if they wish or are expected to participate and contribute to the improvement of political and economic planning. Consumer literacy is not only necessary to aid the well-being and coping skills, but also to promote a thriving economic, social and political democracy.

The Future

Toffler (1983: 98-9) suggests that the sheer weight of information, and the diversity and speed of change in the environment will necessitate a new framework for decision-making: one that moves away from centralized to more immediate, localized decisions. Much of the planning will need co-operation and liaison between citizens as consumers, and planning agencies at the local, national and transnational level. Toffler predicts the need for "resourceful, educated, independent, risk-taking, creative workers" for a Third Wave economy to function successfully. The concepts encompassed by consumer education are a desirable prerequisite for a society in which local or individual autonomy is growing and inevitable. Naisbitt (1982) also writes of the rise of the self-help movement: a large and growing movement away from central and institutional government to personal, neighbourhood and community self-

help. Government organizations are considered too remote and inaccessible for the immediate problems of everyday life.

People everywhere, especially the poor who have relied on government in the past, are acting en masse to secure food and supplies, to build and repair adequate housing, to conserve energy, to increase community and consumer activism.

(Naisbitt, 1982: 151).

Naisbitt is an American, writing of developments in his country, but these trends can be seen in varying degrees in all parts of the world. As our civilization moves from the industrial to the post-industrial society, the education offered has to adjust to the changing needs of people in the workplace, the marketplace and the political, social and economic environment.

Education for the Consumer

Consumer education has received varied support and interest depending on economic conditions, social influences and educational philosophies. First appearing in home economics courses for the wife and mother-to-be, development of separate courses was generated by the needs for frugal life skills during the depression years of the thirties (Bymers, 1983). A concern for consumer protection emerged in the early sixties, a focus given by leading consumer advocates such as the American, Ralph Nader who attracted world wide attention. Development that has occurred in North America has been paralleled in many other areas of the world and some progress towards improving consumer education has been made.

Since 1980 a new orientation has gathered academic support. An example of this new approach is a classification of concepts and a conceptual framework published as a monograph by Bannister and Monsma (1982). The monograph provides a clear, succinct definition of consumer education and a conceptual framework which has striven to transcend social, cultural and economic differences. Consumer education had tended to appear to be more concerned with the middle-class consumer in western society, possibly as a result of the impetus given to the consumer movement by this better educated and more articulate group in the 1960's, which influenced consumer education content.

Consumer education is now, more than ever before, recognized as a basic requirement by political agencies at provincial, national and international levels.

The Field of Study

Bannister and Monsma (1982: 5) consider that "consumer education is entering a significant period of growth and change in the 1980's". This change is marked by an increasing emphasis on the role of the consumer-citizen in social, political and economic decisions, rather than a more exclusive focus on money management and buymanship which has been customary in consumer education.

Consumer education is by nature interdisciplinary drawing on content shared by economics, mathematics, sociology, psychology, political

science, marketing, business education and home economics. Bannister and Monsma (1982: 6) consider the unique element in comparing consumer education to other fields of study is the "focus on the consumer decisions which relate to interactions between consumers and producers in the economic system".

Kroll and Hunt (1980: 284), in a conceptual analysis of the emerging discipline, conclude that consumer interest study can be appropriately titled consumer science. Consumer science is presently at the interdisciplinary stage with the potential of emerging as a distinct unidiscipline. The unique focus of the discipline on consumer interactions is conducive to improving performance of individual consumers, consumer representatives and consumer educators. Kroll and Hunt (1980: 276-77) analyze and classify the scope of the field using the basic/applied, macro/micro, private/public (BAMMPP) model.

Political Recognition of Consumer Education.

The growing recognition of the need for consumer education expressed by consumer groups, politicians and educators is strengthened and assisted by the development of the supporting discipline and a clearer consensus of consumer education content.

In the United States of America, in 1962, President J. F. Kennedy introduced a Consumer Bill of Rights. President Ford subsequently added the right to consumer education. The United States government has since given support to further consumer programs and education. Green, Beck,

and Creech (1982) draw attention to the fact that over 40 State boards of Education or Legislatures in the United States encourage or require consumer education content.

In Europe (C.E.R.N., 1982: 2-3), the European Bureau of Consumer Organizations encourages the development of consumer education programs in schools in the European Economic Community countries, and further reports a high level of support for consumer education in the nine member countries.

In Canada consumer interest activity of particular import occurred in the late 60's and early 70's, notably with the establishment of the Federal Department of Consumer and Corporate Affairs in 1967. The Quebec Ministry of Education included the concept of consumer education as part of the compulsory Secondary II Home Economics Curriculum introduced over the last few years in Quebec High schools (Gouvernement du Quebec, 1981). Seven other Canadian provinces offer consumer studies in some form at the senior high school level (Peterat, 1984).

In April, 1985, the United Nations released the initial draft of **Consumer Protection Guidelines** produced after consultation with member countries and incorporating recommendations into a working document. Further input and modifications suggested by member countries, and included in the release, show considerable general agreement with objectives, general principles and guidelines recommendations. One of the "legitimate" needs defined as part of the general principles is consumer education (United Nations release, April 1985: 599). The

guidelines state that consumer education " - - - should, where appropriate, become an integral part of the basic curriculum of the educational system - - -".

Similarly the International Organization of Consumers Unions (IOCU) "believes that consumer education should be an integral part of the formal education system, from the kindergarten to university" (Hellman-Tuiter, 1985:1). However despite considerable interest shown by many countries to include consumer education in the school curriculum, a survey, conducted by IOCU in 1980 among member organizations in some 50 countries, seldom found consumer education as part of formal education.

Objectives of Investigation and Research Hypotheses

There is presently no formal, post-secondary program in consumer education at the CEGEP level in the province of Quebec. If an effective program is to be introduced it is advantageous to seek out more information about the target population in order to answer the following questions:

What is the level of knowledge and expertise of CEGEP students in this area?

Is any relevant content taught in other courses as measured by the effect of such courses on respondents' knowledge scores in the survey questionnaire?

What type of courses presently contribute to consumer knowledge?

Do respondents acquire any knowledge or expertise from sources other than school?

Is the need for this subject validated by the level of achievement, and is a need perceived by respondents in their own assessment of their abilities?

Are there any respondents who, for whatever reason, are disadvantaged in their knowledge and abilities relative to others? If so, can these reasons be identified?

Do CEGEP students consider there is a need for consumer education in school as part of their academic program?

These observations can assist in examining the research hypothesis that the student's level of consumer knowledge is affected by the type and quality of the sources of consumer information available to the student.

Students who have not taken formal courses which include consumer information, and students whose social environment diminishes the availability of other informal sources of information, are likely to obtain lower scores on a test for consumer knowledge than others who have taken such courses and whose social background is more able to add to the level of consumer knowledge.

Statement of purpose

The long term overall objective is to provide a basic study to assist in the introduction of a formal program in consumer education in post-secondary education in Quebec. The objectives involved in pursuing this goal are summarized as:

1. To assess the knowledge, attitudes and behaviour of English public CEGEP students concerning consumer education using a sample survey.
2. To describe the characteristics of the English public CEGEP population and identify factors which can be shown to affect knowledge, attitudes and behaviour of the population.
3. To develop an instrument capable of simple rapid assessment of the level of knowledge of the CEGEP population.

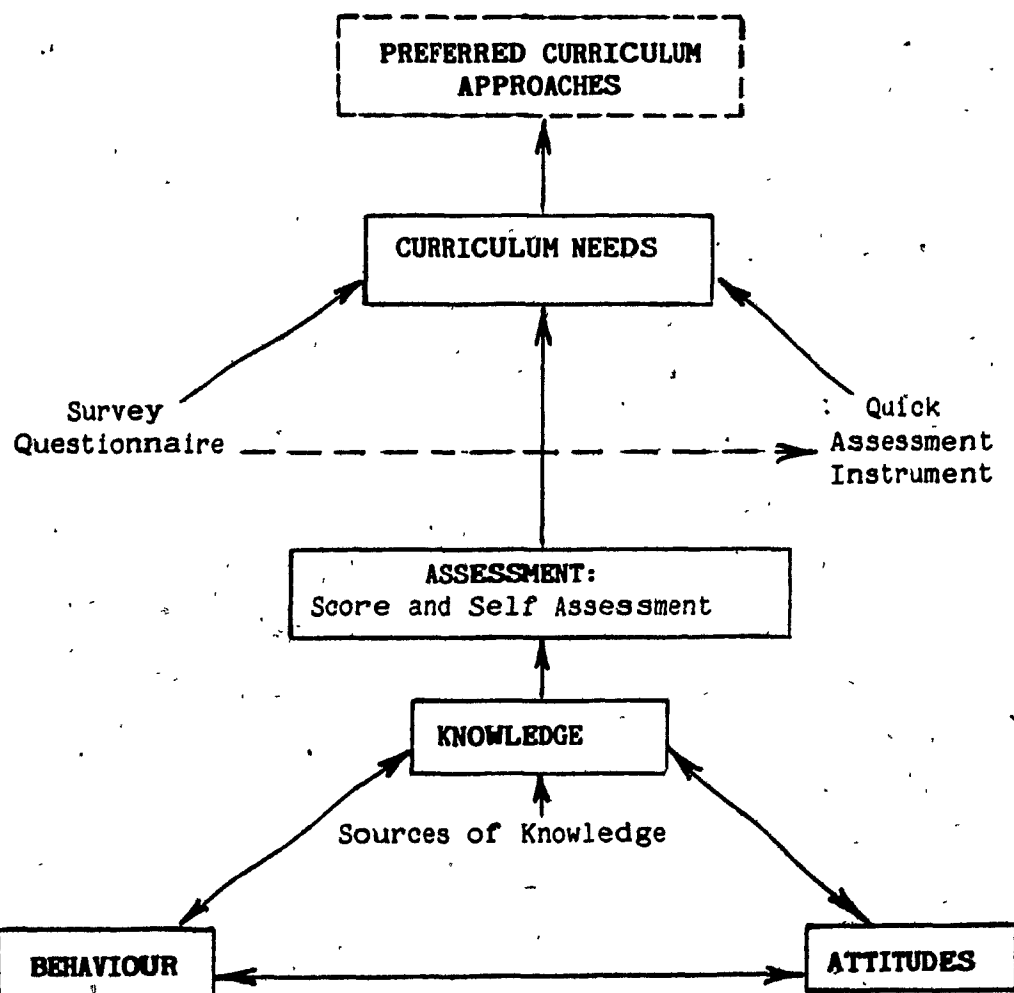
The English CEGEP population forms a minority group within the Quebec CEGEP system. Following an investigation of an equivalent group of the French CEGEPs, findings will be related to future plans for curriculum content and accepted curricular approaches.

The Research Model

The research model (figure 1) is used only to illustrate possible influences and interrelationships which may have an effect on curriculum needs. The model was created specifically for this research study to represent schematically the various factors investigated.

Since no previous studies had been undertaken, and consumer education had not previously existed as part of the education curriculum, the study encompasses a comprehensive approach to investigate the target population.

Figure 1
Research model of the investigation of knowledge, attitudes and behaviour of students attending English public CEGEPs in Quebec



CHAPTER II

REVIEW OF LITERATURE

Introduction

A thorough search of literature in the public domain produced no studies with similar research objectives. These objectives are to investigate present consumer knowledge, attitudes and behaviour of a target population as a basis for planning the introduction of a consumer education curriculum. A recent publication, Promoting Consumer Education in Schools (Hellman-Tuiter, 1985) reports a "dearth of material" on how to integrate consumer education into the school curriculum.

Since this review of literature cannot examine research sharing comparable objectives, literature is examined which will facilitate the understanding of the problems involved, and the discussion and conclusions that may be drawn from the study. Previous studies are examined from the following approaches:

- A. Assessment of knowledge, attitudes and behaviour in consumer education.

B. Evaluation research of consumer education courses including teacher competency and the specific academic background of teachers of consumer education.

C. Assessment of attitudes.

D. Consumer education, its content, and the emerging discipline: consumer science.

E. Types of curriculum approach.

The orientation of the new discipline, consumer science is examined in this literature review because the last few years have marked a period of significant development in this field of study. Political recognition and support is being demonstrated for the need for consumer education in such documents as the United Nations Guidelines (1985). Academics in this field come from diverse academic backgrounds, therefore it is important to reach a consensus to define the concepts, scope, role and profile of consumer science in order to achieve a coordinated effort in research, curriculum development and teacher competency. The new framework and classifications are an important part of this research that has the long term objectives of introducing a formal program in consumer education in Quebec CEGEP's.

A. Consumer Education: Assessing Knowledge, Attitudes and Behaviour

A nationwide sample survey was conducted in the United States by the Institute for the National Assessment of Educational Progress (1978) to assess consumer skills and attitudes among 17-year old high school students in the United States. The intent was to provide a set of items which would enable other interested groups to assess levels of consumer knowledge and aid in the development of consumer education programs. All the results reported are limited to percentage responses for single items and do not give students' individual scores (N.A.E.P., 1979). Results are given for all the 17-year-olds in the national sample and also for subpopulations by sex, for 17-year-old students in the 11th grade, and for 17-year-old 11th graders by sex. The published reports of the survey include a collection of consumer items covering a range of consumer topics (Appendix A), which were used in the study.

In Canada, a pilot project was conducted by the Ministry of Consumer and Commercial Relations, Ontario (1977) to determine the effects of a consumer education program on a whole community. Questionnaires were administered to the public to investigate knowledge of consumer protection legislation, sources of consumer information, purchasing behaviour, attitudes and consumer relations with business, and attitudes towards government and the school system and their responsibilities concerning consumer education.

The project also included a separate questionnaire survey of all Grade X high school students in the community to investigate general consumer

knowledge and awareness of consumer laws, shopping and budgeting habits, and attitudes towards credit, business and consumer education. Ninety-four percent of respondents spoke English in the home, 30 percent spoke French and 9 percent spoke another language; no information was given to indicate the language most frequently spoken in the home, although one of the high schools in the study was French-speaking. Results showed that student confidence in their ability to obtain satisfaction if they had a purchasing problem was not backed by their consumer knowledge. Questions on shopping habits were about specific local conditions and inappropriate to this review. Family budget records were kept by about a third of students' families, while a third did not and a third did not know if their family kept written records. Students were judged in general to be "fairly realistic in their attitude toward borrowing" (Ontario Ministry of Consumer and Business Relations, 1977: 54) though 43 percent of the students said they did not know how to comparison shop for credit. Attitudes towards business varied from general satisfaction for the provision of goods and services to dissatisfaction generally concerning value for money, consumer relations and honesty. A general lack of knowledge was also shown by students about the amount of profit made by businesses.

The research findings of the project indicate:

the overwhelming majority of adults and students feel that consumer education should be taught in the schools. Educators should act on this response, and make a greater effort to develop and offer courses which will prepare students to make intelligent consumer decisions".

Ontario Ministry of Consumer and Commercial Relations
1977, pp.4-5

B. Evaluation Research in Consumer Education

Evaluation research can be used as a summative method to judge the benefits and effectiveness of consumer education programs. Several studies have been carried out to determine whether courses in consumer education can improve student competencies and also to examine the texts and the teachers involved (Herrmann, 1982; Langrehr, 1979; Hawkins, 1977; Lloyd, 1983; Garman, 1979; Lofgren and Suzuki, 1979). The problems found in this type of research are threefold:

1. The content included in consumer education courses offered.
2. The nature of the sample i.e. are those being assessed, who have not taken courses in consumer education, comparable in ability to those who have taken courses?
3. The competency of the teachers and the effect of their academic background.

1. Consumer Education Content. Herrmann (1982), in his study of the content of high school texts on consumer education, 1938 to 1978, concluded that content is neither comprehensive nor adequate and that changing needs of the social and economic systems have not been met. Such factors as i) a preference for the more easily taught concrete topics such as "buymanship" information, and ii) periods when controversial topics have been avoided, have resulted in slower evolution in some areas e.g. public goods. He considered the problem

of a "lack of creativity, scholarship and leadership in the field" and the lack of a developed knowledge base as the most important reasons for the many inadequacies and omissions of consumer education texts.

2. Evaluation: Comparability of the Samples. Langrehr (1979) investigated the effect of consumer education on students' competencies and attitudes in a study completed in 1975 using students from Illinois and Alabama. None of the students from Alabama who formed the control group had taken consumer education or economics courses. His research considered the effect of the specific type of course offered on consumer competency and attitudes to business. A course with specific consumer education objectives was found to improve competency and develop more positive attitudes to business. He concluded that economics courses are not a substitute for consumer courses since no significant difference in competency was found between those who had taken economics courses and those who had taken neither economics nor consumer courses. Hawkins (1977) did not find that consumer courses significantly affected competency of high school graduates concerning money management and purchasing behaviour.

Langrehr (1979) acknowledged previous studies discounting the significant effect of having taken relevant courses, and points out factors which may account for the discrepancies in results obtained in other studies. For example, when consumer education is not compulsory, there may be a tendency for a restricted population, often of less able students to be taking consumer education. He also points to the fact

that few studies have controlled for such factors as previous relevant courses or level of intelligence. This could be a significant factor especially if exacerbated by the possibility that pre-university programs allow few options to the more able students intending to continue their education.

Lloyd (1983: 163-5), addressing education policy-makers, emphasized the inadequacy of much of the research attempts to evaluate consumer education programs "both as a weakness in evaluating program effectiveness, and as a drawback in promoting the value of expanded programs".

3. Competency of Teaching in Consumer Education. Garman (1979) reported an average score of below 60% on a Test of Consumer Competencies administered in a nationwide assessment of prospective teachers in the United States of America, which "does not seem to indicate a high level of comprehension of cognitive consumer education concepts." He noted that those prospective teachers who had taken any consumer related courses scored significantly higher than those who had not.

Lofgren and Suzuki (1979) investigated the competency of consumer education teachers in secondary schools in Oregon. A comparison is made between teachers of consumer education whose academic backgrounds varied from home economics, business education, social studies to mathematics (Table 1).

Table 1

Consumer education competency scores achieved by teachers
of consumer education with different academic backgrounds

Subject-Matter Speciality	Total Test Mean Score (max. score 50)
Home Economics (50)	38.85
Social Studies (38)	33.45
Business Education (52)	32.62
Mathematics (45)	32.44
All Teachers (185)	34.34

Adapted from Table 1, 13.2.384. Lofgren et al. 1979.

They found no significant difference between the scores obtained by teachers in different subject areas and concluded that,

The data seem to suggest that teachers in home economics, business education, social studies and mathematics are equally prepared to teach comprehensive courses in consumer education/economics/personal finance even though certain deficiencies in preparation exist.

(Lofgren et al. 1979: 383)

The contribution of research in recent years has opened up a new approach to consumer education; notably the work of Bannister and Monsma (1982) in providing a new classification and framework of concepts, and also Kroll and Hunt (1980) in their conceptual analysis and useful discussion of the focus of an emerging discipline. It is difficult to assess present competencies for teaching consumer education, until the new approaches defined by these authors affect the curriculum content and the assessment instruments.

C. The Effect of Consumer Education on Attitudes.

Summers (1970:2) contends that an "attitude has a directional quality", and that a tendency to behave in a certain way may be indicated by an attitude expressed in a response. Fishbein and Ajzen (1975:382) whilst recognizing the danger in assuming that an expressed attitude results in corresponding behaviour, consider that accurate prediction of behaviour can be appropriately measured by an expressed intent.

Stone et al. (undated publication) developed a theory of attitudes and events which they suggested can be adapted as a conceptual guide in ~~other~~ studies. Stone et al. emphasize that attitudes are linked with human behaviour; the behaviour or response can be expressed as an answer, written or oral to a question. The survey investigated attitudes as a subset of behaviour using data based largely on responses to a survey questionnaire. Guttman contributed a definition of an attitude item:

An item belongs to the universe of attitude items if and only if its domain asks about behaviour in a
 [cognitive]
 [affective] modality towards an object, and its
 [instrumental]
 range is ordered from [very positive] to [very negative] towards that object.

(Stone et al.: 62)

This definition emphasizes two important factors:

- i. - an attitude has an ordered range of responses from very positive to very negative towards an object in question.
- ii. - attitudes though a subset of human behaviour can be differentiated from other kinds of human behaviour.

Langrehr (1979) draws attention to the fact that little research has been undertaken to explore student attitudes as affected by consumer education. The results of his research suggest that courses in consumer education had a positive effect on student attitudes towards business.

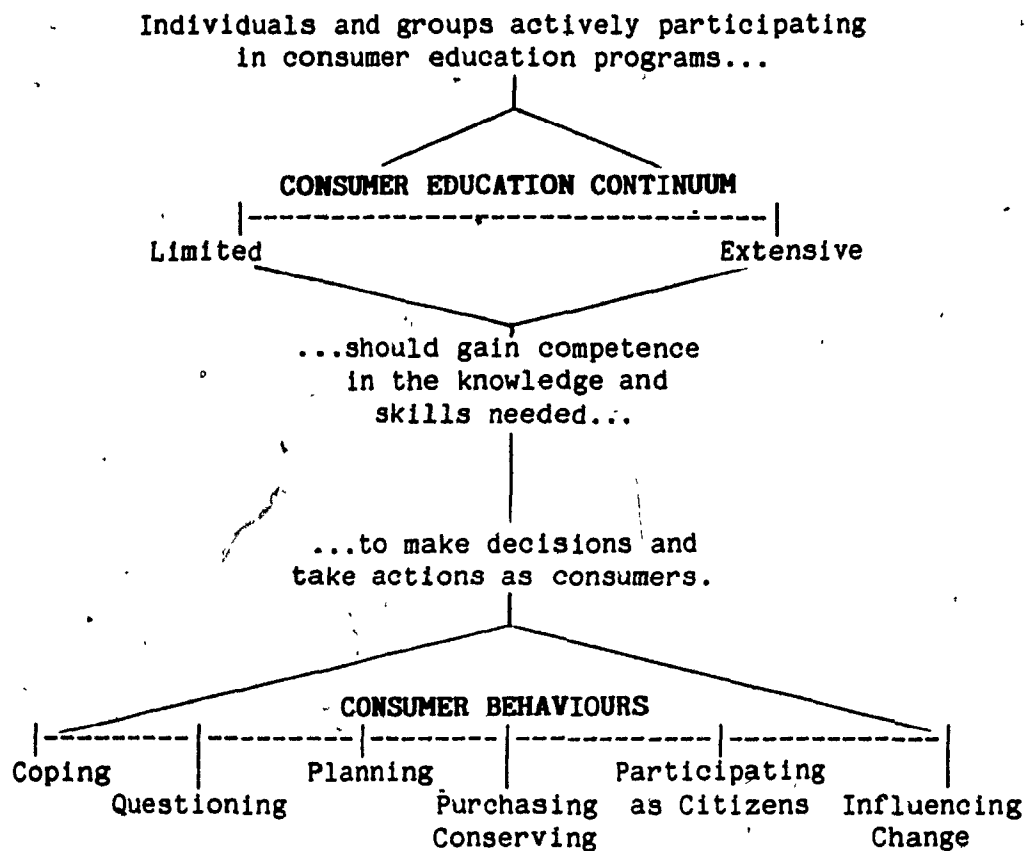
D. Consumer Education, its Content and the New Discipline: Consumer Science

Curriculum Needs. There is an historical and somewhat persistent emphasis on "buymanship" skills found in education materials (Willett 1979). Herrmann (1982) adds that within the concept of buymanship a major emphasis in consumer education texts has been placed on product choice. He suggests the reason for this may be simply the large body of information available and the ease of using such material in teaching rather than some of the more abstract concepts.

Bannister and Monsma (1982) developed a comprehensive guide which provides a framework for content for program planning and curriculum development. This framework has been welcomed by other academics (Bymers, 1983; Green et al., 1982) as a significant attempt to organize the concepts and the body of knowledge; it provides a tool to plan and standardize consumer education curriculum content. Bannister and Monsma (1982) contend that consumer needs are now and will continue to be in a broader range of consumer behaviour modes (1982). Consumer education could affect behaviour on a continuum as illustrated in figure 2.

Figure 2

Consumer education: potential impact on consumer behaviour



Source: adapted from Bannister & Monsma, 1982: 9. fig.2.
(by permission)

Bannister and Monsma's classification of concepts (Appendix B) is cited as a guide for consumer education content in the IOCU publication, *Promoting Consumer Education in Schools* (Hellman-Tuitert, 1985). Bannister and Monsma define consumer education as "the process of gaining the knowledge and skills needed in managing consumer resources and taking actions to influence the factors which affect consumer decisions" (1982:5). Their classification suggests three key concepts:

decision making, resource management and citizen participation. The key concepts may have up to three levels of sub-concepts with various cross references occurring between sub-concepts throughout the classification.

Hellman-Tuiter (1985) cites two other guides to consumer education content: one suggested by the Council of Europe (1981), and one published in Denmark which focusses on four aspects of consumer education (Jensen, 1980) (Appendix B). The Council of Europe guide is more subject oriented than that of Bannister and Monsma and specifies fourteen major content areas. Bannister and Monsma extract commonalities across subjects as concepts, for example: the political system as an external factor affecting consumer decisions under the key concept of decision making, compared to the Council of Europe guide in which no single topic focusses on the concept of the political system.

Jensen (1980) suggests that consumer education has four aspects on which to focus: the society, the producer, the consumer and policies. Consumer education can provide an understanding of the role of the consumer in society and also of the production system. Consumer education should also enable the consumer to acquire the necessary skills to function effectively and to recognize other influences, consumer motivations, consumer rights and responsibilities. The fourth focus on policies emphasizes questioning the way in which a consumer functions within society. Jensen encompasses the concerns for the consumer and notes the need to understand the producer/consumer relationship, acquire effective consumer skills and to explore consumer

behaviour and the influence of consumer actions. Jensen's approach to consumer education, though generalized, is less comprehensive and succinct than the classification of concepts developed by Bannister and Monsma.

Rice and Tucker (1986: 7-24), describing an ecosystems approach to family life management, demonstrate several parallels with the Bannister and Monsma model. The individual and the family are interdependent and furthermore they must participate in other ecosystems: the community, the nation and the world.

Paolucci, Hall, and Axinn (1977: v) also reflect the thrust of the Bannister and Monsma approach when they emphasize the importance of "principles and concepts which may be as applicable and meaningful in ten years as they are today".

Consumer Science. Two publications have contributed significantly to defining and organizing the body of knowledge of the discipline. Bannister and Monsma's classification of concepts in consumer education (1982) has been reviewed previously; the noteworthy contribution of the classification is its aim to provide universality of concepts which transcends social, cultural and economic differences. Kroll and Hunt (1980) in their conceptual analysis of an emerging discipline developed a model: the Basic/Applied; Macro/Micro; Private/Public, which provides an analysis and definition of the important elements of the field of study and further suggest that the term "consumer science" most adequately describes the new discipline which is emerging as a result of previous contributions from several disciplines.

Since 1982, several papers have been published (Kroll 1982; Monsma, 1983; Chenoweth, Elgsti and Stampfl, 1984; Morse, 1984) to address the problem of clarifying and defining the discipline of "consumer science". Chenoweth, Elgsti and Stampfl (1984), analyzed responses from program auditors in the field and suggest that there is agreement that the term consumer science is comprehensive, appropriate in covering the broad field of study and includes consumer economics, family economics and consumption. Kroll (1982) emphasizes the importance of clearly focusing the efforts of researchers, policy makers and teachers in the field. Gribschaw, Hayes and Swartzlander (1984) join those who endorse the Bannister and Monsma (1982) classification as fulfilling the need for well-defined comprehensive classification scheme which is required to assist in planning and practice in research and development.

Morse (1984) summarized participants' opinions expressed at a National Invitational Symposium: "Consumer Science in Institutions of Higher Education". He suggests that there is a distinct role for consumer science as a discipline. Other disciplines are required to contribute to consumer science content but are not congruent. Home economics is complementary in many aspects to consumer science, sharing the "Kroll focus and scope ... particularly ... consumer - consumption - family economics". He recommends that home economists should seek new leadership to strengthen their identification and support for consumer science for the mutual benefit of both.

E. Curriculum Approaches

Wong (1981) contends that consumer topics can be taught in high school through three different areas: business education, mathematics and home economics. She points out that consumer studies requires a facility to teach social and economic concepts, which are more appropriate to the academic training of teachers of business education and home economics rather than mathematics.

Pasch and Bannister (1982) based on independent studies of high school curriculum reform suggest that three curriculum approaches could prove to be relevant to future planning:

- cultivation of the intellect.
- interdisciplinary clusters of knowledge.
- the competency approach.

Pasch and Bannister consider that consumer education content can be adapted to each of these approaches. The first theme, the cultivation of the intellect, would be able to utilize a framework of disciplinary knowledge. The second approach of interdisciplinary clusters of knowledge can be satisfied since all consumer scientists recognize the interdisciplinary nature of the subject which draws on many other disciplines for content such as economics, political science, mathematics, sociology and psychology. The third theme of competency reflects the trend that teachers should be accountable for student performance. The emphasis of this last approach must be to present curriculum content in the form of performance objectives.

Green et al. (1982) summarized curriculum approaches to consumer education in three ways:

- a multidisciplinary team of teachers
- a single course and teacher
- integration into other courses

The multidisciplinary approach uses several teachers each with specialized knowledge who rotate between groups of students as part of a single course. The course is thus offered to a large body of students divided into groups, each of which at any given point in the course are taught a specialized aspect by one of the teachers.

A single course with one teacher responsible for all the content is probably the most common method of teaching consumer education. This approach is more dependent on the limits of the teacher's expertise, although there are a growing number of comprehensive guides to such courses in consumer education.

Integration into other courses of consumer education content requires effective administration and coordination to be successful. Green et al. (1982) summarize the general problem in providing consumer education as lack of pre-service training which in turn results from previous lack of clear identity of consumer programs in higher education.

Hellman-Tuitert (1985) examined three alternatives. Two of these alternatives are similar to those suggested by Green et al. (1982): as a

new subject area taught by a single specialist teacher, or integrated into several other subject areas. The third alternative suggested by Hellman-Tuitert examines the possibility of incorporating consumer education into one specific subject. The Canadian speech (IOCU, 1984) drew attention to the problem that this third alternative would restrict content to one aspect of consumer education, for example in social studies the mathematical skills required might not be covered. The incorporation of consumer education into home economics as in the Quebec secondary level 2 (grade VIII) course, a course which already draws on a number of other disciplines, was not addressed.

Various approaches are preferred and have been tried by different countries. Hellman-Tuitert (1985) notes that the choice of the method chosen to incorporate consumer education into a curriculum is often one of practicality rather than preference. Such factors as an overcrowded curriculum and a lack of qualified teachers may make it easier to incorporate consumer education into existing subjects. However, if consumer education is to avoid being fragmented and lack an overall approach or philosophy this multisubject approach has to be integrated into the curriculum with care, cooperation and planning by educators.

Conclusion

The limited number of previous studies found to be directly useful to the current research has necessitated a different approach to this review of literature. Literature has been reviewed to consider several

relevant approaches which may have an influence on the research objectives.

The content of the emerging discipline, consumer science is more clearly defined. This clarification of content of the emerging academic interest field can be a contributing factor to improving the competency of future consumer educators and the content of consumer education courses. Consumer education has received international attention which has resulted in an increased consensus on the concepts and objectives of consumer education.

CHAPTER III

METHODOLOGY

THE QUESTIONNAIRE

Introduction

The research method used to collect data on English public CEGEP students is a questionnaire survey (Appendix C). The questionnaire used in an United States survey (Education Commission of the States, 1978) was a source of items for the questionnaire used in the Quebec survey and therefore the background to its development is briefly described. Items which were used from the United States survey were modified for differences in culture, practice or legislation in Canada and Quebec. The population for the survey is defined, also the choice of sample size and sampling procedure used.

The section on the analysis of data includes a description of all the variables measured and categorizes them into four areas: population characteristics, consumer knowledge, self assessment of consumer knowledge and the contribution of specific sources, and attitudes and behaviour. A final section describes the objectives of the survey, the hypotheses examined and procedures and methods of analysis used.

The United States Survey

A computer search conducted through the McGill University Library using the Educational Resource Information Center (ERIC) produced several references associated with an extensive research program first initiated in 1975 by National Assessment of Educational Progress. In 1977 a series of questions was developed, as part of a nationwide assessment of basic life skills of 17-year-olds, to evaluate consumer skills specifically concerning personal finance and consumer protection.

Public concern and professional interest generated by the survey resulted in a more comprehensive survey of consumer skills of 17-year olds in 1978. Items included in this extensive study were developed and reviewed by 36 interested professionals with appropriate backgrounds in education, research, relevant content, consumer organizations and government. Over 100 items were developed, one item often consisted of a number of questions on the same subject. No respondents were given the entire questionnaire. A list of the topics covered, including an associated Math Assessment, is given in Appendix A.

Problems were encountered in developing questions in some areas such as consumer behaviour and economics, which according to the National Assessment of Educational Progress (NAEP), had never been assessed before. Comments included in the NAEP report (1978) concerning development and review of questionnaire items can be summarized into four areas. First there was a lack of previous experience in assessing

some areas, notably consumer behaviour. Also difficulties were experienced in developing pencil and paper instruments that assess respondents behaviour and/or their perception of the motivation and behaviour of others. Thirdly, the inevitability of overlapping of content between topics had to be accepted e.g. purchasing behaviour and consumer protection. Finally difficulties occurred with the level of reading and vocabulary.

Some decisions and revisions were made to resolve these problems. Every effort was made to simplify language except where language was intrinsic to the area e.g. installment contract, warranties etc. It was accepted that some questions could be concerned with concepts important in several consumer areas. Items concerning consumer behaviour were included to assess both the respondent's behaviour and recognition of other behaviour patterns. In the latter case, NAEP (1978:4) reports "the developers (of the questionnaire) included only those items where the correct responses were based on generally accepted research or consumer behaviour".

The Quebec Survey

The questionnaire used in the Quebec survey consists of 46 questions concerning consumer education plus questions about respondents' personal background. The questionnaire was modelled on the NAEP questionnaire and extensively modified to reflect Canadian and Quebec consumer law, and the research objectives. The NAEP set of items

covered a very wide range of topics (Appendix A) and totalled several hundred questions. The relatively small scale of the Quebec survey made it essential that each respondent should answer the same set of questions. The researcher chose to omit two subject areas completely: Basic Math Assessment and Energy. Questions for the remaining six sections were examined, selected and adapted in order to achieve a questionnaire appropriate in length which represented as adequately as possible the subject area. Since the long term objective of the research survey is to provide a framework for the introduction of a formal program in consumer education at the CEGEP level, some assumptions were made as to the possible content of an introductory course and the thrust of the questionnaire was directed at questions judged to be representative of key concepts in such a course.

The selected items (see questionnaire Appendix C) also reflect the key concepts used by Bannister and Monsma (1982) (Appendix B). Several concepts could be included in one question. A general analysis of question content classified the items according to Bannister and Monsma's key concepts.

1. Decision-Making: 24 items

Scored questions 1, 2, 3, 5, 6, 7, 8, 13, 16, 17, 18, 19, 20, 24, 35, 37, 36, 38

Unscored questions 4, 9, 10, 11, 12, 40, 41

2. Resource Management: 22 items

Scored questions 2, 5, 6, 8, 13, 14, 15, 21, 23, 24, 25, 26, 35, 36

Unscored questions 4, 9, 10, 11, 12, 42, 45

3. Citizen Participation: 15 items

Scored questions 13,14,15,27,28,30,31,32,33,34,35,36

Unscored questions 9,11,12,43,44

Some items can be categorized under more than one concept either because of the nature of the question or because there are several parts to the question covering more than one concept. For example, Question 21 is concerned with resource management (financial services) but can also be categorized under citizen participation (consumer protection and effective performance).

Early contacts with the English CEGEPs indicated that the questionnaire would need to be suitable for self administration and take about 45 minutes to complete. It is impossible for a questionnaire of this length to be a thorough analysis of respondent's knowledge, attitudes and behaviour concerning the many facets of family economics and consumer education, but it can provide a base for curriculum planning.

A pilot test of the questionnaire was completed using a class of 18 students enrolled in the Faculty of Agriculture at Macdonald College of McGill University. The average age of the students was 20 years, none was enrolled in the consumer services program offered within the faculty, or had prior knowledge of the questionnaire's content. The following day the students were asked to discuss, criticize and comment

on the questionnaire for clarity, format, and general impressions. As a result of this discussion, several changes were made to the format to improve and clarify but the content was not changed. The final version of the questionnaire is divided into eight sections. A copy of the questionnaire is included in Appendix C.

The first six sections of the questionnaire are concerned with selected topics; each section has a brief introduction explaining what the questions are about, how many there are, and an estimate of the time needed to complete the section. Topics covered the following:

A. The behaviour of consumers in the marketplace.

Questions 1-12 Advertising, decision-making, shopping.

B. Contracts.

Questions 13-15 Credit cards, payments by installments.

C. Economics and the marketplace.

Questions 16-20 Consumer understanding of this relationship.

D. Personal Finance.

Questions 21-26 Banking, credit and insurance.

E. Consumer protection.

Questions 27-34 Product safety, purchases, consumer actions.

F. Purchases: consumer purchasing behaviour.

Questions 35-38

Respondent's Self Assessment and Background. In a final section of the questionnaire, respondents are asked to give a self-assessment of their own knowledge and abilities in six specified areas of family economics and consumer education (Questions 39-55). They are also asked to assess the amount of help they have received from school, the family, friends and the media as sources of consumer knowledge in each of the six areas specified. Other questions investigate the respondent's background: consumer education or related courses taken; record-keeping practices and the personal characteristics of each respondent. The college of enrolment was marked on each questionnaire on its return from each college or campus.

The Quebec Education System

In Quebec, high school students graduate on completing secondary level 5 (Grade XI). Post-secondary public education is provided for students who successfully graduate from high school by the CEGEPs (Collèges d'enseignement général et professionnel). The CEGEPs offer two year pre-university programs in the Arts and the Sciences and a three year career program in a wide range of subjects (Appendix D). CEGEPs have some similarities to community colleges elsewhere in Canada.

Registration in the English educational system at the elementary and high school levels is restricted to those whose parents attended English schools in Canada. Note: for a number of years attendance was restricted to those whose parents attended English schools in Quebec.

These restrictions do not apply at CEGEPs. Consequently three language groups are identifiable and need to be considered in the English CEGEP population: French, English and a third group whose mother tongue is other than the two official languages. The criterion used for assignment to a language group in this survey was the language most frequently used in the childhood home.

THE SAMPLE

The Population

The population for this research includes all students enrolled at English public CEGEPs in the province of Quebec. Population statistics used were the latest enrolment figures available at the time the sample was drawn (Appendix D: full-time enrolment, September 1982).

The Colleges

The data collected for the survey is from all seven English public colleges or campuses in Quebec: John Abbott, Lennoxville, St-Lambert-Longueuil, St-Lawrence (Quebec city), Dawson, Ste-Croix and Snowdon. These colleges or campuses are grouped under four separate college administrative complexes: John Abbott, Champlain, Dawson and Vanier which are described below. The specific college attended by students is affected by their preference and the choice of programs offered, not necessarily by the proximity of the college to where they live.

John Abbott College is a single campus (Fall 1982: 4623 students) situated in Ste. Anne de Bellevue, on the western end of the island of Montreal. Although Ste. Anne de Bellevue itself is an old historic town, the West Island catchment area for the college is predominantly new suburbs and not urban.

Champlain College consists of three campuses widely separated geographically. The largest campus of Champlain College is St-Lambert-Longueuil (Fall 1982: 2222 students) which is part of a large suburban community to the east of Montreal across the St. Lawrence waterway and is linked to Montreal by the Metro and suburban public transport. The second largest campus of Champlain College is Lennoxville (Fall 1982: 1285 students), situated close to the city of Sherbrooke about 160 kilometres east of Montreal. The Lennoxville campus provides English post secondary education for the region. The smallest campus of Champlain is St-Lawrence (Fall 1982: 694 students) situated close to Quebec city, the provincial capital.

Vanier College is divided into two campuses: Ste-Croix and Snowdon (Fall 1982: 3947 and 2167 students respectively), the former is in a dense urban community; the latter is situated in a mature suburb. Both campuses are within easy reach of downtown Montreal.

Dawson College, by far the largest college in the survey (Fall 1982: 7369 students) is unique in its administrative and academic structure. The college consists of several campuses of different size and smaller satellite units scattered quite widely in the downtown urban area of

Montreal. Lafontaine is the main administrative and largest campus, Selby is the second largest followed by Viger. There are other smaller satellite campuses and units offering specialized courses for programs based in one of the three largest campuses. However, the structure, administration and enrolment statistics available for Dawson College necessitated some modifications in sampling techniques whilst using the same principles applied for the other colleges included in the survey. Thus, to maintain the principle of selection to that of probability proportionate to size, the percentage distribution of student enrolment in the college programs offered at these three campuses was taken into account when the Dawson College subsample was drawn.

All the colleges are within the census metropolitan area of Montreal, with the exception of the St-Lawrence, Quebec and Lennoxville campuses of Champlain Regional College.

Sample Size

A conservative sample size was used since no estimates were made regarding the maximum (or minimum) occurrence rates of any attributes of the population. The calculation of the sample size for a confidence level of 95% assumes a 50% distribution of any sampled attribute, which maximizes the sample size. These criteria were used:-

Sample size for reliability of + or - 5% for a

population of 20,000 - 377

population of 50,000 - 381

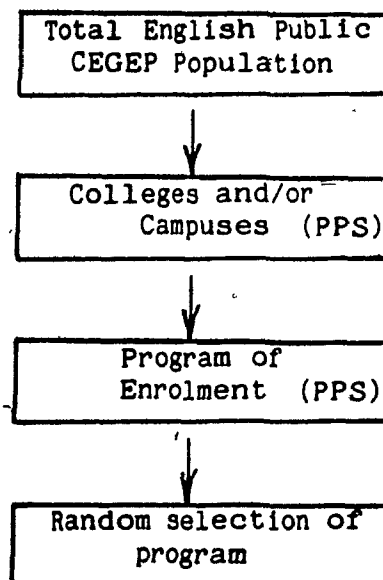
(Arkin and Colton, 1968: 22, 145 -152)

The population of English public CEGEPs (Fall 1982) was recorded as 22,307; 483 Questionnaire were distributed, about 20% in excess of the number required.

Sampling Procedure

The sampling method used is one of probability proportionate to size (PPS); this is a more sophisticated form of cluster sampling (Babbie, 1983: 171 and Kish, 1965: 82). The sampling sequence and design developed for the survey is illustrated in figure 3:

Figure 3
The sampling design



College Sampling. Each college or campus is proportionately represented in the sample. Thus, the subsamples drawn from John Abbott, Ste-Croix (Vanier), Snowdon (Vanier), St-Lambert-Longueuil (Champlain), Lennoxville (Champlain), Quebec St-Lawrence (Champlain), and Dawson were numerically in proportion to the size of each to the total English public CEGEP population.

Program Sampling. The framework for random sampling of programs, also using the method of probability proportionate to size, was created by listing alphabetically all programs offered by the English public CEGEP system. However, unlike college representation in the sample, where each college is represented, program representation is by random selection, therefore all programs are not represented in the sample. Probability of selection is proportionate to size.

Random Selection of Programs. Program enrolment was indicated as a cumulative percentage of the English public CEGEP population. This list created a three number code range for all programs, the range being proportionate to the size of each program (Appendix D). Using a random number table, three-digit numbers were drawn for selection of programs to be included in each subsample; the probability of selection being proportionate to the size of program enrolment. Each program drawn was to be represented by one class; an assumption of twenty students per class was made and numbers were drawn for each subsample until the total required was reached (reserve numbers were drawn to cover insufficient class enrolment).

An attempt to list and draw at random particular classes within programs proved logistically impossible, since few courses are exclusive to one program. A method of emphasizing the predominant program of enrolment of students in a class as a key selection factor was found to be the most feasible. Questionnaires were distributed to the whole class; students within the class who were enrolled in other programs were accepted as part of the sample.

Administration of the Questionnaire

All the CEGEPs were approached initially by letter in December, 1983, to obtain permission to conduct the questionnaire survey.

Vanier, Quebec and Lennoxville colleges, preferred to administer the survey themselves. Administrative and teaching staff of these colleges consulted with the researcher and used the guidelines provided (Appendix C) on the choice of classes to meet the needs required of random selection and to introduce the questionnaire to respondents. The questionnaire was designed to be self-administered and required no additional instructions.

The member of staff, who provided the liaison with St-Lambert-Longueuil, asked for the questionnaire to be administered with one class and personally administered the questionnaire to a second class.

Dawson and John Abbott colleges allowed the questionnaire to be briefly introduced at the beginning of a class, after which the questionnaires were completed in the student's own time.

Only one group, the class at St-Lambert-Longueuil, completed the questionnaire in class to the researcher's knowledge. All questionnaires were distributed and collected during the winter semester, 1984.

It must be noted that the impossibility of controlling the circumstances under which the questionnaire was completed by respondents is a weakness of the survey. However the introduction and instructions for completing the questionnaire emphasized that the questionnaire was not a test. The opportunity to answer "I don't know" and the effort to make questions interesting, personal and non-threatening was designed to optimize validity.

Rate of Return of Questionnaires

The number of questionnaires given out was 483, representing 2.2% of the total population. Two hundred and seventy-three (273) questionnaires were returned representing a rate of return of 57%. Four incomplete or spoilt questionnaires were discarded leaving 269 (56%) of the sample population included in the data analysis. Babbie (1983: 225) suggests that a response rate of at least 50% is adequate and one of at least 60% is good.

In the sample, the smaller campuses located off the island of Montreal achieved the highest rates of return and thus represent 29% of the sample compared to 19% of the population (September 1982). Further details of individual college/campus rates of return are recorded in

Appendix D. Four of the smaller campuses are slightly overrepresented; two underrepresented. No weightings were used in the analysis for several reasons. The objective was to survey the whole CEGEP population, and the individual college population did not necessarily reflect the regional population. All programs are not offered at all colleges, thus weighting to improve college representation might distort program representation. There was considerable homogeneity of the population for age and education which reduced problems of bias that might have existed.

OBJECTIVES

The objectives of the survey are to:

- obtain a measure to determine respondents' level of knowledge on the questionnaire items.
- evaluate the contribution to knowledge of relevant courses previously taken, and other sources of knowledge.
- determine if scores on the questionnaire are associated with specific respondent characteristics and/or student profiles. The student profiles utilized are those determined by sex and language.
- assess students' perception of their own level of knowledge, sources of knowledge and attitudes concerning the need for consumer education.

It is predicted that scores obtained for each section of the questionnaire are not related to:

1. the sex of the respondent
2. the language spoken in the childhood home
3. the program of enrolment
 - i. pre-university arts or pre-university science;
 - ii. pre-university arts and science or career
4. other relevant courses previously taken

Also that the total score obtained for the questionnaire is not related to:

1. the sex of the respondent
2. the language spoken in the childhood home
3. the program of enrolment
 - i. pre-university arts or pre-university science;
 - ii. pre-university arts and science or career
4. other relevant courses previously taken
5. respondents' self assessments of their level of consumer knowledge

ANALYSIS OF DATA

The responses of 269 complete questionnaires were coded and entered on the McGill MUSIC system using the Statistical Package for the Social Sciences (SPSSx version, 1983).

Description of Variables

A total of 188 variables were coded and entered as data for each questionnaire returned. The variables can be subdivided into four general categories:

1. Characteristics of the sample population - 20 variables.
2. Questions measuring consumer knowledge - 108 variables.
3. Questions of self assessment of consumer knowledge and the contribution of specified sources to that knowledge - 30 variables.
4. Questions assessing attitudes and/or behaviour - 30 variables.

1. Sample Population Characteristics

The following variables obtained investigate sample population characteristics:

Program of enrolment

Sex

Age

Marital status

Language most frequently used in childhood home environment

Length of residence in Canada

Current year of study

Plans after leaving college

Amount of paid work in previous year

Degree of responsibility for household expenses

Full or part-time study

Relevant courses previously taken by respondents (Appendix E)

Customary behaviour in keeping a written record of expenses.

2. Consumer Knowledge Measures

The 108 variables used to measure consumer knowledge are distributed into six topic areas:

A. Consumer behaviour: advertising, decision-making, shopping.
- 26 variables

B. Contracts: credit cards, payments by installments.
- 16 variables

C. Economics and the marketplace: consumer understanding of this relationship.
- 17 variables

D. Personal finance: banking, credit and insurance.
- 20 variables

E. Consumer protection: product safety, purchases, consumer actions.
- 20 variables

F. Purchases: consumers purchasing behaviour.
- 9 variables

The question format for measuring these variables demanded choosing a single response, usually with the option of responding "I don't know". In calculating a score for consumer knowledge only a correct response scored a point.

Example : Question 13d

"Some companies may legally issue credit cards to people who have not applied for them"

The correct response that the statement was "false" scored one point; the alternative responses of "true" and "I don't know" were judged not correct and scored zero.

Scores for respondents for each of the six sections are expressed as a percentage unless otherwise indicated. The total knowledge score is given as the mean of the percent correct scores for the six sections, each section is thus given equal weight.

3. Self Assessment of Consumer Knowledge and the Contribution of Specific Sources

Thirty variables (questions 40-45) are directed at investigating two areas. First, respondents' self-assessment of their knowledge and ability in six areas included in the questionnaire. Four possible responses are graded from high indicating satisfaction with their knowledge or ability to low indicating an inadequacy of knowledge or ability. Secondly, respondents' assessment of the help given by

school, family, friends and the media for consumer information or education is investigated. Three (3) possible responses are graded from "a lot" to "not at all".

The six areas covered are:

- knowledge of the physical and psychological conditions which can influence consumer decisions in what to buy.
- understanding of the effect that economic and consumer decisions may have on each other.
- knowledge to establish and use credit.
- knowledge to avoid being misled or cheated when buying goods and services.
- knowledge to be capable of protecting rights if goods or services are unsatisfactory.
- ability to judge the quality and prices of goods and services.

4. Attitudes and Behaviour

Some of the questions investigating attitudes and behaviour are included among those questions which measure consumer knowledge. Twenty-eight (28) of the 31 variables measuring attitudes and behaviour are in the first section of the questionnaire on consumer behaviour. Questions are concerned with attitudes, that may affect actual consumer behaviour and the type of action a respondent is likely to take in specific circumstances. The degree of importance is investigated for specific reasons to save money, and for the price of a good or service as an indication of quality. Respondents were asked to identify their probable shopping behaviour in specific circumstances. Respondents' opinions were requested on the feasibility and usefulness of providing

courses in consumer education in their school program, or whether such courses would have no effect and were unnecessary.

The SPSSx (1983) multiple response procedure was used to examine respondents' self-assessment of knowledge by sex, language in the childhood home, and actual knowledge scores obtained on the questionnaire. Analysis of variance and t tests were used to test null hypotheses.

Data Reduction Analysis

Two methods were used to investigate the accuracy of using a reduced amount of data to predict similar results to those obtained using the full questionnaire.

1. Scaling Analysis.

Scalogram analysis or Guttman scaling has usually been used on qualitative attributes such as prejudice or aggression. However, it has been applied in food studies based on the frequency of intake of specified foods. This quantitative measure can be given a cumulative order describing the quality of nutritional intake. Herzler and Owen (1976 :377) review the use of this sociologic method in a study of food intake patterns. The food item scale created the possibility of a quick assessment of a person's probable nutritional status by a simple determination of the frequency of intake of certain foods.

Since no scaling procedure is available on SPSSx (1983), a factor

analysis and a correlation matrix of items were first used to assist in choosing items to include in a Guttman scale as good indicators of consumer knowledge. The SPSSx Sort procedure was then used to list respondents in rank order for percent correct scores with each respondent's responses to the previously selected items listed in columns. It was then possible to determine the accuracy of the ranking using a reduced set of items compared to the ranking using the complete instrument.

2. Item Analysis: Development of the Short Questionnaire

A shortened version of the questionnaire was tested for internal consistency, reliability and the ability to classify respondents successfully into groups based on levels of consumer knowledge. Procedures used included discriminant and reliability analysis, and factor analysis available on SPSSx (1983).

Forty of the 108 items used to obtain a consumer knowledge score on the questionnaire were selected as listed in Table 31 (Chapter IV, Results). Each of these items met the criteria defined below and fell between reasonable limits generally accepted for dichotomous variables as effective measures of discrimination in education. (Marshall and Hales, 1971:89)

1. a difficulty index equal to or less than .75
2. a discrimination index equal to or more than .20

Correlation Matrix and Factor Analysis

Pearson correlation coefficients were examined and used as a guide to investigate the possibilities of further reducing the number of items required to achieve effective discrimination. These analyses were completed in order to determine first, if there was any strong correlation between scores obtained in the six topic areas of the consumer knowledge questions; and how each topic correlated with the total score for consumer knowledge. Second, the analyses would indicate if any of the 40 items selected by difficulty and discrimination index criteria were so highly correlated as to be repetitive in their contribution to a more rapid assessment of consumer knowledge.

A factor analysis was used to determine if there were particular and identifiable dimensions being measured.

Item Validity

The discrimination index or the discriminating power of validity (Marshall et al., 1971: 81) of the item measures the success or failure of the item to indicate the possession of the trait or achievement being measured. Marshall et al. (1971: 87) consider this to be relatively good with samples of 100 or more. The criterion used in this study to test item validity is the total consumer knowledge score.

The validity of the questionnaire as an internal criterion testing reliability and consistency, and the ability to discriminate and

classify students must be considered. This fact has bearing on the justification of the short version of the questionnaire which has been developed as a quick method of classifying students according to the level of their knowledge.

No standardized method has been developed and accepted as a measure of consumer skills or knowledge. The level of consumer knowledge necessary for any individual to function effectively in the socio-economic environment is a relative and subjective judgement. The choice of criteria itself is open to considerable debate: is solvency or rational decision making paramount? Alternatively should quality of life and the ability to participate fully in an economic democracy be a part of a person's goal? There is no simple answer and consumer education is more likely to affect consumer behaviour on a full continuum ranging from coping to influencing change (Bannister and Monsma, 1982: 8).

Using the premise that the questionnaire measures a multi-dimensional concept called "consumer knowledge", can it be justified that lacking an external criterion, the questionnaire score results obtained for this sample can be used as an internal criterion? The procedure of using the internal criterion for the item analysis can improve the questionnaire as a measure of the same dimensions of "consumer knowledge". The only advantage of using an external criterion would be if it is considered as a better measure of "consumer knowledge".

Since no external criterion is available and the questionnaire and

sample size are large, the internal criterion is accepted as valid and appropriate. Scores are a measure of consumer knowledge and are used in testing the consistency and reliability to discriminate and classify students in the sample. It is also accepted therefore as a means of comparison among sub-population groups.

Test for Internal Consistency and Reliability

In the case of dichotomous variables, as are all the responses to items used to measure consumer knowledge in the survey questionnaire, the same criteria may be used to test reliability and internal consistency. (Ebel, 1979 : 279 - 280).

Ebel notes:

One limitation of K-R (Kuder-Richardson) 21 is that it always gives an underestimate of the reliability coefficient when items vary widely in difficulty - - - - - If most of the items have average scores of more than 30 percent but less than 70 percent of the maximum possible score, the underestimate is much smaller.

Ebel's reference above to average score is concerned with the difficulty of each item or the proportion of correct responses for a particular item.

The SPSSx (1983) reliability coefficient Alpha is equivalent to the Kuder Richardson Formula 21 reliability coefficient for dichotomous variables. The coefficient of reliability for constructed educational achievement tests should be .90 or higher (Marshall et al. 1971: 107, Ebel, 1979).

Discriminant Analysis

The groups used in the discriminant analysis divided the sample into three levels of consumer knowledge based on respondents' total consumer knowledge score. The first group included the upper 27% by rank, the second group included the next 46% by rank, and the lower 27% formed the third group. The criterion groups chosen are those which are commonly used in education since they provide a compromise between the aim of maximizing the size of extreme groups, and at the same time having the extreme groups as different as possible (Ebel, 1979 : 260).

CHAPTER IV

RESULTS AND ANALYSIS

Introduction

Results obtained are presented without prejudice. All comments, opinions, interpretations and conclusions are given in subsequent chapters of the thesis. In general, only those results which are statistically significant are reported. Some results are included because they form part of a sequence of analyses which led to a research objective. Additional results are referred to and included in the appendices.

Consumer knowledge, attitudes and behaviour of a probability sample of English public CEGEP students in the province of Quebec were investigated. The study examines: the level of consumer knowledge as measured by correct responses; the courses with consumer education or related content respondents report having previously taken; respondents' personal assessments of their knowledge, and also their assessment of the contribution of the specified sources of this knowledge.

Respondent profiles, particularly as defined by sex and language used most frequently in the childhood home, are examined in association with the level of consumer knowledge, and reported attitudes and behaviour.

The null hypotheses tested are that the scores of correct responses obtained are unrelated to the variables of sex; language used in the childhood home; consumer education or related courses previously taken and CEGEP program of enrolment i.e. pre-university arts and/or pre-university science or career programs.

Finally the use of data reduction analysis, to develop a method of rapid assessment of the level of consumer knowledge, is described. Tests for the reliability and validity of questions selected for the rapid assessment instrument are reported.

Order of Results as Reported in Analyses

Results in each analysis are reported when appropriate in the following sequence:

1. for the whole sample
and as affected by:
2. sex
3. language or language and sex
4. program of enrolment i.e. pre-university arts,
pre-university sciences and career
5. other consumer education or related courses
previously taken.

PART 1

Characteristics of the Sample Population**The Colleges**

The community colleges of general and professional training were introduced in Quebec in 1967 and are commonly called by their acronym, "CEGEP". The colleges provide postsecondary, preuniversity education for those who have graduated from secondary level 5 or the equivalent, for selected disciplines and careers. In 1984, 51 CEGEPs provided free public education of which six were anglophone institutions, and 29 were private. The sample for this research was drawn from the six English language public CEGEPs.

The sample drawn from the population consists of 269 CEGEP students: 129 males and 140 females from the six English language CEGEP colleges in the province of Quebec. The colleges and campuses are located in various regions of Quebec, however about 90% of the total public English language CEGEP student population is on the island of Montreal or within commuting distance.

Table 2 shows the representation in the sample of each college or

campus compared to the population. The proportion of males and females in the sample is also given for each college, though no detailed statistics were available for the population.

Table 2

Breakdown by college of the sample population (1984) compared to the total English public CEGEP population (September 1982 statistics).
Breakdown by sex of sample

College	Zone ₁	Population ₂	Sample Total	Sample Male	Sample Female
On Montreal Island					
Dawson	Inner City	33.0%	25.9%	12.6%	13.3%
Vanier	Mature Suburbs	27.4	29.0	6.3	22.7
John Abbott	Exurbia	20.7	16.4	12.3	4.1
Montreal C.M.A.					
*St-Lambert	Mature & new suburbs	10.0	15.2	10.4	4.8
Rest of Province					
*Lennoxville	Urban(100,000+)	5.8	8.6	4.5	4.1
*Quebec	Urban(100,000+)	3.1	4.9	1.9	3.0
Total		100.0	100.0	48.0	52.0
Number of students		22307	269	129	140

* under common administration of Champlain Regional College

¹ zone definition reference:

Perspectives Canada II, A Compendium of Social Statistics 1977.
189-193. Statistics Canada. (Appendix F)

² statistics based on fulltime enrolment, September 1982, unavailable for male and female enrolment.

Demographic Characteristics of the Sample

Sixty-four (64) percent of the respondents use English as their first language; 13% are French speaking and the remaining 23% used a language other than French or English in their childhood home. This latter group will henceforth be referred to as "other" when defining language. Seventy percent of the males in the sample and 58% of the females in the sample are English. "Other" females constituted 28% of the females in the sample compared to "other" males who constituted 19% of the males (Table 3).

The median age for both males and females in the sample is 19 years with 81% between 18 and 20 years, and ten (10) percent under 18 years. Eighty-one (81) percent of the sample were born in Canada and only two (2) percent had lived in Canada for less than 5 years (Tables 4 and 5).

Table 3**Sex and language most frequently used during childhood**

Language	Male	Female	Total
English	69.5%	58.4%	63.8%
French	11.7	13.9	12.8
Other*	18.8	27.7	23.4
Total	100.0	100.0	100.0
Number of cases	128	137	265
Missing cases	1	3	4

* Other languages recorded included: Italian, Greek, Portuguese, Chinese, Arabic, Hindi, Spanish, Rumanian, Lithuanian, Inuktit and Vietnamese.

Table 4

Age and sex distribution of respondents in the sample

Age	Male	Female	Total
Under 18	7.0%	13.7%	10.4%
18 years	41.1	33.1	36.9
19 years	30.2	37.4	34.0
20 years	13.2	7.2	10.1
Over 20	8.5	8.6	8.6
Total	100.0	100.0	100.0
Number of cases	129	139	268
Missing cases	0	1	1

Table 5

Distribution of respondents by length of residence in Canada and sex

	Male	Female	Total
Born in Canada	81.3%	81.2%	81.2%
Lived in Canada more than 5 yrs.	17.2	15.9	16.5
Lived in Canada less than 5 yrs.	1.6	2.9	2.3
Total	100.1	100.0	100.0
Number of cases	128	138	266
Missing cases	1	2	3

Totals may not equal 100% due to rounding.

Employment Status and Household Expenses

Eighty (80) percent of the respondents had worked for wages at some time during the previous year. However a higher proportion of females in the sample had not worked at all: 25% compared to 16% of the males in the sample (Table 6).

Forty-four (44) percent of the sample reported taking at least shared responsibility for household expenses; the remaining 56% were dependent on their parents for paying household expenses (Table 7).

Table 6

Distribution of the respondents by paid work in previous year and sex

Amount of Paid Work	Male	Female	Total
Full time &/or part time during summer and school year	60.5%	48.9%	54.5%
Summers only	24.0	25.9	25.0
None at all	15.5	25.2	20.5
Total	100.0	100.0	100.0
Number of cases	129	139	268
Missing cases	0	1	1

Table 7

Distribution of the respondents by responsibility for payment of household expenses and sex

Responsible for Expenses	Male	Female	Total
Parents	52.7%	59.3%	56.1%
Self with parent's help	37.2	30.7	33.8
Self with spouse or friends	1.6	6.4	4.1
Self alone	8.5	3.6	6.0
Total	100.0	100.0	100.0
Number of cases	129	140	269

Enrolment Characteristics of the Sample

The CEGEP program provides two kinds of post-secondary education

1. a pre-university program in Arts or Sciences, normally taking 2 years to complete.
2. a selection of terminal career programs which may take 3 years to complete.

In the sample, 47% are enrolled in pre-university arts, about four percent less than in the population. Fifty-five (55) percent of those enrolled in pre-university arts are male. Sixty-one (61) percent of English males are enrolled in pre-university arts, French males are least likely to be in this program with 33% so enrolled. Thirty-one (31) percent are enrolled in pre-university sciences compared to 21% of

the population. Fifty-two (52) percent of those enrolled in the pre-university sciences are males. Almost half of "other" males and French females are enrolled in pre-university sciences, however only 13% of "other" females are in pre-university sciences. Twenty-two (22) percent of respondents are enrolled in career programs compared to 28% in the population. Thirty (30) percent of the females are enrolled in career programs compared to 13% of the males. Fully half of "other" females in the sample are enrolled in career programs representing 33% of the total career program enrolment. Twenty-eight (28) percent of the English females are enrolled in the career program representing 38% of the total career program enrolment in the sample (Tables 8 and 9).

Table 8

Distribution in sample by program (1984) compared to English public CEGEP population (September 1982 statistics) and by sex for sample population

Program	% in CEGEP population	% in sample		
		Total	Male	Female
Pre-University Science	21.0	31.2	52.4	47.6
Pre-University Arts	51.2	46.8	55.3	44.7
Career	27.8	22.1	27.6	72.4
Total	100.0	100.1		
No. of cases	22307	263	127	136

Missing cases = 6

Totals may not equal 100% due to rounding.

Table 9

Distribution of the respondents by program, sex and language*

Program	Male			Female			Total
	English	French	Other	English	French	Other	
Pre-Univ.	26 ¹	6	11	25	9	5	82
Science	31.7 ²	7.3	13.4	30.5	11.0	6.1	100.0
	29.2 ³	40.0	47.8	31.6	47.4	13.2	31.2
Pre-Univ.	54	5	9	32	9	14	123
Arts	43.9	4.1	7.3	26.0	7.3	11.4	100.0
	60.7	33.0	39.1	40.5	47.4	36.9	46.8
Career	9	4	3	22	1	19	58
	15.5	6.9	5.2	37.9	1.7	2.8	100.0
	10.1	27.0	13.0	28.0	5.3	50.0	22.1
Total	89	15	23	79	19	38	263
	33.8	5.7	8.7	30.0	7.2	14.4	99.8
	100.0	100.0	99.9	100.1	100.1	100.1	100.1

Missing cases = 6

Totals may not equal 100% due to rounding.

¹ Number of respondents² Row percent³ Column percent**Future Plans**

Students' plans for the future would seem to confirm pre-university and career program enrolment figures reflecting future intentions since 78% of the sample intend to continue their studies and 78% of the sample are enrolled in pre-university programs. The larger proportion of females in career programs is also matched by a larger proportion of females reporting their future plans are to "get a job" (Table 10).

* Details of all programs offered and enrolment figures for the population and the sample are included in Appendix D.

Table 10

Distribution of the respondents by plans after leaving college and sex

Plans	Male	Female	Total
University or more training	83.6%	73.2%	78.2%
Get a job	8.6	20.3	14.7
Undecided	7.8	6.5	7.1
Total	100.0	100.0	100.0
Number of cases	128	138	266
Missing cases	1	2	3

Consumer Education and Related Courses Taken

Respondents were asked to specify any consumer education courses they had taken or courses which they considered contained considerable consumer information. The responses to this open-ended question (# 39a and b) were classified and grouped subjectively by the researcher to provide categories as useful as possible for subsequent analyses. The responses could not be differentiated as originally intended between consumer education courses and those considered to include consumer information because similar or identical courses were viewed differently by different respondents. Fifty (50) percent reported they had taken one or more courses previously. Courses taken were classified into 4 groups:

1. consumer related courses
2. economics courses
3. business courses
4. courses reported other than those listed above

Seventeen (17) percent reported taking one or more consumer related courses; 22% had taken economics courses and 18% had taken business courses (Table 11).

Table 11

Respondents' record of consumer education or related courses taken by the number and type taken

Type of course	Proportion of sample				Courses taken		
	No. of courses taken				Sex		
	1	2	3	4	Male	Female	Total
Consumer	16.3	0.8	-	-	15.2%	23.7%	17.0%
Economics	17.8	3.0	1.1	-	19.2	24.5	22.0
Business	9.8	7.6	0.4	-	25.6	10.8	17.8
Other	3.8	1.1	0.7	-	3.2	7.9	5.7
Miscellaneous							
*Total of any type taken	28.6	11.5	7.8	1.1	48.8	51.1	50.0

N = 264

Missing cases = 5

* Column totals are not relevant since respondents may take more than one type of course. The computation for totals is independent of those for each particular type.

Record Keeping

Seventy three (73) percent of the sample did not keep a written record of their expenses. Details of the responses to the question (Question 46) concerning record keeping behaviour are available in Appendix E).

PART 2**Level of Consumer Knowledge****The calculation of scores**

The level of consumer knowledge was measured and computed as the number of correct responses for the six topic areas of the questionnaire. By this method each respondent was given a score for each topic section and a combined total score. The topics are:

	Maximum raw score possible
a. consumer behaviour	26
b. contracts	16
c. economics	17
d. finances	20
e. consumer protection	20
f. purchases	9
All topics	<hr/> 108

The scores for each topic and the total score for all topics combined were calculated as a raw score and as a standardized percent correct score.

The mean score for the sample population on the questionnaire is 65.4%. The highest mean score is 73.5% for the topic on consumer behaviour. Three topics have mean scores below 70%: finances with the lowest mean score of 47.6%, and consumer protection and contracts with mean scores of 60.6% and 68.1% respectively (Table 12).

The dispersion of scores obtained for each section (Table 13) and for the three lowest scoring sections on finances, consumer protection and contracts (Table 14), indicate in particular the general poor level of performance among respondents in finances. Thirty (30) percent of the sample scored less than 40%, more than half the sample population scored below 50%, and only 28% of the sample scored more than 60% on this topic. For the other low scoring topics, consumer protection and contracts, 39% and 22% respectively of the sample scored less than 60%, and more than half of the respondents scored between 50 and 70%.

Table 12

Mean scores for consumer knowledge topics by sex and topic

Topic [raw score*]	Mean Score		
	Male	Female	All
a. Consumer Behaviour [26]	74.7% [19.4]	72.4% [18.8]	73.5% [19.1]
b. Contracts [16]	69.3 [17.1]	67.1 [10.7]	68.1 [10.9]
c. Economics [17]	76.7 [13.0]	66.5 [11.3]	71.4 [12.1]
d. Finances [20]	51.9 [10.4]	43.6 [8.7]	47.6 [9.5]
e. Consumer Protection [20]	61.9 [12.4]	59.3 [11.9]	60.6 [12.1]
f. Purchases [9]	71.3 [6.4]	71.0 [6.4]	71.1 [6.4]
All Topics [108]	67.6 [73.0]	63.3 [68.4]	65.4 [70.6]
No. of cases	129	140	269

* Raw scores are given in brackets under % score

Table 13

Dispersion of respondents by percent correct score levels and the standard deviation for consumer knowledge topics

Topic	N	Standard deviation	No. of Respondents			
			% correct score levels			
			<50	50 to <70	70 to <90	90+
a. Consumer Behaviour	269	9.5	2	97	166	4
b. Contracts	269	14.3	14	140	106	9
c. Economics	269	16.5	30	58	165	16
d. Finances	269	17.9	137	96	32	4
e. Consumer Protection	269	12.7	48	136	80	5
f. Purchases	269	17.4	29	107	112	21
All Topics	269	9.6	22	172	75	0

Table 14

Dispersion of respondents by percent correct scores in the topic sections on contracts, finances and consumer protection

Mean score	No. of Respondents		
	Contracts 68.1%	Finances 47.6%	Consumer protection 60.6%
% correct			
Above 90%	9	4	5
80 - 90%	48	9	13
70 - 79.9%	58	23	67
60 - 69.9%	94	40	78
50 - 59.9%	46	56	58
40 - 49.9%	4	57	38
30 - 39.9%	6	41	10
20 - 29.9%	1	28	0
Below 20%	3	11	0
No. of cases	269	269	269

Breakdown of Scores by Sex

Males have a higher mean score in every topic. Males have the highest mean score (77%) for the section on economics. Females have the highest mean score (72%) for the section on consumer behaviour.

The greatest disparity between male and female scores is for the topics economics and finances with differences of ten (10) percent and eight (8) percent respectively. The other topics on consumer behaviour, contracts, consumer protection and purchases have a less than three (3) percent difference between males and females.

Female scores for the topic economics are more widely dispersed with a standard deviation of 17.1 compared to 14.1 for the male sample. Seventy (70) percent of males score between 70 to 90% on this topic, whereas 62% of females score between 60 and 90%. Thirty-four (34) percent of the females score below 60% compared to 13% of the males.

Although females have a much lower mean score for the section on finances, the dispersion of scores is similar for males and females in the sample. (Table 15)

Table 15

Dispersion of male and female respondents by percent correct scores for the topics economics and finances

Mean score	Economics		Finances	
	M	F	M	F
	76.7%	66.5%	51.9%	43.6%
% correct				
Above 90	11	5	4	0
80 - 89.9	52	25	5	4
70 - 79.9	38	50	17	6
60 - 69.9	11	12	18	22
50 - 59.9	10	25	33	23
40 - 49.9	4	13	24	33
30 - 39.9	2	1	18	23
20 - 29.9	1	6	8	20
Below 20	0	3	2	9
Standard deviation	14.1	17.1	17.5	17.5
No. of cases	129	140	129	140

Consumer Knowledge Scores as Affected by Language and Sex

Mean scores are examined for the combined effect of language and sex. Six profiles are created as given below with the mean scores obtained for consumer knowledge for each profile as represented in the sample: English male (69%), English female (66%), French male (70%), French female (64%), other male (62%), and other female (57%).

Males achieve higher mean scores than the females in each language group. The disparity between English male and female scores of three (3) percent is the least. "Other" males while having the next to lowest mean score are a full five (5) percent ahead of "other" females. French males have a mean score almost seven (7) percent more than French females.

French males score particularly well compared to other sub-groups in the topic areas of economics and finance. Among the females, the English females have higher mean scores than French females in the topic areas on consumer behaviour, economics, finances and consumer protection. "Other" females have the lowest score in each topic with the exception of purchasing. The mean score of "other" females is six (6) percent below the mean for all females and ten (10) percent below the mean for all males. The mean score of "other" males is six (6) percent below the mean for all males. (Table 16)

Table 16

Mean scores of respondents for consumer knowledge by consumer topic, sex and language of the childhood home

Topic	Mean scores by language and sex							
	English		French		Other		Total	
	M	F	M	F	M	F	M	F
Consumer Behaviour	75.8%	73.6%	73.8%	72.5%	71.6%	69.2%	74.7%	72.2%
Contracts	70.4	68.2	69.2	70.7	65.4	63.0	69.3	67.1
Economics	76.9	69.9	80.0	65.6	73.3	65.6	76.6	66.4
Finances	53.0	48.7	59.3	40.8	43.8	33.9	52.0	43.5
Consumer Protection	63.0	61.2	64.7	57.9	56.7	54.3	62.0	58.8
Purchases	73.4	73.2	74.1	73.7	62.5	63.2	71.4	70.5
All Topics	68.8	65.8	70.2	63.5	62.2	57.2	67.7	63.1
No of cases	89	80	15	19	24	38	128	137
Missing cases							1	3

Analysis of Subpopulation Differences: Testing Hypotheses

The significance of the association between percent correct scores and selected characteristics and profiles for the sample was examined using analysis of variance and t-test procedures. Subpopulations examined include differentiations based on:

- sex
- language
- courses previously taken with consumer education content
- program of enrolment

Scores were examined separately for each topic and combined as a total score.

The null hypothesis, that group means are unrelated to the respondent profile is tested for each topic score and the total score for the questionnaire. Results reported in this chapter are restricted to those found to be significant. Other results are given in Appendix H.

Sex

The null hypothesis is that sex of the respondent has no effect on consumer knowledge scores. The null hypothesis is rejected for the total score and for topic areas economics and finances. The difference between the subgroup population means for the topics on economics, finances and the total score is significant at the $p = .01$ level (Table 17). The null hypothesis is accepted for the topic areas consumer behaviour, contracts, consumer protection and purchases.

Table 17

Males and females: descriptive statistics for mean scores* and t-test on group differences between means

Topic (max.pts.)	Male (129)		Female (140)		F value	T value	df	2-tail prob.
	Mean	sd	Mean	sd				
Economics (17)	13.0	2.4	11.3	2.9	1.57	5.30	261.8	0.000
Finances (20)	10.4	3.5	8.7	3.5	1.01	3.87	264.9	0.000
Total (108)	72.7	9.3	67.8	10.7	1.31	3.98	266.2	0.000

* Note: raw scores

Language

The null hypothesis is tested that respondents who spoke a language other than the two official languages in their childhood home are unaffected in their test performance. The null hypothesis is accepted in the topic area of contracts. The null hypothesis is rejected for the total score and for every topic section score other than contracts; the difference between the subgroup population means is significant at the $p = .01$ level (Table 18).

Table 18

Language spoken in the childhood home and its effect on scores:
descriptive statistics for mean scores and t-test on group
differences between means

Topic (max. score)	Other (66)		Language Engl. or French (203)		F value	T value	df	2-tail prob
	Mean	sd	Mean	sd				
Consumer Behaviour (26)	18.3	2.5	19.4	2.4	1.01	-3.00	109.8	0.003
Economics (17)	11.1	3.3	12.5	2.5	1.69	-2.98	91.4	0.004
Finances (20)	7.6	3.7	10.1	3.3	1.22	-4.86	101.8	0.000
Consumer Protection (20)	11.3	2.6	12.4	2.5	1.09	-3.14	106.6	0.002
Purchases (9)	5.8	1.5	6.6	1.5	1.01	-3.85	110.7	0.000
Total (108)	64.4	10.9	72.1	9.4	1.35	-5.12	98.3	0.000

* Note: raw scores

Program of Enrolment

Three general types of programs were examined: pre-university sciences, pre-university arts and career programs. Since the career programs are planned as terminal programs, and therefore different from pre-university programs two distinct null hypotheses were examined using the t-test procedure.

The null hypothesis was examined that enrolment in pre-university arts as opposed to pre-university science has no effect on mean scores achieved for each topic area and total score for the consumer knowledge. Results indicate that this null hypothesis is accepted for the total score and for every topic section score. The difference between the subgroup population means is not significant at the $p = .01$ level. (Table 41 in Appendix H)

The null hypothesis was examined that enrolment in pre-university programs as opposed to career programs has no effect on mean scores achieved for each topic area and total score for the questionnaire. Results indicate that this null hypothesis is accepted for the total score and for every topic section score; the difference between the subgroup population means is not significant at the $p = .01$ level. (Table 42 in Appendix H)

Hypotheses Concerning Consumer Education or Related Courses Previously Taken

Analyses of variance were used to determine whether the number of courses and/or the type of course taken affected scores obtained in

each topic area and in the total scores achieved. This involved a large number of computations: only those for which the null hypothesis is rejected at $p = .01$ level are reported in the summary Table 19.

Table 19

Significant differences between the subpopulation means by the number and type of courses taken

1. Courses taken of any type		2. Business courses taken	
Topic	Probability	Topic	Probability
Finances	0.002	Finances	0.000
Purchases	0.007		
Total Score for All Sections	0.000	Total Score for All Sections	0.005

Full tables which include mean scores by the number of courses taken are given in Tables 44 to 51 in Appendix H.

The Effect of Any Type of Relevant Courses Taken on Consumer Knowledge Scores

Results indicate that taking any consumer education and related courses does affect total scores and in particular scores for the topics on finances and purchases. The mean score on finances for those who had not taken any relevant courses was 45%; those who had taken one course achieved a mean score two (2) percent higher; a second relevant course

raised the mean score a further ten (10) percent. Subsequent additional courses did not continue to increase scores although those who had taken three or four courses still had a mean score of at least six (6) percent higher than those who had only taken one relevant course. (Table 45 in Appendix H)

For the topic on purchases the mean score consistently increased with the number of courses taken. The mean for those who had taken no courses is 69%; for 21 respondents who had taken three courses the mean reached 78%; finally for three respondents who had taken four courses the mean is 93%. (Table 46 in Appendix H)

The mean score for the combined topic areas is 64% for those who had taken no relevant course; one course taken improved the mean score by one percent, two courses taken improved mean scores by a further six (6) percent to 71%. Respondents who had taken three relevant courses scored a mean of 69%, which is lower than for those who had taken two courses, though still four (4) percent higher than those who had taken only a single course. The small number (3) of respondents who had taken four relevant courses scored the highest mean of 77%. (Table 47 in Appendix H)

The Effect of Business Courses Taken on Consumer Knowledge Scores

Business courses had a significant effect on total score and the score for the topic on finances. Forty-seven (47) respondents had taken one or more business courses previously. The mean score on finances for

respondents who had not taken any business courses is 46%; for those who had taken one business course the mean score increased by nine (9) percent and for those who had taken two business courses the mean score increased a further five (5) percent to 60%. Business courses also increased mean scores for the topics on purchases and economics, though less consistently thus failing to reject the null hypothesis at the .01 level. (Tables 48 to 50 in Appendix H)

The mean score for the combined topic areas for those respondents who had taken one business course increased five (5) percent over the score of those who had not taken any relevant courses. Two business courses taken produced a further two (2) percent increase in the mean score. (Table 51 in Appendix H)

PART 3

Self Assessment of Level of Consumer Knowledge

Respondents were asked to assess on a scale of four possible responses the level of their own knowledge on six areas concerning consumer knowledge (Appendix A: questions 40a to 45a). An examination of the results investigates how respondents viewed their own capabilities and level of knowledge when coping with the complexities of the marketplace. A composite self-assessment, representing how respondents assessed their level of consumer knowledge overall was computed based on the responses for all six questions. Self assessment responses were also examined for profiles based on sex and language.

Composite Self Assessment of Consumer Knowledge

Nineteen (19) percent of all respondents considered their overall level of knowledge to be very good/a great deal*. More than a quarter (28%) of the sample population judged their overall level of consumer knowledge to be fair/little or poor/nothing.

However, considerable differences were found when sex and language are used to differentiate groups. Male respondents were nearly twice as likely as females to assess their knowledge as very good. French males had the highest self assessment of their consumer knowledge, while English and "other" males assessed themselves only slightly lower: close to a quarter of all males rated themselves as very good. However, French males were also less likely than English or "other" males to assess their knowledge as fair or poor. More than a third of female respondents reported their level of consumer knowledge to be fair/little or poor/nothing. English females assessed themselves higher than French or "other" female profiles and quite similarly to the English males. French and "other" females had the poorest assessment of their ability; almost half of them considered themselves to have only a fair or poor level of knowledge. (Table 20)

* Terms for assessment are those used in the questionnaire.

Table 20

A composite of self assessment responses based on the six questions concerning consumer knowledge by sex and language of childhood home

Language and sex	N	Self assessment			Total
		V.good/Gt.deal	Good/Some	Fair/Poor	
English					
Male	89	24.9%	54.2%	20.9%	100%
Female	80	16.3	55.2	28.6	100.1
French					
Male	15	26.7	60.0	13.3	100
Female	19	8.8	46.0	45.1	99.9
Other					
Male	24	25.0	52.8	22.3	100.1
Female	38	8.9	47.1	44.0	100.0
All Males	128	24.9	54.5	20.5	99.9
Missing	1				
All Females	137	13.3	52.2	34.6	100.1
Missing	3				
Total	265	18.9	53.3	27.8	100

Totals may not equal 100% due to rounding.

Self Assessment of Consumer Knowledge and Scores Obtained

The responses to each of the six questions asked were examined for the whole sample, and as affected by sex and score levels. The questions covered the topics listed:

- i. Knowledge of the physical and psychological conditions which can influence consumer decisions in what to buy.
- ii. Understanding of the effect economic conditions and consumer decisions may have on each other.
- iii. Knowledge about establishing and using credit.
- iv. Knowledge to avoid being misled or cheated buying goods and services.
- v. Knowledge to be capable of protecting interests if unsatisfactory goods or services are received.
- vi. Ability to judge the quality and prices of goods and services.

Respondents felt the greatest need for more knowledge on the subject of credit: fully 55% of the sample judged they knew little or nothing about establishing and using credit. Thirty-six (36) percent rated their knowledge about the effect economic conditions and consumer decisions may have on each other as fair or poor. Respondents also felt a need for more knowledge concerning the physical and psychological influences on consumer decisions with 32% of the sample assessing their knowledge as fair or poor.

However respondents were more confident in the other three areas, especially concerning knowledge about avoiding being cheated or misled when buying goods or services. Thirty-three (33) percent of the sample felt they knew a great deal and only eight (8) percent assessed they

knew little or nothing. Seventy-seven (77) percent assessed their ability to judge quality and prices of goods and services to be very good ~~or~~ good.

Twenty-three (23) percent were confident they knew a great deal about protecting their interest if unsatisfactory goods or services were received, and 63% felt more cautiously that they had some knowledge of this area but not enough.

The relationship between the way respondents assess their level of knowledge and their actual level of performance on the consumer knowledge questionnaire is investigated to determine whether respondents are able to perceive with any accuracy the level of their consumer knowledge. (Table 21)

Respondents' ratings of their abilities and knowledge levels are in step with the percent correct scores on the questionnaire: the higher they rate themselves the higher the mean for percent correct scores and vice versa. Thirty-five (35) percent of the responses of students in the sample who have a correct score of more than 80% on the questionnaire assessed their knowledge as very good. The converse, a low self-assessment associated with a low score level, is even more likely with 56% of the responses of students in the sample scoring below 50%, assessing their knowledge as fair or poor. (Table 22)

Table 21

Self assessment of level of knowledge for six questions on consumer knowledge and associated mean scores*

Question	N	Self assessment				Total
		Very Good/ A great deal	Good/ Some	Fair/ Little	Poor/ Nothing	
Influences on decisions	267	16.9 ¹ 69.8 ²	51.8 67.0	28.0 61.5	3.4 52.7	100.1 65.4
Economics & Consumers	266	13.5 70.0	50.8 66.9	29.7 62.9	6.0 55.4	100.0 65.4
Credit usage	269	8.2 71.9	36.8 68.9	42.4 64.3	12.6 55.9	100.0 65.4
Being misled or cheated	269	33.1 68.6	59.5 68.6	7.1 54.4	0.4 59.9	100.1 65.4
Protection of rights	267	22.8 68.1	62.5 65.9	12.7 57.4	1.9 57.4	99.9 65.5
Judging price and quality	267	18.7 68.0	58.6 66.4	21.3 60.8	1.5 52.3	100.1 65.5

¹ Percent of sample

² Percent mean score for consumer knowledge

* analyses of specific questions asked are given in Tables 51 to 56 in Appendix H.

Table 22

Consumer knowledge: a comparison of self assessment responses with scores obtained

Percent scores	Self assessment			Row totals as % of population
	V. good	Good	Fair/Poor	
	as percent of responses			
80 and above	34.7	58.3	7.0	4.5
70 - 79.99	26.5	57.4	16.0	30.3
60 - 69.99	15.4	55.9	28.6	38.3
50 - 59.99	14.4	46.6	39.1	19.9
Below 50	7.0	37.1	56.0	7.0
Column Totals				
% of Responses	18.9	53.3	27.8	100.0
# responses	303	856	447	1606
# Possible Responses				1614

A composite of responses for all six self assessment questions was examined using the multiple response procedure by specified score levels. This enabled a comparison to be made between those respondents who had high scores and those who had lower scores and how they assessed their knowledge. Considerable differences between male and female assessment of their knowledge and ability were found. Although the same trends are apparent for males and females in each topic area, females have a much lower estimation of their knowledge and ability. In concordance with lower scores obtained, females viewed their consumer knowledge as less adequate than males. (Table 23, further details Tables 51-56 in Appendix H)

Male respondents rated themselves consistently higher but also had higher mean scores. However both male and female respondents assessed their knowledge as poorest concerning the question about credit usage, a topic which also had the lowest mean correct score on the questionnaire.

Table 23

The proportion of males and females who assess their knowledge, understanding or ability to be high or low and mean scores for consumer knowledge questions

Assessment of consumer knowledge				
Topic of knowledge	HIGH*		LOW*	
	Male	Female	Male	Female
Being misled or cheated	43.4%	23.6%	3.0%	11.4%
% Mean score	69.4	67.1	60.1	53.4
Protection of rights	26.4	19.6	9.3	19.6
% Mean score	69.2	66.8	65.9	57.1
Judge quality and price	24.8	12.9	14.0	31.0
% Mean score	69.1	67.0	64.0	58.7
Influences on decisions	21.9	12.2	23.5	38.8
% Mean score	70.1	69.4	64.9	58.2
Economics and consumers	20.6	7.1	27.8	42.8
% Mean score	72.3	63.9	63.9	60.3
Credit usage	12.4	4.3	45.8	63.6
% Mean score	71.4	73.3	65.3	60.4

* high : "very good" or "a great deal"
low : "fair/little" or "poor/nothing"

Analysis of Variance of Subpopulation Differences: Testing Hypotheses

The association between self assessment and scores is consistent; respondents appear to have an accurate perception of the level of their ability at least compared to their peers. The significance of this association was examined using analysis of variance.

The null hypothesis, that group means are unaffected by the respondents' self-assessment of their consumer knowledge was tested for each of the six questions. In every question the null hypothesis is rejected at the $p = .01$ level. Tables of these results appear in Tables 57 to 62 in Appendix H.

PART 4

Perceived Sources of Consumer Knowledge: School, Family, Friends and the Media by Sex and Language

Respondents were asked the amount they judged that school, family, friends and the media had contributed to their consumer knowledge. A composite frequency distribution, based on all of the responses for the six questions, indicates overall the contribution respondents judged that they received from these four sources. (Table 24)

In general, the sources of knowledge considered by the greatest proportion of the sample population to have contributed a lot are the family and school (33% for each source). Attitudes to the role of the school are divergent with 28% assessing the school as of no help at all. Twenty-eight (28) percent felt the media also contributed a lot to their level of consumer knowledge. Only 12% considered that friends contributed a lot whilst 36% of respondents felt that friends contributed nothing.

In general, females are more likely than males to consider that the family contributed a lot. However, fewer females than males considered that the other sources listed, school, friends and the media, made a major contribution to their consumer knowledge. "Other" males (26%) and "other" females (22%) were less likely to regard the family as contributing a lot of help than either French or English language groups. The proportion of "other" females who felt that they received no help at all from school (37%) and the media (27%) is the highest for any sex/language profile group. Contrary to this, "other" males are among the most likely to consider that school (38% compared to 25% of "other" females) and the media (36% compared to 22% of "other" females) were a lot of help.

French males (39%) and French females (41%) are the most likely to consider that the family made a major contribution to their consumer knowledge. Thirty-six (36) percent of French males regard school as a lot of help, a much higher proportion than the 22 percent of French females who are the least likely of any sex/language group to feel that

school contributed a lot. French males show strong support for the media as a source of consumer knowledge: more French males view the media as the best source of knowledge (48%) than any other sex/language group and for any other source.

English females (39%) are more likely than English males (32%) to find that the family contributed a lot to their level of consumer knowledge. This perspective is almost exactly reversed for their view of the school as a major contributor (Table 24).

Table 24

Assessment of help received by respondents from school, family, friends and the media by sex and language. Percents and totals based on responses

Source and help received	Language						Total
	English	French Male	Other	English	French Female	Other	
SCHOOL							
A Lot	38.5	35.6	38.2	31.2	21.9	25.2	33.0
Some	38.9	43.3	43.1	42.3	49.1	37.4	41.1
None	22.6	21.1	18.8	26.4	28.9	37.4	25.9
Total	33.7 [530]	5.7 [90]	9.1 [144]	30.3 [477]	7.2 [114]	13.9 [219]	99.9 [1574]
FAMILY							
A Lot	32.1	38.9	25.7	38.9	41.2	21.8	32.9
Some	49.5	42.2	51.4	49.2	44.7	57.7	50.3
None	18.3	18.9	22.9	11.9	14.0	20.5	16.8
Total	33.6 [529]	5.7 [90]	9.1 [144]	30.3 [478]	7.2 [114]	14.0 [220]	100.0 [1575]
FRIENDS							
A Lot	13.8	16.7	10.7	9.9	9.6	9.1	11.5
Some	51.0	50.0	58.6	49.3	63.2	55.9	52.7
None	35.2	33.3	30.7	40.9	27.2	35.0	35.8
Total	33.7 [529]	5.7 [90]	8.9 [140]	30.4 [477]	7.3 [114]	14.0 [220]	100.0 [1570]
MEDIA							
A Lot	30.4	47.8	36.1	24.4	22.8	22.4	28.4
Some	51.0	38.9	47.9	54.6	57.9	51.1	51.6
None	18.5	13.3	16.0	21.0	19.3	26.5	19.9
Total	33.6 [529]	5.7 [90]	9.1 [144]	30.2 [476]	7.2 [114]	14.1 [223]	99.9 [1576]
No. of Cases	89	15	24	80	19	38	265
No. Possible Responses	534	90	144	480	114	228	1590
Missing Cases		1			3		4

Totals may not equal 100% due to rounding

Table 25 compares sex/language profiles' perception by sources that "helped a lot". The table ranks the four sources of knowledge for each profile from the highest to the lowest by percent of responses. School and/or the family occurs in the first two ranking positions for all profiles. Friends are consistently ranked the lowest.

"Other" and French females have lower percent responses supporting any of the sources as helping a lot with one exception. The French female ranks the family as highest with 41%, a percent of responses only equalled by the French male. The French male ranks school third as a source of help with a percent of responses higher than two profiles: English and "other" females, who rank school first or second. The family ranks lower for "other" males and females both in ranking and in percent of responses compared to the English and French profiles.

Table 25

Assessment of help received: a comparison between sex/language profiles by sources that "helped a lot"

PROFILE	Sources that "helped a lot" [percent responses]			
	HIGHEST %	< - - - - -	- - - - -	> LOWEST %
ENGLISH male	School 39	Family 32	Media 30	Friends 14
female	Family 39	School 31	Media 24	Friends 10
FRENCH male	Media 48	Family 41	School 36	Friends 17
female	Family 41	Media 23	School 22	Friends 10
OTHER male	School 38	Media 36	Family 25	Friends 11
female	School 25	Media 22	Family 21	Friends 9

PART 5

Attitudes and Behaviour**Attitudes Towards Saving Money**

Education and emergencies are the important reasons for saving. Marriage and "saving because the family expects you to" are reasons held to be of least importance, though still held by nearly half and a third of the sample respectively. Reasons for saving money are listed in order of importance in Table 26.

Table 26

Percentage of respondents who consider specific reasons for saving money as very or moderately important

Reasons	N	Very or moderately important
To pay for education	268	93%
Take care of emergencies	268	89
To buy something not affordable now	268	65
To earn interest on the money	267	64
To avoid using credit	268	63
Because you like money in the bank	268	62
To get married	266	49
Because your family expects you to	266	33

Attitudes Towards Price as an Indication of Quality

Thirty-two (32) percent of respondents judged that price was usually or always a good indicator of quality; 52% that it was sometimes a good indicator of quality and 17% that price was seldom or never a good indication of quality. (Appendix E).

Shopping Behaviour

Three questions (9, 11, and 12) probed the probable behaviour of respondents in specific circumstances while shopping. Caution as consumers was demonstrated most strongly in three situations. More than half the respondents said they would return unsatisfactory merchandise; while half of the sample reported they would obtain several estimates before agreeing to expensive repairs or services. Finally, only 14% considered seeing a product advertised on TV was usually or always an important reason for buying it. It should be noted that a considerable proportion of respondents stated that they had had no experience with the last four shopping practices listed in Table 27.

Table 27

Behaviour of respondents in specific shopping situations

N = 269

Shopping Situation	Behaviour			Total
	Always or Frequently	Sometimes or Never	No Experience	
Compare label information on similar products	41%	57%	2%	100%
Return unsatisfactory merchandise	57	40	3	100
Buy brand names even if costing more	39	60	1	100
Seeing advertised on TV is an important reason in choosing to buy	14	85	1	100
Check quality & performance ratings in consumer reports before a major purchase	25	58	17	100
Check reputation of company before expensive repair or service agreement	37	41	32	100
Complain to manager or owner if service unsatisfactory	28	49	23	100
Obtain other estimates before expensive repairs or service	50	22	28	100

Responses about shopping behaviour when buying a stereo indicated that 86% would not buy the first stereo they liked; 97% would definitely or probably check out different stores and almost as many (93%) would ask a friend's advice. Far fewer (41%) would be interested in a

salesperson's advice. Seventy-four (74) percent of the respondents would definitely or probably check consumer magazines before buying. Forty-four (44) percent would definitely or probably only consider buying widely advertised brands. (Table 28)

Table 28

Distribution of responses predicting shopping behaviour when buying a stereo

Action	Definitely/Probably Would	Probably/Definitely Would Not	Total
Buy 1st you like	14.5 [39]	85.5 [230]	100.0 [269]
Check prices & models at different stores	97.0 [261]	3.0 [8]	100.0 [269]
Ask a friend's advice	92.9 [249]	7.1 [19]	100.0 [268]
Take salesperson's advice	40.9 [110]	59.1 [159]	100.0 [269]
Read about stereos in consumer magazines	73.6 [198]	26.3 [71]	99.9 [269]
Consider only widely advertised brands	43.8 [118]	56.1 [151]	99.9 [269]

Totals may not equal 100% due to rounding

Respondents' Behaviour to Protect Themselves as Consumers

Results are reported for those whose responses indicated they had had the opportunity to act to protect themselves as consumers in specific circumstances. Those respondents who indicated that they had no experience with the action described are not included in the results presented in Table 29. Seventy-five (75) percent of the respondents kept sales slips and 87% kept warranties most of the time. Twenty-seven (27) percent most of the time complained by returning to the store if dissatisfied, but 20% stated that they never returned to the store with a complaint. Only 14% reported that they wrote to the company regional or national office when receiving unsatisfactory service from the company, while 47% never took such an action to protect themselves as a consumer. Only 15% stated that they had taken complaints ignored by a business to a federal or provincial consumer affairs department or a consumer agency.

Results indicate that the more effort the consumer action requires and the further a complaint might be taken by the consumer, the fewer the respondents who had any experience. All 269 respondents in the sample had experienced the opportunity of keeping sales slips, while only 80 respondents had a complaint that could have been sent to a government consumer affairs department or a consumer agency to protect their consumer interests. Scores achieved in the consumer protection section of the questionnaire were lower than all other sections except finances.

Table 29

Consumer protection behaviour*

Behaviour	Frequency of action			Row Totals
	Most Times	Some Times	Never	
Keep sales slips	74.7% [201]	20.4% [55]	4.8% [13]	99.9% [269]
Keep warranties	88.6 [234]	9.5 [25]	1.9 [5]	100.0 [264]
Complain to store if dissatisfied	26.7 [52]	53.3 [104]	20.0 [39]	100.0 [195]
Write to head office if necessary if service is unsatisfactory	14.0 [18]	39.5 [51]	46.5 [60]	100.0 [129]
If complaint ignored, send details to govt. consumer affairs dept. or consumer agency	15.0 [12]	23.8 [19]	61.3 [49]	100.1 [80]

* respondents included in this table are only those who had experienced the actions described

PART 6

Perception of Consumer Education**The Need for Consumer Education in the School Curriculum**

Respondents were asked to agree or disagree with two opposing arguments for and against courses in consumer education being offered as part of their education program. The responses to the two arguments matched almost 100%; those respondents who supported the argument for consumer education in school did not support the argument that consumer education is of no benefit as part of the school curriculum. The results clearly indicate that a very large majority feel that consumer education could and should be taught. (Table 30)

Table 30

Distribution of responses supporting consumer education in the school curriculum

Response	N	Percent
Support	249	92.9
Does not support	10	3.7
Undecided	9	3.4
Total	268	100.0

PART 7**Data Reduction Analysis**

The objective for this part of the analysis is to develop a quick method to assess the level of consumer knowledge. Such an instrument is pedagogically useful to identify within a student population those who have acquired some knowledge and skills in this subject and those who are disadvantaged for any reason. To achieve this objective it is necessary to reduce the number of items required, while maintaining the effectiveness of the instrument, as a measure of the level of students' consumer knowledge. Two methods have been tried; both methods will be examined here although the first has not produced satisfactory results.

Method 1: Scaling Analysis

It was hoped that a number of questionnaire items measuring a common dimension, which might be termed "consumer knowledge status", could provide a cumulative ordering of the items making it possible to rank respondents by their level of consumer knowledge.

The 108 questions which measured consumer knowledge were ordered for each topic section according to their indices of difficulty. This index is measured as the proportion of students who answered an item correctly, thus a higher proportion indicates an easier item. This index is commonly used in education as a measure of difficulty for items. Forty of the items with a difficulty index between .20 to .75 were included in scaling attempts. (Table 31)

A successful scale would have resulted in a consistent order for scoring correct responses amongst students in the sample. No such order was discovered. Scaling was attempted for each topic section independently and for all topics combined. Results with this selected group of responses were not encouraging or indicative of finding a quick method of assessing the level of consumer knowledge by this method; therefore the procedure was discontinued.

Method 2: Item Analysis: Development of the Short Questionnaire

Forty of the 108 items used to obtain a consumer knowledge score on the questionnaire were selected as listed in Table 31. Each of these items met the same criteria defined in Method 1. The discrimination index for each item listed was not less than .20; this index measures the difference between the proportion of the top 27% and the proportion of the bottom 27% who answered items correctly.

Table 31

Difficulty and discrimination indices for forty selected items measuring consumer knowledge

Question	Topic	Discrimination index [>20]	Difficulty index [<75]
SECTION A			
2g	Behaviour	.33	.74
2j	Behaviour	.42	.64
7c	Behaviour	.34	.65
SECTION B			
13a	Contracts	.45	.74
13d	Contracts	.26	.46
13e	Contracts	.45	.29
13h	Contracts	.34	.28
13i	Contracts	.47	.39
14	Contracts	.31	.44
SECTION C			
16b	Economics	.28	.73
16d	Economics	.93	.51
16e	Economics	.41	.69
18	Economics	.33	.18
20d	Economics	.43	.75
20g	Economics	.51	.54
20h	Economics	.37	.37
SECTION D			
21c	Finances	.53	.51
21d	Finances	.37	.36
22a	Finances	.47	.43
22b	Finances	.67	.47
22d	Finances	.61	.35
23	Finances	.44	.32
24d	Finances	.41	.50
25b	Finances	.27	.31
25c	Finances	.36	.28
25e	Finances	.36	.28
26	Finances	.31	.19
SECTION E			
27	Consumer protection	.25	.75
28c	Consumer protection	.27	.31
30d	Consumer protection	.31	.74
31b	Consumer protection	.24	.36
32	Consumer protection	.28	.37
34a	Consumer protection	.27	.66
34b	Consumer protection	.29	.59
34d	Consumer protection	.34	.55
SECTION F			
35a	Purchases	.30	.58
35c	Purchases	.30	.60
36	Purchases	.42	.68
37	Purchases	.39	.35
38	Purchases	.47	.61

Correlation Matrix and Factor Analysis

Correlations were used as a guide to select the fewest number of items to achieve effective discrimination. The highest correlation between topic areas is .54 between the topic on consumers' understanding of the relationship between economics and the marketplace and the topic on personal finance: banking, credit and insurance. These topic areas also have the highest correlation (.79 and .76 respectively) with the overall score for the consumer knowledge questions. The topic area concerning consumer behaviour in the marketplace had the poorest correlation with other topics and with the overall score for the consumer knowledge questions. (Table 32)

Pearson correlation coefficients between the 40 items selected according to item difficulty and discrimination index indicated the strongest correlation among three items on the topic of insurance: Questions 25b, 25c, 25e (Table 33). No other association between the items exceeded a correlation of .36. All 40 items were retained in the short version of the questionnaire.

Factor analysis was used as an heuristic device to attempt to identify if what was being measured and called "consumer knowledge" could be summarized in one or more dimensions. Since the items retained in the "short" questionnaire are not highly correlated, it is not surprising that the factor analysis did not uncover any marked or strong dimension which could explain a high proportion of what is being measured in the consumer knowledge questionnaire. (Table 34). The two dimensions isolated explain only 13.4% of total variance.

Table 32

Pearson correlation coefficients matrix between topic area and total scores for the consumer knowledge questions

N = 269

Scores	A	B	C	D	E	F	All
A Behaviour	1.00	.16	.35	.28	.30	.24	.52
B Contracts		1.00	.44	.46	.22	.22	.64
C Economics			1.00	.54	.37	.36	.79
D Finances				1.00	.33	.29	.76
E Consumer Protection					1.00	.30	.61
F Purchases						1.00	.64
All Topics							1.00

Table 33

Pearson correlation matrix for three items on insurance:
Questions 25b, 25c and 25e

N = 269

Question	25b	Question 25c	25e
25b	1.00	.65	.58
25c		1.00	.58
25e			1.00

Table 34

Factor loadings for consumer knowledge questions
(Varimax rotation)

Question	Topic	Sub-topic	Factor 1	Factor 2	Communality
22b.	Personal Finance	Banking	.530	.251	.343
22d	Personal Finance	Banking	.499	.191	.285
22a	Personal Finance	Banking	.476	.174	.257
23	Personal Finance	Credit	.457	.081	.216
26	Personal Finance	Insurance	.436	.047	.193
13i	Contracts	Credit	.409	.177	.199
25e	Personal Finance	Insurance	.352	.031	.125
20h	Economics	Taxation	.352	.144	.145
13h	Contracts	Credit	.348	.147	.147
21c	Personal Finance	Banking	.298	.277	.166
20g	Economics	Taxation	.270	.267	.144
16b	Economics	Private business	.251	.134	.081
34b	Consumer Protection	Purchases	.237	.152	.079
13d	Contracts	Credit	.233	.090	.062
14	Contracts	Installments	.220	.052	.051
35c	Purchasing	Auto(Decisions)	.156	-.055	.027
36	Purchasing	Information	-.027	.525	.277
16d	Economics	Private Business	.258	.440	.260
2j	Behaviour	Advertising	.114	.421	.190
13a	Contracts	Credit	.233	.385	.203
38	Purchasing	Information	.095	.353	.134
30d	Consumer Protection	Product Safety	-.045	.339	.177
21d	Personal Finance	Banking	.163	.338	.140
7c	Behaviour	Decision-making	.103	.312	.108
20d	Economics	Taxation	.273	.304	.166
13e	Contracts	Credit	.286	.303	.174
16e	Economics	Private Business	.195	.284	.119
27	Consumer Protection	Consumer Action	.090	.277	.085
2g	Behaviour	Advertising	.135	.254	.083
34a	Consumer Protection	Purchases	.055	.250	.065
37	Purchasing	Information	.119	.244	.074
18	Economics	C.P.I.	.243	.243	.118
32	Consumer Protection	Purchases	.005	.230	.053
34d	Consumer Protection	Purchases	.089	.219	.056
24d	Personal Finance	Credit	.163	.178	.058
31b	Consumer Protection	Product Safety	.078	.160	.032
28c	Consumer Protection	Consumer Action	.123	.154	.039
35a	Purchasing	Auto(Decisions)	.127	.135	.034
Factor contributions			4.181	.919	5.100
Percent of total variance			11.0%	2.4%	13.4%

The "Short" Questionnaire: Reliability and Validity

The reduction of 108 items to the 40 items selected to form the "short" questionnaire was examined using discriminant and reliability analyses to determine first whether the items are reliable and consistent in measuring the degree or level of consumer knowledge possessed by respondents. Secondly, to determine if respondents could be classified, based on percent correct responses, into the same groups using the short questionnaire as they would have been using the long questionnaire.

Since no external criterion is available to test item validity, the total score for the questionnaire is used as the internal criterion. This is acceptable because a large number of items are included in the complete questionnaire to measure the level of consumer knowledge and the size of the sample is large.

Internal Consistency and Reliability

Using the same criteria and the fact that reliability coefficient Alpha is equivalent to the Kuder Richardson Formula 21 reliability coefficient for dichotomous variables, the reliability coefficient for the 40 variables used approached that suggested for constructed educational achievement tests, of .90 or higher.(Table 35)

Table 35

Reliability analysis of 40 variables which met specific criteria for indices of difficulty and discrimination

N = 220

Statistics for scale	Mean	Variance	SD
	19.86	43.37	6.59

Reliability coefficients 40 items

Alpha = .8222 Standardized item Alpha = .8242

Discriminant Analysis

Discriminant analysis was used to determine if it is possible to predict new incoming students' group membership concerning their level of consumer knowledge. The instrument used to predict group membership would be a reduced number of variables which could be the short version of the questionnaire. Based on the data obtained for these variables it would be possible to distinguish among three groups i.e. students with high, average or low consumer knowledge levels. The data used as a reference base for the discriminant analysis is the complete set of data generated by the probability sample, that is the total score for the questionnaire, which provides a measure of consumer knowledge.

The sample population was divided into three groups by percent correct scores achieved for consumer knowledge on the complete questionnaire:

- the upper 27%,
- middle group
- the lower 27%.

A total of four discriminant analyses were completed consisting of three "short" questionnaires and a fourth which uses selected respondent characteristics as a measure of assessing probable level of consumer knowledge. The items selected from the questionnaire for the first three analyses are given in figure 4.

Figure 4
List of items used in discriminant analyses¹

Topic					
Behaviour	Contracts	Economics	Finances	Protection	Purchases
2g	13a*	16b	21c*	27	35a
2j*	13d	16d*	21d	28c	35c
7c	13e*	16e*	22a*	30d	36*
	13h	18	22b*	31b	37
	13i*	20d*	22d*	32	38*
	14	20g*	23*	34a	
		20h	24d*	34b	
			25b	34d	
			25c		
			25e		
			26		

¹ Items in boldface were included in the 30 item analysis; items marked with an asterick (*) were included in the 17 item analysis

Analysis 1. 40 items are used from the questionnaire with discrimination indices equal to or greater than .20, and difficulty indices equal to or less than .75 (Tables 31 and 36).

Analysis 2. 17 items are used from the questionnaire which were selected on the basis of a more stringent discrimination index equal to or greater than .40 (Table 37)

Analysis 3. 30 items are used from the above 40 items originally chosen from the questionnaire. The 10 items eliminated were those which, after completion of the first discriminant analysis described, were not included in the stepwise selection because the F level or tolerance was insufficient for further computation. (Table 38)

Since the discriminant analysis uses three groups in each of the analyses, the chance occurrence of being classified correctly is 33.33%.

The 40 items selected as discriminant variables from the questionnaire are 89% successful in classifying respondents correctly for group membership. Success in classifying members of the highest and lowest groups is 93% and 90% respectively. The 17 item questionnaire classifies group membership correctly for 76% of the sample. Using 30 items from the questionnaire as described for Analysis #3 proved to be marginally better than the 40 items and correctly classified group membership for 90% of the sample. Success in classifying members of the highest and lowest groups is 94% and 90% respectively.

Table 36

Prediction of group classification based on 40 out of 108 items measuring consumer knowledge

N = 269

Classification Results

Actual Group	N	Predicted group membership		
		1	2	3
Upper 27%	68	63 92.6%	5 7.4%	0 0.0%
Middle 46%	95	9 9.5%	82 86.3%	4 4.2%
Lower 27%	62	0 0.0%	6 9.7%	56 90.3%
Percent of "grouped" respondents classified :				89.33%
No. excluded (at least 1 discriminating variable is missing)				49

Table 37

Prediction of group classification based on 17 out of 108 items measuring consumer knowledge*

N = 269

Classification Results

Actual Group	N	Predicted group membership		
		1	2	3
Upper 27%	70	54 77.1%	16 22.9%	0 0.0%
Middle 46%	119	18 15.1%	85 71.4%	16 13.4%
Lower 27%	65	0 0.0%	12 18.5%	53 81.5%
Ungrouped cases	1	1 100.0%	0 0.0%	0 0.0%
Percent of "grouped" respondents classified :				75.59%
No. excluded (at least 1 discriminating variable is missing)				14

* includes Item 20c which met the criteria for this analysis

Table 38

Prediction of group classification based on 30 out of 108 items measuring consumer knowledge

N = 269

Classification Results

Actual Group	N	Predicted group membership		
		1	2	3
Upper 27%	68	64 94.1%	4 5.9%	0 0.0%
Middle 46%	95	8 8.4%	83 87.4%	4 4.2%
Lower 27%	62	0 0.0%	6 9.7%	56 90.3%
Percent of "grouped" respondents classified :				90.22% ↑
No. excluded (at least 1 discriminating variable is missing)				44

A similar survey* has recently been completed using an equivalent French CEGEP sample, and early results indicate that the reduced number of items selected on the basis of English CEGEP data classified 86% of the French respondents correctly.

* B. Stafford Smith and E. Jennaway Eaman, untitled (in preparation)

Analysis 4. The fourth analysis used different variables. The ability of selected variables of respondent characteristics was tested to discriminate and classify respondents into consumer knowledge level groups. The variables used are sex and language used in the childhood home. This analysis was completed since the sex and language of respondents had significant effects on consumer knowledge scores. (Table 39)

Using the characteristics of sex and language as variables to distinguish and predict group membership is less successful, achieving overall correct classification for 42% of the students. Correct classification of the upper, middle and lower group was 62%, 31% and 42% respectively.

Table 39

Prediction of group classification based on 2 characteristics of students: sex and language of the childhood home.

N = 269

Classification Results

Actual Group	N	Predicted group membership		
		1	2	3
Upper 27%	71	44 62.0%	22 31.0%	5 7.0%
Middle 46%	126	52 48.4%	39 31.0%	26 20.6%
Lower 27%	72	23 31.9%	19 26.4%	30 41.7%
Percent of "grouped" respondents classified :		42.01%		
No. excluded (at least 1 discriminating variable is missing)		0		

CHAPTER V

DISCUSSION

The survey of a probability sample of 269 students attending English public CEGEPs in the province of Quebec investigated their consumer knowledge, attitudes and behaviour as affected by personal variables. The study is concerned with current knowledge and possible sources of consumer education that are available to and useful for the students.

The sample obtained from the population was adequate. A good rate of return for the survey questionnaires and a conservative determination of the sample size required has resulted in a large sample for the size of the population, especially since the population is homogeneous for age and education. The sampling procedure of random selection with the probability of selection proportionate to size has achieved a sample with representation comparable in general to the student population enrolled in the English public CEGEPs. Thus, generalizations can be made with confidence.

It is noted that some colleges are slightly overrepresented and the proportions of males to females from some college samples are uneven compared to the total sample. However, since not all collegial programs are offered by all colleges, it was judged preferable not to weight college representation because such weightings could distort program

representation. Since the objectives for the research are to survey ~~the total~~ English public CEGEP population as described in the methodology (Chapter III), this imbalance does not invalidate the results for the objectives as stated. In the discussion of some of the results the effect of the sex and the program of enrolment is noteworthy. One example is the high female enrolment in nursing and secretarial science which weights the female career program enrolment and the high representation of "other" language females. Also, a higher male enrolment is noted in commerce, business administration and pure and applied sciences.

The fact of male or female predominance in any instance does not affect the objectives of investigating the need for consumer education at the CEGEP level. Thus, while such over-representations are noted, weighting could introduce distortions rather than solve problems of representation. The sample is therefore accepted as a probability sample drawn with the chance of selection proportionate to size. Finally, since the bias in any sample is lessened as the homogeneity of the population increases, it is important to note that the age and education background of the CEGEP population is very uniform.

The discussion of this study is strongly influenced by the context, that is the Quebec situation as described in Chapter III (Methodology). Canada is a multi-cultural democratic nation, and Quebec within Canada reflects this in the three language groups which are an important consideration in the English CEGEPs.

Consumer knowledge scores obtained clearly indicate a general lack of knowledge in the area of personal finance including banking, credit and insurance, and in the area of consumer protection.

Males in the sample obtain higher scores in general than females. The hypothesis posed that the sex of the respondent affects consumer knowledge scores is found to be true and specifically in the sections on economics and finances. These results may be affected by the higher enrolment of males in the sample in business and commerce programs and the greater proportion of males indicating that they had taken one or more business courses with a consumer education orientation.

The hypothesis that the language spoken in the childhood home affects scores is sustained by the results obtained. Consumer knowledge scores are significantly lower if the language spoken in the childhood home is other than English or French. Speaking a language other than English or French has a more general significance for scores obtained for consumer knowledge than any other respondent characteristic. The association between "other" language and scores is statistically significant for all sections of the questionnaire except contracts both independently and combined as a total score. This could support the argument that the contribution of other sources of consumer education particularly the family, are at present as important as the school for the English and French respondents. "Other" language respondents perceived the family as contributing less to their consumer knowledge than the other two language groups. Informal sources of consumer information are available to all respondents and their families, but

some may be unable to understand or make effective use of such sources, depending on the family background and social environment.

The hypothesis that previous courses with consumer education content or consumer information affect scores again is true. Those respondents who had taken consumer related courses of any type obtained higher total scores, and in particular in the topic areas of finances and purchases. Only business oriented courses independently affect scores obtained. Business courses affect the total score and the score for the section on finances favourably.

Formal sources of consumer knowledge such as consumer education and related courses previously taken were recorded by the respondents in an open ended question. The accuracy of description of these courses varied widely and included courses taken at very different stages of school e.g. Secondary 2-(Grade VIII) Home Economics to CEGEP level courses on consumer chemistry or microeconomics. The option chosen for this research was to categorize courses in general groups. It is recommended that future studies request more specific information regarding course titles, when and where courses were taken, and course content.

Although the information available gives a broad indication of the value of courses, it might be supposed that the more advanced courses most recently taken carry a greater weight i.e. business and economics courses taken at CEGEP.. Hence it is not surprising to find the significant contribution of business courses taken on scores. It is

interesting that economics courses do not significantly improve scores. This lack of significance of economics courses taken has been found in other studies (Langrehr, 1979). Courses other than business courses are not found to contribute significantly independently, although the effect overall is positive since the number of courses taken of any type is significantly associated with scores obtained.

The results raise the question of whether the sex of the respondent, or having previously taken relevant courses particularly business courses provides the explanation for the greater disparity of scores in economics and finances. In the sample, business and commerce programs have a larger male than female enrolment. Respondents enrolled in business and commerce programs are more likely to have taken consumer related business courses which, the results indicate, are significantly associated with mean scores obtained. More studies focussed on this aspect, including a content analysis of courses involved could be helpful in determining the contributions of business courses to consumer knowledge.

Enrolment in pre-university arts, pre-university science, or the career program does not have a significant effect on scores obtained for the questionnaire.

When respondents assess their level of consumer knowledge, males are much more confident of their knowledge than females. The topics in which respondents have the greatest or least confidence are similar for both males and females. The subject area in which very few are

confident is that of establishing and using credit. Fewer than one in five of respondents are satisfied with their knowledge of the relationship between economic conditions and consumer decisions; of the physical and psychological influences on consumer decisions; or are satisfied with their understanding or ability in credit usage and their ability to judge quality and prices of goods and services.

Respondents are more confident about their knowledge to protect their rights as consumers and their ability to protect themselves against fraud and being misled. However, respondents' greater confidence in these areas is not matched by their percent correct responses for the consumer knowledge topic on consumer protection: the mean score for this topic was the second lowest of the six topics covered in the survey. This finding concurs with the Ontario study (Ministry of Consumer and Commercial Relations, 1977) cited in Chapter II (pp. 16-17).

The relationship between scores and self assessment ratings is strong; test statistics all indicate a significant relationship. It would seem possible to classify respondents according to their own rating of their level of consumer knowledge, based on the results of this study. However, it can be argued that the results may have been influenced by the fact that after completing the earlier part of the questionnaire they were more easily able to assess their knowledge.

The contribution to consumer knowledge of the family, the school, the media and friends as perceived by respondents indicates the equal

importance of the school and the family in general; though the school is viewed as of no help at all by more than one in four. The media are regarded as slightly less important and friends are rated lowest as a source of help despite today's assumed strong role of the peer group among the younger generation.

Informal sources of consumer knowledge and information are available in the day to day life experience in the home and the social environment. These sources include the help and influence of the family, friends and peers, and consumer knowledge acquired from various forms of the media. However, the contribution of these sources depends on several factors. First the access to and the ability of the individual to make effective use of the sources available may be very different from student to student. If the language spoken in the home is other than the two official languages, it is possible that less consumer education material will be available, or will be known to be available. Also, the family's own level of consumer knowledge, experience and ability to use such sources will affect the student's exposure to consumer education and is an important variable. Thus, the language spoken in the home and knowledge of either of the official languages of Canada is likely to affect the contribution of the family and home environment. The school and possibly the media may assume a greater importance when the family is less able to contribute to consumer education.

The perception of help received by the different sex and language profile groups varies and few general statements can be made. One of the most interesting differences is the lesser contribution of the

family as a source of help to "other" language respondents. This would support the hypothesis that the families of "other" language students are not exposed to the same sources of information. The lack of fluency in either one of the official languages results in the family being able to contribute less. Thus, for these respondents the school and the media are considered the most useful sources of consumer education and information.

One observation is noteworthy and without an obvious explanation. Females are less likely than males of the same language group to consider they have a lot of help from any source, with the exception of the family. In the absence of other explanations, this phenomenon may be demonstrating the lack of interest often attributed to females in areas i.e. banking, financial management and economics, which are culturally still regarded as a male preserve. In other words females are less likely to be expected or encouraged to pursue information of this type. The fact that, in recent years, financial management courses and personal finance books are advertised as especially for women may be a result of this need for women to close the information gap in an area which traditionally has been accepted as a male domain.

Measurement of knowledge is an objective assessment of respondents' possession of factual information and recognition of rational consumer behaviour to achieve any given objective. The study of attitudes and behaviour in this study is limited to responses as an indication of beliefs, values and behavioural intent, or recording respondents' perception of previous behaviour in a described situation.

The most important reasons for saving money for respondents were the immediate cost of getting an education and having enough money to take care of emergencies. Social expectations of saving to get married and compliance to family wishes are not a priority for the respondents.

There were some inconsistencies in the responses related to shopping behaviour. Most respondents are sensitized to the possible influence of advertisements: they would not regard T.V. advertisements as an important reason for choosing a product; this scepticism is confirmed in the high percent correct scores obtained on questions concerning advertising. Consumer behaviour is more rational when the result appears to the respondent to be of more immediate benefit, such as keeping warranties, returning unsatisfactory merchandise, researching and checking before buying a stereo. The common factor here might be seen as "sticking up for your rights" and "getting the best deal". Actions which are concerned with the broader issue of consumer responsibilities and of less immediate or individual benefit, such as writing to the head office, to government consumer affairs departments or to consumer agencies, are much less likely to occur. Respondents' consumer behaviour is more concentrated at the lower level of the continuum described by Bannister and Monsma (1982: 8) and discussed in Chapter II (pp. 23-24). Consumer education received has not influenced consumer behaviour to "participate as citizens" or "influence change".

One inconsistency occurs in a comparison of the responses to two similar questions asked: only one respondent would always or frequently check consumer reports for quality and performance before

making major purchases, for every three respondents who would definitely or probably read about stereos in consumer magazines before buying a stereo. "Checking consumer reports" may conjure up a more daunting task than "reading about stereos in a consumer magazine". An alternative explanation, is that in the first question the respondent is accurately reporting previous shopping behaviour, and in the second question is reporting what seems to be sensible behaviour before buying a stereo.

A second inconsistency occurs in a comparison of previous shopping behaviour and likely behaviour when buying a stereo. Again for every three respondents who would only consider widely advertised brands of stereos, only one respondent would consider having seen a product advertised on TV as an important reason for buying. Since TV plays such a large role in advertising, this inconsistency is puzzling. However perhaps the magic word is "brand" since a very similar number of respondents would buy brand names despite a higher cost. The responses would seem to indicate a confidence in brand names rather than advertised products per se. Finally, this particular inconsistency could simply reflect that TV advertising does not play a major role in the marketing promotion of stereos.

A third inconsistency is the overwhelming prediction that respondents would ask a friend's advice before buying a stereo, yet results indicate a general discounting of the role friends play in contributing to consumer knowledge. It is suggested in explaining this inconsistency that respondents have not recognized that friends may be

considered as one of several sources of information in their decision making process. Recognizing the value of seeking several different sources of information is part of effective consumer knowledge.

The majority of respondents do not value a salesperson's advice. Traditionally salespersons have been viewed as experts concerning the products or services sold. This finding reflects the trend for salespersons today to no longer become specialists in one sales area.

The perception of the need for consumer education is important. Although it is necessary to demonstrate objectively a need for consumer education by such facts as low scores and the contribution of other relevant courses which include consumer education content, it is also very advantageous that the student population, especially at the post-secondary level, recognize the need. The overwhelming response was that consumer education can and should be taught as part of the school curriculum. Respondents took the questionnaire very seriously; only four questionnaires had to be discarded and the rate of return was high.

The research hypothesis is that students benefit from consumer education both formally through school and informally through their social environment. Courses with consumer knowledge content do improve scores obtained for consumer knowledge. However, none of the courses presently offered are modelled on the new approaches in consumer education suggested, by for example Bannister and Monsma (1982), and reviewed in Chapter II. Though it can be argued that business courses

presently contribute more than any other type of course, the researcher considers that only the group of economic courses can be compared to business courses in this survey as having an identifiable body of content. Courses classified under the consumer orientation were rather eclectic concerning subject matter and included more courses taken at high school. It should also be recognized that while business courses may improve performance in some areas of consumer knowledge, they are unlikely to include some of the new approaches in consumer education content such as consumer rights and responsibilities and citizen participation. It is noted that while societal marketing has become increasingly evident in the past two decades, and may form part of business education courses, the thrust of this approach has been expedient to business interests. Extensive consumer education must further the role of the consumer in public decision making and in influencing change, especially in the target population of educated young adults who can fulfil the role of opinion leaders in the community.

Acquisition of consumer knowledge is affected by the sex of the respondent and the language spoken in the childhood home. Females consistently scored lower than males of the same language group, particularly French and "other" females. Respondents who spoke a language other than the two official languages in the home whilst growing up tended to score lower.

The short 30 item version of the questionnaire is theoretically sound. The statistics for reliability and ability to discriminate are

encouraging and approach those for standardised tests especially as the most conservative statistics were used in the analysis. However, the assumption must be made, if the short questionnaire is used to assess and classify future CEGEP populations, that the population tested remains comparable to the sample.

The researcher has not presently been able to identify the particular dimensions of consumer knowledge. The authors of the 1978 survey conducted in the United States recognized and remarked on the overlapping of content between the topic areas of consumer knowledge (NAEP, 1978). This was confirmed in the current research since factor analysis did not indicate that any "consumer knowledge" dimensions could be identified with any one topic area. Further confirmation is obtained when categorizing questionnaire items according to Bannister and Monsma's classification of concepts (1982). A single question can encompass several concepts. Further research would be useful to isolate and identify the dimensions involved in this subject.

Survey results support the introduction of consumer education at the CEGEP level. Courses with consumer education content have a significant effect on overall performance on the questionnaire. Only business oriented courses have an independent effect on the total score obtained for the questionnaire. However several factors are noted concerning the effect of these courses. First, business course enrolment was predominantly male, and males scored consistently higher than females. Second, business courses had been taken more recently and at a more advanced level than many of the other courses listed by

respondents. Also though business courses significantly affected scores for the section on finances, they did not affect scores for the other five sections. Finally, it is reasonable to conclude that business courses are business oriented and do not include the new approaches in consumer education now generally accepted and recommended as represented by the classification of concepts of Bannister and Monsma (1982). However it is recognized that business courses currently provide more appropriate content than economics courses. This concurs with previous studies (Langrehr, 1979) in which economics courses were not found to improve consumer competencies. The nature of appropriate content included in consumer related courses should be investigated further.

Several content areas are pinpointed by poor performance scores recorded for the questionnaire and/or by the respondents' perception of a need based on their self assessment of knowledge, understanding or ability. The areas particularly noted are first, finances including banking, insurance, establishing and using credit; second, consumer protection including appropriate consumer actions, product safety and consumer purchases; third, the interrelationship of consumer decisions and economic conditions which encompasses the areas of public decision making and economic democracy. Consumer education can be classified as a critical social science (Brown, M. 1985), and an ecosystem perspective of the interaction of the individual and the family with the community, the nation and the world is appropriate and applicable for consumer education curricula.

CHAPTER VI

SUMMARY AND CONCLUSIONS

The context for this study is the Quebec situation and the objectives are to provide a base for the development of a consumer education curriculum at the CEGEP level. The investigation was considered necessary because no formal curriculum in consumer education is available in the public CEGEP system. The English CEGEP population forms a minority group within the Quebec CEGEP system. Following the analysis of a study of an equivalent French CEGEP sample currently underway by another investigator, the findings of the two studies will be incorporated to assist in curriculum planning. Consumer education has been recognized both by academics and politicians (Introduction: 8) as a necessary part of universal education. Some aspects of consumer education are more meaningful when introduced to students as maturing adults who can recognize the significance of course content. Since students are often restricted in their senior high school years to choosing pre-requisite courses for CEGEP entrance, courses made available to CEGEP students enrolled in all programs would provide access and satisfy a need for consumer education at an appropriate time. This study provides a first step in the assessment of the level of students' consumer knowledge, the sources of consumer information and education available; and in addition determining if the objective measures of consumer knowledge concur with perceived abilities and needs.

The results of the survey clearly indicate insufficient consumer knowledge in the area of personal finance including banking, insurance and credit, and in the area of consumer protection as reflected by the

scores obtained and reinforced by respondents' perception of their abilities. Respondents generally found that the family and the media are as useful as the school in contributing to their consumer knowledge. The exception to this is for those who spoke a language other than French or English in the childhood home; far fewer in this group assessed that they received much help in this area from the family.

Respondents who had taken any previous courses with consumer education or related content, notably business courses, have higher scores than those who had not taken any courses. This is particularly true in the general area of finances which includes credit usage and insurance. Scores for the section on finances of the questionnaire are low. A large majority of respondents perceived a need for knowledge about establishing and using credit.

The language spoken in the childhood home proved to be the most important variable influencing the level of consumer knowledge, followed by the sex of the respondent. Respondents who are disadvantaged in their level of consumer knowledge were likely to speak a language other than the two official languages whilst growing up, and/or to be female.

Students' self assessment is highly correlated with their knowledge scores. The conclusion may be drawn that this accurate self assessment and the almost unanimous approval to incorporate consumer education as part of the CEGEP curriculum indicates acceptance of both their needs and own perceived inadequacies in the consumer content area.

Few conclusions can be drawn relating attitudes to behaviour and/or

knowledge. The researcher recognizes the limited focus on attitudes because of the nature and scope of the investigation. Behavioural responses concerning consumer responsibilities, when immediate individual benefit is unlikely, are limited to consumer complaints at the local retailer level and do not generally extend to the broader concerns of consumer advocacy and citizen participation.

It would be advantageous to pursue further research into the nature and content of present courses offered which make significant contributions to scores obtained. Further research is also required to explain the nature of the disadvantage for females, and of a language other than French or English, and how these disadvantages may be compensated for or removed.

The short version of the questionnaire is pedagogically useful to identify students who, for whatever reason, are disadvantaged and have special needs in consumer education. It could also identify students who are capable of benefiting from enriched courses; such courses could explore some of the wider implications of consumer rights and responsibilities and citizen participation.

There is no current standardized method available to measure consumer skills or knowledge; therefore, assessing the level of consumer knowledge necessary for any individual to function effectively in the socioeconomic environment tends to be relative and subjective. This research is a first step from this subjective judgement to objective measurement.

It is recommended that consumer education be available for all CEGEP

students enrolled in pre-university arts or science and career programs. Courses that already exist tend to be directed to the needs of specific programs and are constrained to appropriate content and approach for the needs of that program e.g. business courses by their nature are unlikely to orient content to the consumer's viewpoint. Therefore, it is recommended that consumer education courses should be included as an integral part of CEGEP curriculum in the social sciences and independent of business or commerce programs. Social science courses as presently grouped in the CEGEP course offerings provide the most appropriate place for consumer education. It is also noted that courses which had been introduced independently by CEGEP teachers and provided consumer education content were in the social sciences.

Although any courses with consumer education content taken were shown to affect scores, no one type of course affected all topic sections. Concepts for consumer education have undergone substantial changes and development in recent years. The evidence to prove the value of the new approaches in consumer education is not available yet. The results of the survey point to definite student shortcomings both through objective assessment, and by subjective respondents' self assessment and perception of their ability and needs. The following topics covered in the survey can be considered as inadequately covered by courses offered in the Quebec CEGEP curriculum: finances including banking, credit and insurance; consumer protection including knowledge of product safety, appropriate consumer action for redress. More than 80% of the sample assessed as insufficient their ability to establish and use credit; their understanding of the relationship between

economic conditions and consumer decisions; their knowledge of the physical and psychological influences on consumer decisions, and their ability to judge quality and prices.

Two types of courses are recommended to fill the gaps apparent from the survey results, and to encompass the new approaches to consumer education cited in the literature review, specifically the Bannister and Monsma classification of concepts. The first type would concentrate on broader issues concerning **the consumer in the marketplace** and include the issues of consumer protection, consumer rights and responsibilities, and the role of the consumer in the market and in public decision making. The second type would focus more specifically on **personal and family finance**: the knowledge and skills required to function effectively in the financial and economic environment.

The nature of consumer education could benefit from a multidisciplinary approach; however, it would be advantageous to have teachers who are able to retain the consumer's viewpoint as the priority and also present an open examination of the rights and responsibilities for all in seeking to achieve an economic democracy. A single competent teacher who can communicate this "way of thought" would be preferable to specialists who could not.

The importance is emphasized of providing adequate education to promote informed consumer decision making and understanding of the nature of the marketplace and the rights and responsibilities of all the parties involved. Citizen participation, especially in public decision making, must be part of the economic democracy of a nation.

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APPENDIX A

The United States Survey: Consumer Topics and General Subjects Covered in Consumer and Maths Assessments

NOTE: subjects CAPITALIZED and in boldface are those included in the Quebec Survey.

BEHAVIOUR

- *ADVERTISING
- *DECISION MAKING
- *SHOPPING

CONTRACTS

- *CREDIT CARDS
- *INSTALLMENTS
- *Rental
- *Warranties

ECONOMICS

- BUSINESS
- Employment
- FLUCTUATIONS
- Government Policy
- Marketing
- Money and Income
- PRICES
- SUPPLY AND DEMAND
- TAXES

Energy

- Attitudes
- Conservation
- Consumption
- Control
- Sources

FINANCES

- *BANKING (SAVING AND CHECKING)
- *Budgeting
- *Cost Calculations
- *CREDIT

Math (Basic Math Assessment)

- Calculating:
 - Earnings
 - Finance Charges
 - Miles per Gallon
 - Percent Discount

- Profit
 - Sales Tax
 - Simple Interest

- Purchase Problems(Price and Amount)
- Reading Graphs and Statements

PURCHASES

- *Appliances
- *AUTO
- Burial
- *Clothing
- Education
- *FOOD
- Housing
- *INFORMATION
- *Medicine

PROTECTION/REDRESS/RIGHTS

- CONSUMER ACTIONS
 - *Housing
 - *Legal Actions
 - Organizations
- *PRODUCT SAFETY
- *PURCHASES

National Assessment of Educational Progress (1978).

*Subjects also covered in consumer portion of Basic Life Skills Assessment.

APPENDIX B

Three Approaches Classifying Consumer Education

A brief overview of three approaches from Europe, the United States, and Denmark classifying consumer education content in the IOCU publication, Promoting Consumer Education In the Schools (Hellmann - Tuitert, 1985).

1. Key concepts for Consumer Education Content as suggested by the Council of Europe.
 1. Needs
 2. Resources
 3. Household Budget
 4. Fixed Expenses and Taxes
 5. Products (Technical Features, Notion of Quality, Price)
 6. Services
 7. Distribution
 8. Advertising and Marketing
 9. The Market and its Control (legal, social and commercial aspects)
 10. Consumer Information
 11. Health Protection (statutory and non-statutory)
 12. Culture and Leisure
 13. Living Conditions and the Natural Environment
 14. Place and Role of the Consumer in Economic Life and Society

Source: Consumer Education in the Schools, a working document of the Commission to the Council of Europe, 1981.

2. Key concepts for Consumer Education Content as suggested by Bannister and Monsma

- 1.0 Decision Making
 - 1.1 External Factors Affecting Consumer Decisions
 - 1.2 Personal Factors Affecting Consumer Decisions
 - 1.3 Decision - Making Process
- 2.0 Resource Management
 - 2.1 Financial Planning
 - 2.2 Purchasing
 - 2.3 Conserving
- 3.0 Citizen Participation
 - 3.1 Consumer Protection
 - 3.2 Consumer Advocacy

Source: Bannister R. and C. Monsma, 1982. Classification of Concepts in Consumer Education, Monograph 137. Cincinnati: South-Western Publishing Co.

3. Jensen's Four Functions of Consumer Education

- 1. Society focussed
- 2. Producer focussed
- 3. Consumer focussed
- 4. Policy focussed

Source: Jensen, H.R., 1980. Socially Oriented Consumer Education. Aarhus University. Aarhus, Denmark.

APPENDIX C

1. Sample of Guidelines Given for Administering the Questionnaire
 2. Copy of the Questionnaire
-

1.

SURVEY OF CONSUMER KNOWLEDGE AND BEHAVIOUR

**GUIDELINES FOR THE SELECTION OF RESPONDENTS AND
THE ADMINISTRATION OF THE QUESTIONNAIRE**

Administration.

The questionnaire can be completed in class or in the student's own time. It would be appreciated if arrangements could be made for the completed questionnaires to be collected for eventual return to me.

The nature and purpose of the survey are explained to the respondents in the introduction on the first page of the questionnaire. General and specific instructions are given throughout, consequently no help should be needed other than reinforcing these instructions. For example, the fact that this is not a test, although mentioned twice, might be emphasized; that it is most important to complete the questions without assistance from any source; also, that total anonymity will be maintained.

48 Questionnaires supplied for distribution.

cont...

Selection of respondents:

The most important criteria in selecting students for the sample is the program in which they are enrolled. Using the list of programs specified below, please choose courses which are usually restricted to students enrolled in these programs until the sample number has been met.

Programs from which the sample of students may be chosen

1. Social Sciences (Arts).
2. Social Sciences (Arts).

I would like to thank you most sincerely for your help in administering my survey. I intend to prepare a short summary of the results and would be delighted to send you a copy if you would so wish. If I can help you in any way in the administration of the questionnaire or by answering any further questions you may have, please call me at Macdonald College [514 457-2000 local 218, if no answer local 214].

SURVEY OF CONSUMER KNOWLEDGE AND BEHAVIOUR.

INTRODUCTION:

THE LIFE OF THE CONSUMER IN THE MARKETPLACE TODAY IS GROWING INCREASINGLY COMPLEX. ELECTRONIC TECHNOLOGY HAS AFFECTED ALMOST EVERY ASPECT OF OUR LIVES, IN MONEY MANAGEMENT, SUPERMARKETS, EDUCATION, WORK AND ENTERTAINMENT.

WE ARE ALL FACING SITUATIONS AND DECISIONS WHICH DID NOT EXIST EVEN A DECADE AGO. HOW ARE WE GOING TO COPE EFFECTIVELY WITH THIS OVERLOAD OF NEW INFORMATION, NEW PRODUCTS, NEW MATERIALS, NEW TECHNOLOGY?

THIS SURVEY IS PART OF A RESEARCH PROJECT BEING CONDUCTED AT MCGILL UNIVERSITY, AS A WAY TO TRY TO JUDGE CONSUMER NEEDS FOR EDUCATION AND INFORMATION TO HELP THEM TO BE ABLE TO MAKE EFFICIENT USE OF THE MARKETPLACE.

THE FOLLOWING QUESTIONNAIRE IS NOT A TEST, IT IS AN ATTEMPT TO ASSESS CONSUMER KNOWLEDGE AND BEHAVIOUR. PLEASE ANSWER THE QUESTIONS AS FRANKLY AS POSSIBLE AND WITHOUT ASSISTANCE FROM ANY SOURCE, SINCE WE WISH THE SURVEY TO REFLECT YOUR PERSONAL KNOWLEDGE AND OPINIONS.

THANK YOU FOR YOUR PARTICIPATION AND COOPERATION WITHOUT WHICH THIS INVESTIGATION CANNOT HAPPEN. THE 40 MINUTES YOU SPEND COMPLETING THIS QUESTIONNAIRE IS A VERY REAL CONTRIBUTION TO FUTURE CURRICULUM DEVELOPMENT AND IS GREATLY APPRECIATED.

PLEASE REMEMBER THIS IS NOT A TEST. IF YOU ARE NOT SURE OF AN ANSWER DO NOT GUESS, CHOOSE THE RESPONSE "I DON'T KNOW". ALSO, PLEASE IGNORE THE NUMBERS IN BRACKETS AT THE END OF EACH QUESTION, THESE ARE TO ASSIST THE TABULATION OF RESULTS.

THE QUESTIONNAIRE STARTS HERE:

THE FIRST TWELVE QUESTIONS ARE ABOUT THE BEHAVIOUR OF CONSUMERS IN THE MARKETPLACE. TOPICS INCLUDE ADVERTISING, DECISION-MAKING AND SHOPPING.

QUESTIONS: 1 TO 12

ESTIMATED TIME: 11 mins

1. Is it possible for someone to be influenced by an advertisement without being aware of it? [CHECK ONE ANSWER]

1. Yes []
 2. No []
 3. I don't know []
 [1.1][1.19]

2. Here are some statements about advertising. Is each statement correct or incorrect? [CHECK ONE ANSWER BESIDE EACH STATEMENT]

	CORRECT (1)	INCORRECT (2)	I DON'T KNOW (3)
A. Advertising helps to increase sales and lower prices for a new product.	[]	[]	[]
B. Consumers have to pay for advertising in product prices.	[]	[]	[]
C. Generally, only high quality products are advertised.	[]	[]	[]
D. Companies that advertise more produce better products.	[]	[]	[]
E. Advertising information can be misleading.	[]	[]	[]
F. Advertisements often try to imply large differences between products where there are only small differences.	[]	[]	[]
G. Advertising is used to increase loyalty to a particular brand of product.	[]	[]	[]
H. It is difficult for a new business to compete in an industry where large amounts are spent on advertising.	[]	[]	[]
I. Advertisements can give useful information.	[]	[]	[]
J. For some products, production costs are less than advertising costs.	[]	[]	[]

[1.1][1.20-29]

3. John saw an advertisement in which a famous hockey player recommended a cologne for men. Which of the following statements would most likely be accurate and which would be inaccurate? [CHECK ONE ANSWER BESIDE EACH STATEMENT]

	ACCURATE (1)	INACCURATE (2)	I DON'T KNOW (3)
A. The player's comments probably represented the feelings of most hockey players.	[]	[]	[]
B. The player is probably an expert on comparing colognes.	[]	[]	[]
C. The player is probably getting some kind of payment for making his recommendation.	[]	[]	[]
D. The advertising company is probably concerned with having the viewer associate the cologne with someone famous.	[]	[]	[]
E. The player's recommendation probably means it's the best on the market.	[]	[]	[]

[1.1][1.31-35]

4. Here are some reasons to save money. How important is each of them to you? [CHECK ONE ANSWER BESIDE EACH REASON]

	VERY IMPORTANT (1)	MODERATELY IMPORTANT (2)	NOT VERY IMPORTANT (3)	NOT AT ALL IMPORTANT (4)
A. To buy something you can not afford to buy now.	[]	[]	[]	[]
B. To take care of emergencies.	[]	[]	[]	[]
C. To pay for an education.	[]	[]	[]	[]
D. To get married.	[]	[]	[]	[]
E. Just because you like to have money in the bank.	[]	[]	[]	[]
F. Because your family expects you to save.	[]	[]	[]	[]
G. To earn interest on the money.	[]	[]	[]	[]
H. To avoid using credit to buy something.	[]	[]	[]	[]

[1.2][1.36-43]

5. A person usually considers the price of a product before deciding whether or not to buy it. Is each of the following statements correct or incorrect? [CHECK ONE ANSWER BESIDE EACH STATEMENT]

CORRECT INCORRECT I DON'T KNOW
(1) (2) (3)

- A. A person who is buying a refrigerator for the first time, and knows little about refrigerators, is more likely to think that "higher price means better quality" than someone who knows a lot about refrigerators.

[] [] []

- B. People with low incomes are more likely to use special "cents-off" coupons from magazines or newspaper ads for foods than are people with middle to high income.

[] [] []

- C. When choosing a brand of food, people with middle to high incomes are more likely to use information on price per unit of weight or volume than people with low incomes.

[] [] []
[1.2][1.45-1.47]

6. A person who is deciding which type of a product to buy (for example, brand of toothpaste, make of car, brand of computer) may consider many brands and many features of each brand. At the other extreme, he or she may consider only 1 or 2 brands or features of each brand. Each of the following statements is about how people decide which brand to buy. Is each statement correct or incorrect? [CHECK ONE ANSWER BESIDE EACH STATEMENT]

CORRECT INCORRECT I DON'T KNOW
(1) (2) (3)

- A. When people are buying inexpensive items like toothpaste, they will usually consider more types of the product than when buying expensive items like cars.

[] [] []

- B. The number of different brands or makes a person will consider depends on the type of product being purchased.

[] [] []

- C. Whether someone considers many features or only a few is usually influenced by how busy or hurried the person is at the time.

[] [] []
[1.2][1.48-1.50]

7. Here are some reasons why consumers behave as they do. Is each statement correct or incorrect? [CHECK ONE ANSWER BESIDE EACH REASON]

CORRECT INCORRECT I DON'T KNOW
(1) (2) (3)

- A. Often the main reason shoppers change brands is to try something different.

[] [] []

- B. Shoppers are more interested in quickly and easily making a choice than in determining which product is best for them.

[] [] []

- C. Sometimes the main reason shoppers buy a product is because they feel that their friends will be impressed if they own that product.

[] [] []
[1.2][1.51-53]

8. Most consumers generally make comparisons between different brands of food by comparing the price per unit of weight or volume. [CHECK ONE ANSWER]

1. Correct []
 2. Incorrect []
 3. I don't know []
 [1.2][1.55]

9. For each of the following questions the answer choices are "ALWAYS", "FREQUENTLY", "SOMETIMES", "NEVER", or "NO EXPERIENCE WITH THE ACTIVITY". Check one response beside each statement that best describes how often it applies to YOU.

	ALWAYS (1)	FREQUENTLY (2)	SOMETIMES (3)	NEVER (4)	NO EXPERIENCE (5)
A. When you go shopping, do you compare information given on the labels of similar products?	[]	[]	[]	[]	[]
B. When you buy merchandise that is unsatisfactory, do you return the merchandise?	[]	[]	[]	[]	[]
C. When you go shopping, do you purchase brand name products even if they cost more than other products?	[]	[]	[]	[]	[]
D. Is the fact that you saw a product advertised on TV an important reason in choosing to buy it?	[]	[]	[]	[]	[]
E. Before making a major purchase, do you check its quality and performance rating in a consumer report publication?	[]	[]	[]	[]	[]
F. Before agreeing to an expensive service or repair, do you check the company's reputation?	[]	[]	[]	[]	[]
G. If you receive unsatisfactory service from a company or store, do you complain to the manager or owner of the place that provided the service?	[]	[]	[]	[]	[]
H. Before agreeing to an expensive service or repair do you get estimates from several places?	[]	[]	[]	[]	[]

[1.3][1.56-63]

10. How often is the price of an item a good indicator of its quality?
[CHECK ONE ANSWER]

1. ALWAYS	[]
2. USUALLY	[]
3. SOMETIMES	[]
4. SELDOM	[]
5. NEVER	[]

[1.3][1.65]

11. You are considering buying a new stereo. Would you do each of the following: [CHECK ONE ANSWER BESIDE EACH STATEMENT]

	DEFINITELY WOULD (1)	PROBABLY WOULD (2)	PROBABLY WOULD NOT (3)	DEFINITELY WOULD NOT (4)
A. Buy the first one you like.	[]	[]	[]	[]
B. Check prices and models at several different stores.	[]	[]	[]	[]
C. Ask a friend's advice.	[]	[]	[]	[]
D. Take the salesperson's advice.	[]	[]	[]	[]
E. Read about stereos in a consumers magazine.	[]	[]	[]	[]
F. Consider only a widely advertised brand.	[]	[]	[]	[]

[1.3][1.66-71]

12. The following are actions that consumers can take to protect themselves. Indicate how often you take each action described. If you have never had any experience with the action described, indicate this.
[CHECK ONE ANSWER BESIDE EACH ACTION DESCRIBED]

	MOST TIMES (1)	SOMETIMES (2)	NEVER (3)	NO EXPERIENCE (4)
A. Keep copies of sales slips after making a purchase of a product or a service.	[]	[]	[]	[]
B. Keep copies of warranties when purchasing a product or service involving a warranty.	[]	[]	[]	[]
C. Complain directly to the owner or manager of a store when dissatisfied with a product or service.	[]	[]	[]	[]
D. Write to officials of a company at their regional or national office if necessary when receiving unsatisfactory service from the company.	[]	[]	[]	[]
E. When your consumer complaint is ignored by a business, send details of your complaint to federal or provincial consumer affairs department and/or a consumer protection agency.	[]	[]	[]	[]

[1.3][2.1-2.5]

THE NEXT THREE QUESTIONS ARE CONCERNED WITH CONTRACTS INVOLVED IN CREDIT CARDS AND PAYMENTS BY INSTALLMENTS.

QUESTIONS 13 TO 15

ESTIMATED TIME : 4 MINS

13. In Quebec, which of the following statements about a credit card are true and which are false? [CHECK ONE ANSWER BESIDE EACH STATEMENT]

- | | TRUE
(1) | FALSE
(2) | I DON'T KNOW
(3) |
|--|-------------|--------------|---------------------|
| A. The use of a credit card may involve interest charges. | [] | [] | [] |
| B. The credit card company can legally inform you they have increased your credit limit if they consider you have a good record for repaying your debts. | [] | [] | [] |
| C. The use of a credit card lessens the necessity of carrying a lot of cash when shopping or travelling. | [] | [] | [] |
| D. Some companies may legally issue credit cards to people who have not applied for them. | [] | [] | [] |
| E. All credit cards, whether they are department store, bank owned or oil company cards compute interest and charges for using credit the same way. | [] | [] | [] |
| F. A credit card enables you to buy things when you are short of cash. | [] | [] | [] |
| G. If you pay your credit card bill after the due date, it will cost you more money. | [] | [] | [] |
| H. As long as you pay the minimum amount required by the due date you will not have to pay any interest charges. | [] | [] | [] |
| I. For every sale in which a bank credit card such as Visa or Mastercard is used, the retailer pays a charge to the bank. | [] | [] | [] |

[2.1][2.7-15]

14. Bill and Linda were relaxing at home in Sherbrooke when a young salesman came to the door with pots and pans for sale. They decided to buy a set and signed a contract which resulted in a bill for \$400.00. A few days later Linda saw similar utensils for sale in a department store for less than half the price. Which one of the following actions would be the best for Bill and Linda to take in order to cancel the contract? [CHECK ONE ANSWER]

- | | |
|--|-----|
| 1. Tear up their copy of the contract, and send it back to the company. | [] |
| 2. Hire a lawyer to cancel the contract legally within 10 days of receiving their copy of the contract. | [] |
| 3. Telephone the salesman immediately to call off the deal. | [] |
| 4. Wait a week to give themselves time to think about the best action to take. | [] |
| 5. Cancel the contract by registered letter within 10 days of receiving their copy of the signed contract. | [] |
| 6. I don't know. | [] |

[2.2][2.16]

15. Kathy purchased a new stereo on an installment plan recently. Before signing an installment contract should Kathy do each of the following?
[CHECK ONE ANSWER BESIDE EACH STATEMENT]

	YES (1)	NO (2)	I DON'T KNOW (3)
A. Check that all blank spaces are filled in or not applicable in the contract.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B. Check that the schedule of payments and total amount payable (in dollars and cents) is included in the contract.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C. Ignore the details because all the terms and conditions of the contract are written to protect the consumer.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D. Check that the credit charges and the annual % interest rate are stated in the contract.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E. Obtain an exact copy of the contract.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F. Make sure she understands all the provisions of the contract before signing it.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			[2.2][2.18-23]

THE NEXT FIVE QUESTIONS ARE ABOUT CONSUMERS UNDERSTANDING OF THE
RELATIONSHIP BETWEEN ECONOMICS AND THE MARKETPLACE.

QUESTIONS 16 TO 20

ESTIMATED TIME: 4 MINS

16. Which of the following statements about most Canadian private businesses are accurate and which are inaccurate? [CHECK ONE ANSWER BESIDE EACH STATEMENT]

	ACCURATE	INACCURATE	I DON'T KNOW
A. Private businesses are established to produce goods and/or services for which people are willing to pay.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B. Private businesses can continue to exist indefinitely without making profits.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C. Private businesses expect to earn profits in return for risking their money capital.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D. Private businesses are guaranteed a profit by the government.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E. Competition generally makes businesses more efficient.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			[3.1][2.24-28]

17. Which of the following is correct? [CHECK ONE ANSWER]. Inflation is an economic condition in which:

1. more dollars are needed than before to be able to buy the same amount of goods and services.	<input type="checkbox"/>
2. the value of the dollar increases and can buy more.	<input type="checkbox"/>
3. salaries go up and each dollar buys more goods and services.	<input type="checkbox"/>
4. salaries go down and each dollar buys more goods and services.	<input type="checkbox"/>
5. I don't know.	<input type="checkbox"/>
	[3.3][2.29]

8.

18. If the consumer price index (C.P.I.) is reported as 140, this means which of the following:
[CHECK ONE ANSWER]

- 1. prices for consumer goods and services went up 140%. []
- 2. the average consumer is spending \$140 per week for purchases. []
- 3. prices for consumer goods and services were 40% higher than wages when the index was 100. []
- 4. an assortment of goods and services that cost consumers \$100 when the index was 100 now cost \$140. []
- 5. I don't know. []

[3.7][2.31]

19. Which of the following would probably happen to the price of orange juice when a frost reduces the orange crop, assuming the demand for orange juice stays the same? [CHECK ONE ANSWER]

- 1. As the supply of oranges goes down, the price of orange juice goes up. []
- 2. As the supply of oranges goes down, the price of orange juice goes down. []
- 3. The supply of oranges does not affect the price of orange juice. []
- 4. I don't know. []

[3.8][2.32]

20. Which of the following are mainly supported by taxes and which are not?
[CHECK ONE ANSWER BESIDE EACH ORGANISATION]

	MAINLY SUPPORTED BY TAXES	NOT MAINLY BY TAXES	I DON'T KNOW
A. National parks.	[]	[]	[]
B. Public schools.	[]	[]	[]
C. Movie theatres.	[]	[]	[]
D. Major league baseball teams.	[]	[]	[]
E. Highways.	[]	[]	[]
F. Better Business Bureau.	[]	[]	[]
G. National Film Board of Canada.	[]	[]	[]
H. Canadian Red Cross.	[]	[]	[]
I. Police departments.	[]	[]	[]

[3.9][2.33-41]

THE NEXT SIX QUESTIONS ON PERSONAL FINANCE ARE CONCERNED WITH BANKING, CREDIT AND INSURANCE.

QUESTIONS 21 TO 26

ESTIMATED TIME: 5 MINS

21. Which of the following statements about savings accounts are accurate and which are inaccurate. [CHECK ONE ANSWER BESIDE EACH STATEMENT]

	ACCURATE (1)	INACCURATE (2)	I DON'T KNOW (3)
A. A savings account pays interest at regular intervals on money deposited.	[]	[]	[]
B. The interest rates on savings accounts are the same at every bank or lending institution.	[]	[]	[]
C. The formula for computing the interest that savings accounts earn is the same at all banks.	[]	[]	[]
D. When money is deposited and withdrawn frequently from a savings account, less interest will be earned if it is in a daily interest savings account than if it is in a monthly interest savings account.	[]	[]	[]

[5.1][2.43-46]

22. Which of the following statements about chequing accounts are accurate and which are inaccurate? [CHECK ONE ANSWER BESIDE EACH STATEMENT]

	ACCURATE (1)	INACCURATE (2)	I DON'T KNOW (3)
A. No chequing accounts pay interest on money deposited.	[]	[]	[]
B. Some chequing accounts offer free cheques for accounts which maintain a certain minimum balance.	[]	[]	[]
C. The first account a person opens in a bank has to be a chequing account.	[]	[]	[]
D. Under certain circumstances, for example with a specified minimum balance, some chequing accounts may pay the same percentage interest as some savings accounts.	[]	[]	[]

[5.1][2.47-50]

23. Which one of the following USUALLY charges the highest rate of interest on a loan? [CHECK ONE ANSWER]

1. Insurance company.	[]
2. Local bank.	[]
3. Personal finance company.	[]
4. Credit union.	[]
5. Caisse populaire.	[]
6. I don't know.	[]

[5.4][2.51]

24. Joanne wants to buy a colour TV. She can save money to buy the TV with cash or she can buy the TV on credit. Which of the following statements about credit usage are accurate and which are inaccurate? [CHECK ONE ANSWER BESIDE EACH STATEMENT]

	ACCURATE (1)	INACCURATE (2)	I DON'T KNOW (3)
A. She can have the TV sooner if she buys on credit.	[]	[]	[]
B. If she uses credit and makes all payments when due, she can build up a good credit rating.	[]	[]	[]
C. She will get a better warranty if she uses credit.	[]	[]	[]
D. She will have less income left free to spend if she uses credit.	[]	[]	[]
E. If she uses credit her fixed expenses will be increased.	[]	[]	[]

[5.4][2.53-57]

25. The statements below are true of EITHER term OR whole life insurance. What type of life insurance is described in each part? [CHECK ONE ANSWER BESIDE EACH STATEMENT]

	TERM (1)	WHOLE LIFE (2)	I DON'T KNOW (3)
A. The premiums cost more for the same dollar value coverage.	[]	[]	[]
B. It has a built-in savings feature.	[]	[]	[]
C. The premiums increase when the policy is renewed at regular intervals.	[]	[]	[]
D. It allows someone to buy more coverage with a limited income.	[]	[]	[]
E. The insured person may borrow on the policy.	[]	[]	[]

[5.5][2.58-62]

26. A deductible clause in an insurance policy is a provision which states which one of the following? [CHECK ONE ANSWER]

1. The part of expenses that the insured person must pay on an insurance claim, and beyond this amount the insurance company will pay. []
 2. The part of the premium that can be claimed as a tax deduction. []
 3. The amount the insured can deduct from his premium if no claims are made in a given year. []
 4. The part of expenses covered by insurance that will be paid by the insurance company. []
 5. I don't know. []
- [5.5][2.63]

THE FOLLOWING 7 QUESTIONS INVOLVE CONSUMER PROTECTION : ACTIONS TAKEN BY CONSUMERS, PRODUCT SAFETY AND PURCHASES.

QUESTIONS 27 TO 33

ESTIMATED TIME: 6 MINS

27. You are unhappy with a product you bought and want your money back or credit made to your account. The following four steps can be used to resolve your complaint.

- A. Call a third party such as a consumer assistance organization or Better Business Bureau.
- B. Ask to speak to the manager in an effort to settle the dispute by yourself.
- C. Collect your receipts or sales slips or cancelled checks as proof of your purchase.
- D. File papers in a small claims court to sue the merchant to return your money or give you credit on your account.

To be most effective, some steps should be taken before others. What is the best order of steps to take to resolve your complaint? [CHECK ONE ANSWER]

- 1. B,A,C,D []
 - 2. A,B,C,D []
 - 3. C,D,B,A []
 - 4. C,B,A,D []
 - 5. I don't know []
- [7.1][2.65]

28. Is each of the following statements correct or incorrect? [CHECK ONE ANSWER BESIDE EACH STATEMENT]

- | | CORRECT
(1) | INCORRECT
(2) | I DON'T KNOW
(3) |
|--|----------------|------------------|---------------------|
| A. Product complexity and variety make it difficult for consumers to evaluate quality. | [] | [X] | [] |
| B. While there is an increasing number of laws to protect consumer interests, consumers are largely unaware of their rights. | [] | [] | [] |
| C. Government agencies established to protect consumer rights are often influenced by business interests. | [] | [] | [] |
- [7.1][2.66-68]

29. A. It is sometimes argued that there is no need for family economic and consumer education in school, because people will spend money however they want to and ignore what they've learned in school classes. Do you agree with this argument? [CHECK ONE ANSWER]

1. Yes []

2. No []

3. I don't know []

- B. It is sometimes argued that there is a need for family economic and consumer education in school, because people can learn to spend their money more wisely and school classes help them to do so. Do you agree with this argument? [CHECK ONE ANSWER]

1. Yes []

2. No []

3. I don't know []

[7.1][3.1-2]

30. Cheryl wants to buy her mother an electrical appliance that will be safe for her mother to use. Does each of the following guarantee that the appliance meets minimum electrical safety standards? [CHECK ONE ANSWER BESIDE EACH STATEMENT]

	DOES GUARANTEE SAFETY (1)	DOES NOT GUARANTEE SAFETY (2)	I DON'T KNOW (3)
A. A seal of approval from a well-known magazine.	[]	[]	[]
B. The salesperson's statement that the appliance is safe.	[]	[]	[]
C. The Canadian Standards Association seal of approval or tag on the appliance.	[]	[]	[]
D. A 12-month warranty on the appliance.	[]	[]	[]

[7.4][3.3-6]

31. Below are statements regarding the care labelling of clothing and fabrics. Is each statement true or false? [CHECK ONE ANSWER BESIDE EACH STATEMENT]

	TRUE (1)	FALSE (2)	I DON'T KNOW (3)
A. Canadian law does not require a permanent care label on clothing and fabrics.	[]	[]	[]
B. Clothes labelled as non-flammable are permanently non-flammable.	[]	[]	[]
C. Sleepwear for men and women must be labelled regarding flammability.	[]	[]	[]
D. Textile fibres must be identified by their generic or chemical name.	[]	[]	[]

[7.4][3.7-10]

32. Marie saw an advertisement for a hair dryer in the newspaper. When she went to the store to buy the advertised dryer, the salesperson told her that it was of poor quality. He suggested that she purchase a different, more expensive model. What should Marie do? [CHECK ONE ANSWER]

1. Report what happened to the appropriate federal or provincial consumer authority. []
2. Ask to see the more expensive hair dryer. []
3. Leave the store and take no action. []
4. Thank the salesperson for being so honest. []
5. I don't know []

[7.5][3.12]

33. A man came to your home and said he was from the town's housing inspection agency. He showed you his identification card and asked to inspect your furnace. About a week later, you received a call saying your furnace did not meet the town's required specifications. The caller told you to contact a certain company to make the needed repairs at your expense. What would be the BEST action for you to take first? [CHECK ONE ANSWER]

1. Call the furnace company that the inspector recommended. []
2. Call the town's housing inspection agency to see if the man is an authorized inspector. []
3. Contact a legal authority to find out your rights in this case. []
4. Ask the Better Business Bureau to give you a list of accredited furnace repair companies. []

[7.5][3.13]

34. Mike went to the supermarket for a particular item advertised as being on sale. When he arrived at the store he found that the advertised product was sold out. Which of the following actions would be appropriate for him to take in order to PROTECT HIS CONSUMER RIGHTS? [CHECK ONE ANSWER BESIDE EACH STATEMENT]

- | | APPROPRIATE
ACTION
(1) | INAPPROPRIATE
ACTION
(2) | I DON'T
KNOW
(3) |
|---|------------------------------|--------------------------------|------------------------|
| A. Wait until the product goes on sale again. | [] | [] | [] |
| B. Ask for a raincheck. | [] | [] | [] |
| C. Don't shop in the store anymore. | [] | [] | [] |
| D. Ask for a substitute item of similar quality at the sale price. | [] | [] | [] |
| E. Complain to the manager. | [] | [] | [] |
| F. Purchase the item at the regular price when the store restocks it. | [] | [] | [] |

[7.5][3.14-19]

THE NEXT FOUR QUESTIONS ARE ALSO ABOUT PURCHASES AND HOW CONSUMERS MAKE THEM.

QUESTIONS 35 TO 38

ESTIMATED TIME: 3 MINS

35. Which of the following actions are important to take before buying a new car and which are not important? [CHECK ONE ANSWER BESIDE EACH STATEMENT]

	IMPORTANT (1)	NOT IMPORTANT (2)	I DON'T KNOW (3)
A. Don't consider any car priced above the average price of similar cars advertised for sale in the newspaper.	[]	[]	[]
B. Check an annual used car review in an auto magazine or consumer report.	[]	[]	[]
C. Look at the used car price books used by car dealers and banks.	[]	[]	[]
D. Have the mechanic of your choice check the car before making a purchase.	[]	[]	[]
E. Test drive the car before buying.	[]	[]	[]
F. Be sure all promises made by the dealer are put in writing and signed.	[]	[]	[]

[8.2][3.21-26]

36. Which of the following kinds of information about two packages of the SAME kind and quality of product would tell you which one was the better buy? [CHECK ONE ANSWER]

1. The size of the packages. []
2. The one that is "on special" this week. []
3. The one that costs less per gram of net weight. []
4. The one that has a "cents off" label on it. []
5. I don't know. []

[8.6][3.27]

37. Which one of the following is the correct description of the term "UNIT PRICING"? [CHECK ONE ANSWER]

1. Each manager in a chain of stores sets the price of products independently of other managers. []
2. In addition to the total price for the package of some goods, the price per g, ml, or kg (or other appropriate measure) is also given. []
3. Prices are set for each new shipment received in the store, for example, prices are set for each new crate of lettuce or case of peanut butter. []
4. Prices are set for some fixed unit of time, generally a month, and are only changed at the end of that unit of time. []
5. I don't know. []

[8.6][3.29]

38. Which of the following would be the best source of information about the quality of brand name products? [CHECK ONE ANSWER]

1. The Living section of The Montreal Gazette. []
2. Homemaker's magazine. []
3. Protect Yourself magazine. []
4. The manufacturer's information leaflet. []
5. I don't know. []

[8.8][3.30]

THESE LAST 8 QUESTIONS ARE ABOUT YOUR BACKGROUND: RELEVANT COURSES TAKEN AND OTHER SOURCES FOR KNOWLEDGE YOU FEEL YOU HAVE ACQUIRED.

QUESTIONS 39 TO 46

ESTIMATED TIME: 5 MINS

39. A. CONSUMER EDUCATION concerns the relationship of the consumer to the economic system, effective methods of buying and using goods and services, competent money management, and the protection of human rights. Have you ever taken a course that DEALT SPECIFICALLY with CONSUMER EDUCATION?

1. YES []
2. NO []

B. CONSUMER INFORMATION concerns understanding the relationship between the consumer and the economic system, and understanding concepts that are important in family finance and family consumer decision making. Have you ever taken a course or courses that did not deal specifically with consumer education but did help you to learn considerable CONSUMER INFORMATION?

1. YES []
2. NO []

If your answer to A or B is YES, what was the name of the course or courses?

1. _____
2. _____
3. _____

[10.1][3.31-33]

40. A. How would you rate your knowledge of the physical and psychological conditions which can influence consumer decisions in what to buy?
[CHECK ONE ANSWER]

1. VERY GOOD	[]
2. GOOD	[]
3. FAIR	[]
4. POOR	[]

- B. Did any of the following ever contribute to this knowledge?

	A LOT (1)	SOME (2)	NOT AT ALL (3)
a. School	[]	[]	[]
b. Family	[]	[]	[]
c. Friends	[]	[]	[]
d. TV, radio, newspapers, magazines, books	[]	[]	[]

[10.2][3.35-39]

41. A. How would you rate your understanding of the effect that economic conditions and consumer decisions may have on each other? [CHECK ONE ANSWER]

1. VERY GOOD	[]
2. GOOD	[]
3. FAIR	[]
4. POOR	[]

- B. How much do you think the following helped your understanding of this effect?

	A LOT (1)	SOME (2)	NOT AT ALL (3)
a. School	[]	[]	[]
b. Family	[]	[]	[]
c. Friends	[]	[]	[]
d. TV, radio, newspapers, magazines, books	[]	[]	[]

[10.3][3.40-44]

42. A. How much do you know about how to establish and use credit?
[CHECK ONE ANSWER]

- | | |
|-----------------|-----|
| 1. A GREAT DEAL | [] |
| 2. SOME | [] |
| 3. LITTLE | [] |
| 4. NOTHING | [] |

B. Did the following ever help you in learning about how to establish and use credit?

- | | A LOT
(1) | SOME
(2) | NOT AT ALL
(3) |
|--|--------------|-------------|-------------------|
| a. School | [] | [] | [] |
| b. Family | [] | [] | [] |
| c. Friends | [] | [] | [] |
| d. TV, radio, newspapers, magazines, books | [] | [] | [] |
- [10.4][3.46-50]

43 A. Do you feel that you know enough to avoid being misled or cheated when buying goods and services? [CHECK ONE ANSWER]

- | | |
|-------------------------|-----|
| 1. YES | [] |
| 2. SOME, BUT NOT ENOUGH | [] |
| 3. LITTLE | [] |
| 4. NOTHING | [] |

B. Did the following ever contribute to this knowledge.

- | | A LOT
(1) | SOME
(2) | NOT AT ALL
(3) |
|--|--------------|-------------|-------------------|
| a. School | [] | [] | [] |
| b. Family | [] | [] | [] |
| c. Friends | [] | [] | [] |
| d. TV, radio, newspapers, magazines, books | [] | [] | [] |
- [10.5][3.51-55]

44. A. Do you feel that you know enough to be capable of protecting your rights if you receive goods or services that are unsatisfactory?
[CHECK ONE ANSWER]

1. YES, A GREAT DEAL []
2. SOME, BUT NOT ENOUGH []
3. LITTLE []
4. NOTHING []

- B. Did the following ever contribute to your knowledge?

- | | A LOT
(1) | SOME
(2) | NOT AT ALL
(3) |
|--|--------------|-------------|-------------------|
| a. School | [] | [] | [] |
| b. Family | [] | [] | [] |
| c. Friends | [] | [] | [] |
| d. TV, radio, newspapers, magazines, books | [] | [] | [] |
- [10.5][3.57-61]

45. A. How would you assess your ability to judge the quality and prices of goods and services? [CHECK ONE ANSWER]

1. VERY GOOD []
2. GOOD []
3. FAIR []
4. POOR []

- B. Would you consider that the following contributed to this knowledge?

- | | A LOT
(1) | SOME
(2) | NOT AT ALL
(3) |
|--|--------------|-------------|-------------------|
| a. School | [] | [] | [] |
| b. Family | [] | [] | [] |
| c. Friends | [] | [] | [] |
| d. TV, radio, newspapers, magazines, books | [] | [] | [] |
- [10.6][3.62-69]

46. Do you regularly keep a written record of your expenses?

1. YES []
2. NO []
[10.7][3.70]

52. a) Were you born in Canada? 1. Yes ☐ IF YES GO TO QUESTION 53

2. No ☐

b) How long have you lived in Canada?

1. Less than 2 Years ☐

2. 2 - 5 Years ☐

3. More than 5 Years ☐

[1.11]

53. As you were growing up what was the language most frequently used in your family?

1. English ☐

2. French ☐

3. Other ☐

Please specify other languages spoken _____ [1.12]

54. a) What program are you enrolled in at present? Please specify

b) In what year are you in your CEGEP studies?

1. 1st year ☐

2. 2nd year ☐

3. 3rd year ☐

c) Are you enrolled as a CEGEP student?

1. Full time ☐

2. Part time ☐

[1.13-16]

55. When your studies are completed what are your plans?

1. Get a job ☐

2. Further training ☐

3. University ☐

4. I don't know ☐

[1.17]

=====

THANK YOU!

=====

APPENDIX D

Population and Survey Sample Statistics

English Public CEGEPs in the Province of Quebec: Total Full-time Enrolment, September 1982. (Data used in calculating sample requirements)

a. Summary of enrolment and questionnaire survey statistics

	JOHN ABBOTT	CHAMPLAIN St- Lennox. Lambert	QUEBEC	DAWSON	VANIER Ste- Croix Snow.	TOTAL
Total enrolment	4623	1285	2222	694	7369	3947 2167 22307
As % CEGEP popln	21	6	10	3	33	18 10 101
# Questionnaires distributed	100	28	48	14	158	86 48 482
# Questionnaires returned	46	23	42	13	70	55 24 273
% of total of returned questionnaires	17	8	15	5	26	20 9 100

Totals may not equal 100% due to rounding

b. Summary of enrolment by program and by college

	JOHN ABBOTT	CHAMPLAIN St- Lennox. Lambert Quebec	DAWSON	VANIER Ste- Croix Snow.	TOTAL			
Pre-University Sciences:								
Health	378	115	146	82	277	429	270	1697
Pure & Applied	745	175	292	108	558	602	341	2821
Developmental					101			101
Preparatory					62			62
Science subtotal	1123	290	438	190	998	1031	611	4681
Pre-University Arts:								
Social Science	1137	321	692	177	2583	989	455	6354
Commerce	874	167	443	66	545	581	362	3038
Preparatory					43			43
New School					123			123
Retailing					101			101
Creative Arts	164	36	122		363	144	51	880
Music						138		138
Lang. and Lit.	113	57	42	71	181	147	51	662
General Academi		31	4	52				87
Arts subtotal	2288	612	1303	366	3939	1999	919	11426
Total Pre-University	3411	902	1741	556	4937	3030	1530	16107

continued...

continued...

b. Summary of enrolment by program and by college

Program	CHAMPLAIN				VANIER		TOTAL
	JOHN ABBOTT	Lennox.	St- Lambert	Quebec	Ste- Croix	Snow	
Career:							
Forestry	53						53
Dental Hygiene	74						74
Med. Lab.; Cytotechnol.						109	109
Inhalation Therapy					51		51
Radiogr.; Nucleogr.; and Radiotherapy				47			47
Natural Science					102		102
Farm Management		20					20
Nursing	224				242		730
Chemical Tech.					56		56
Urban & Reg. Land Use	29						29
Civil Tech.					99		99
Architectural Tech.						112	112
Mech. Systems					71		71
Mech. Tech.;							
Drafting					229		229
Electrotechnology					306	171	477
Aircraft Maintenance	74						74
Police Technology	210						210
Child Care					92		92
Special Care (Educ.)		68			205		273
Social Science					86		86
C.R.L.T.					95		95
Documentation Tech.	47						47
Business Admin.	201		179	58	219	238	895
Bus. Admin.-							
Marketing	6				68		74
Finance	3	80			24		107
Secretarial Science	84	56	112	80	137	136	739
Data Processing		123	153		270		546
Fine Arts (prof.)		36	37		66		139
Popular Music	91						91
Prof. Theatre	88				39		127
Ceramics	28						28
Commercial Art					107		107
Interior Design					107		107
Graphics					104		104
Total Careers	1212	383	481	138	2432	917	6200

continued ...

c. Program of Enrolment of the English Public CEGEP Population,
September 1982, compared to the Sample Population.*

Program	% in Population	% in Sample		
		Male	Female	Total
Pre-University Sciences:				
Pure and Applied	12.6	24.4	6.5	15.1
Health Sciences	7.6	9.4	21.7	15.8
All Science Programs	21.0	33.8	28.2	30.9
Pre-University Arts:				
Social Science	28.5	22.0	26.1	24.2
Commerce	13.6	29.1	11.6	20.0
Creative Arts	3.9	0.8	1.4	1.1
Language & Literature	3.0	1.6	0.7	1.1
Retailing	0.5	0.8	0	0.4
All Arts Programs	51.2	54.3	39.8	46.8
Career:				
Business Administration	4.0	8.7	0.7	4.5
Nursing	3.3	0.8	10.1	5.7
Secretarial Science	3.3	0	16.7	8.7
Data Processing	2.4	0	0.7	0.4
Fine Arts	0.6	0	0.7	0.4
Commercial Arts	0.5	0	0.7	0.4
Graphics	0.5	2.4	2.2	2.3
All Career Programs	27.8	11.9	31.8	22.4
Total	100.0	100.0	99.8	100.1
Number of cases	22307	127	138	265

* programs listed in the table are those drawn in the survey probability sample.

1. Percent Correct Responses to Consumer Knowledge Questions

Question #	% correct	Question #	% correct	Question #	% correct
Consumer Behaviour					
1	98.5	15 a	82.4	25 a	6.9
2 a	38.4	b	96.6	b	30.1
b	83.2	c	96.3	c	27.0
c	90.7	d	94.0	d	16.0
d	85.1	e	97.4	e	26.0
e	95.9	f	98.5	26	18.0
f	91.4	Economics		Consumer Protection	
g	72.9	16 a	79.0	27	74.0
h	80.6	b	77.0	28 a	73.0
i	79.7	c	82.5	b	92.0
j	65.7	d	74.0	c	28.0
3 a	91.4	e	68.0	30 a	84.0
b	96.7	17	95.5	b	94.0
c	98.1	18	17.0	c	94.0
d	98.1	19	94.0	d	72.0
e	83.6	20 a	88.0	31 a	10.0
5 a	84.4	b	94.0	b	35.0
b	43.9	c	83.5	c	20.0
c	18.2	d	80.0	d	41.0
6 a	56.7	e	95.0	32	33.0
b	88.1	f	19.0	33	63.0
c	56.9	g	51.0	34 a	67.0
7 a	72.9	h	29.0	b	67.0
b	48.5	i	84.0	c	91.0
c	71.0	Finances		d	59.0
8	26.2	21 a	86.5	e	51.0
Contracts		b	86.0	f	83.0
13 a	78.0	c	47.0	Purchases	
b	7.0	d	37.0	35 a	59.0
c	94.0	22 a	52.0	b	79.0
d	47.0	b	51.0	c	64.0
e	27.0	c	82.0	d	83.0
f	91.0	d	29.0	e	97.0
g	80.0	23	31.5	f	98.0
h	25.0	24 a	68.5	36	69.0
i	37.0	b	90.0	37	35.0
14	46.0	c	83.5	38	61.0
		d	46.0		
		e	26.0		

2. Item Responses to Questions 10 and 46 (Price as an Indication of Quality and Record Keeping Behaviour)

#10: Always [0.7%] Usually [30.9%] Sometimes [51.7%]
 Seldom [14.1%] Never [2.6%]
 #46: Yes [26.6%] No [73.4%]

N=269
 N=267

Appendix F

**Definition of Zones Used to Describe the Location of
English Public CEGEPs in the Quebec Survey**

The following text is directly quoted from the reference listed at the end of this appendix and is part of the section on study zone morphology and definitions.

Census Metropolitan Area (C.M.A.): The Census Metropolitan Area encompasses the main labour market area of a continuous built-up area having 100,000 or more population. Each C.M.A. has an urbanized core consisting of the continuous built-up area, a rural-urban fringe and other municipalities and rural areas within the main labour market area.

Zone 1 - Central Business District

The Central Business District is the major focus for much of a city's social and economic interaction. It is characterized by high concentrations of office employment and retail trade and service outlets, and by small numbers of permanent residents.

Zone 2 - The Inner City

The Inner city is the transition zone of mixed and unstable land uses separating the Central Business District from more durable, mature neighbourhoods.

Zone 3 - Mature Suburbs

The Mature Suburbs encompass an extensive and varied sector of urban residential development. This area displays a wide range of social, economic and physical conditions reflected in a diversity of neighbourhood characteristics and housing quality and design.

Zone 4 - New Suburbs

The concept of "urban sprawl" is inevitably associated with suburban development that took place when the private automobile became the dominant form of transport. . . . These new suburbs were characterized by mass-produced, essentially similar single family dwellings, bungalows and split levels, which became the dominant features of the urban landscape.

Zone 5 - Exurbia

Exurbia . . . can be described as the remainder of the Census Metropolitan Area outside the continuously built-up area. It generally covers a great expanse of the C.M.A. and has a low population density. This zone embraces rural farm land, including market gardening and orchards, along with non-farm uses such as regional parks, quarries, auto wreckers, riding stables, dog kennels, drive-in theatres, and golf courses. The most important facet of this zone, however, may be the villages and towns which serve the immediate rural areas and act as dormitories for commuters seeking the tranquility of "country" life.

Rural: includes all parts of incorporated rural municipalities, unorganized territories, and Indian Reserves having a population density of less than 1.000 per square mile. Typical characteristics are low population density, land in agricultural use, and tracts of undeveloped and wooded land.

Author's Note: Since 1977, the population of Sherbrooke has increased to more than 100,000, thus putting the Lennoxville Campus of Champlain in an urban zone.

Reference: Statistics Canada, Perspective Canada II, A Compendium of Social Statistics 1977. Ministry of Supply and Services Canada. 1977: 189-196.

APPENDIX G

Summary of Courses Taken, as Reported by Respondents, Which Included Consumer Education or Related Content.

Type of course	Course titles as listed by respondents
Consumer Orientation:	Consumer credit Consumer economics Consumer education Consumer behaviour Consumer chemistry Nutrition Family living(High School) Intro to consumer activities (High School)
Economics Orientation:	Economics Microeconomics Macroeconomics Economic geography Initiation de la vie economique
Business Orientation:	Business dynamics Fundamentals of business Marketing Intro to Canadian business Promotion Retailing Sales management Customer services Business law Intro to Quebec law Market research Advertising Business English(High School)
Miscellaneous	"Info. hours (University)" Social problems Chemistry Mass media Chemistry of the world(902) Information analysis Chemistry III Sociology of the family

APPENDIX H

Tables 40 to 63 as Referenced in Results and Analysis

Table 40

Males and females: descriptive statistics for mean scores* and t-test on group differences between means

Topic (max.pts.)	Male (129)		Female (140)		F value	T value	df	2-tail prob.
	Mean	sd	Mean	sd				
Consumer Behaviour (26)	19.4	2.3	18.8	2.6	1.26	1.97	266.7	0.05
Contracts (16)	11.1	2.3	10.7	2.3	1.03	1.25	264.5	0.21
Consumer Protection (20)	12.4	2.6	11.9	2.5	1.08	1.67	263.2	0.96
Purchases (9)	6.4	1.7	6.4	1.5	1.33	0.17	254.5	0.87
Total (108)	72.7	9.3	67.8	10.7	1.31	3.98	266.2	0.00

* Note: raw scores

Table 41

Language spoken in the childhood home and its effect on scores: descriptive statistics for mean scores* and t-test on group differences between means

Topic (max. score)	Other (66)		Language Engl. or French (203)		F value	T value	df	2-tail prob
	Mean	sd	Mean	sd				
Contracts (16)	10.3	2.5	11.1	2.2	1.27	-2.51	100.5	0.014

* Note: raw scores

Table 42

Enrolment in pre-university arts or science programs and its effect on scores: descriptive statistics for mean scores* and t-test on group differences between means

Topic (max. score)	Program of Enrolment				F value	T value	df	2-tail prob
	Science (82)		Arts (124)					
	Mean	sd	Mean	sd				
Consumer Behaviour (26)	18.9	2.6	19.3	2.3	1.30	-1.07	157.5	0.28
Contracts (16)	10.8	2.1	11.1	2.4	1.27	-1.01	187.3	0.31
Economics (17)	12.0	2.8	12.6	2.5	1.25	-1.57	159.7	0.12
Finances (20)	9.2	4.0	10.0	3.2	1.51	-1.52	148.6	0.13
Consumer Protection (20)	12.2	2.2	12.2	2.7	1.54	-0.01	196.1	0.99
Purchases (9)	6.5	1.6	6.3	1.5	1.09	0.72	168.5	0.47
Total (108)	69.6	10.6	71.5	9.5	1.24	-1.34	160.3	0.18

* Note: raw scores

Table 43

Enrolment in career or pre-university programs and its effect on scores:
descriptive statistics for mean scores and t-test on group differences
between means

Topic (max score)	Program of Enrolment				F value	Separate Variance Est.		
	Career		Science & Arts			T	df	2-tail prob
	(59)		(206)					
	Mean	sd	Mean	sd		value		
Consumer Behaviour (26)	18.9	2.5	19.2	2.4	1.09	-0.82	90.7	0.42
Contracts (16)	10.7	2.5	10.9	2.3	1.23	-0.56	86.9	0.58
Economics (17)	11.4	3.3	12.3	2.6	1.53	-2.11	81.0	0.04
Finances (20)	9.1	3.7	9.7	3.6	1.10	-1.13	90.5	0.26
Consumer Protection (20)	11.7	2.6	12.2	2.5	1.12	-1.27	89.8	0.21
Purchases (9)	6.4	1.7	6.4	1.5	1.14	0.09	89.3	0.93
Total (108)	68.2	11.2	70.8	10.0	1.25	-1.59	86.4	0.12

* Note: raw scores

Table 44

Analysis of variance between means of subgroups based on total number of consumer education or related courses taken and mean score for topic section on contracts

Criterion variable - Mean score on section on contracts

Description of subpopulations.

Total # courses taken	N	Mean	SD
0	137	67.2	14.8
1	77	66.2	15.5
2	31	75.2	8.5
3	21	70.0	10.8
4	3	79.2	3.6
Total	269	68.1	14.3

ANALYSIS OF VARIANCE

Variance	SS	df	MS	F	Significance
Between groups	2416.20	4	604.05	3.04	.0179 **
Within groups	52485.63	264	198.81		

** The null hypothesis is accepted at $p = .01$ level.

Table 45

Analysis of variance between means of subgroups based on total number of consumer education or related courses taken and mean score for the topic section on finances

Criterion variable - Mean score on section on finances

Description of subpopulations

# courses taken	N	Mean	SD
0	137	44.6	18.7
1	77	46.8	15.7
2	31	57.1	13.4
3	21	55.0	20.2
4	3	53.3	22.5
Total	269	47.6	17.9

ANALYSIS OF VARIANCE

Variance	SS	df	MS	F	Significance
Between groups	5355.56	4	1338.89	4.37	.0019 **
Within groups	80824.55	264	306.15		

** The null hypothesis is rejected. The difference between the subgroup population means is significant at the $p = .01$ level.

Table 46

Analysis of variance between means of subgroups based on total number of consumer education or related courses taken and mean score for the topic section on purchases

Criterion variable - Mean score on section on purchases

Description of subpopulations

# courses taken	N	Mean	SD
0	137	68.5	17.8
1	77	70.9	17.3
2	31	76.7	15.5
3	21	77.8	14.5
4	3	92.6	6.4
Total	269	71.1	17.4

ANALYSIS OF VARIANCE

Variance	SS	df	MS	F	Significance
Between groups	4203.27	4	1050.82	3.59	.0072 **
Within groups	80824.55	264	306.15		

** The null hypothesis is rejected. The difference between the subgroup population means is significant at the $p = .01$ level.

Table 47

Analysis of variance between means of subgroups based on total number of consumer education or related courses taken and total mean score for the consumer knowledge questions

Criterion variable - Total mean score on the consumer knowledge questions

Description of subpopulations

# courses taken	N	Mean	SD
0	137	63.8	10.7
1	77	64.5	8.7
2	31	71.0	5.2
3	21	68.9	9.8
4	3	76.9	2.6
Total	269	65.4	9.9

ANALYSIS OF VARIANCE

Variance	SS	df	MS	F	Significance
Between groups	2040.16	4	510.04	5.55	.0003 **
Within groups	24263.83	264	91.91		

** The null hypothesis is rejected. The difference between the subgroup population means is significant at the $p = .01$ level.

Table 48

Analysis of variance between means of subgroups based on the number of business courses taken and mean score for the topic section on economics

Criterion variable - Mean score on section on economics

Description of subpopulations

# courses taken	N	Mean	SD
0	217	70.1	16.8
1	26	79.6	8.8
2	20	72.9	19.4
3	1	82.4	.0
Total	264	71.3	16.6
Missing cases	5		

ANALYSIS OF VARIANCE

Variance	SS	df	MS	F	Significance
Between groups	2281.84	3	760.61	2.83	.0390 **
Within groups	52485.63	264	198.81		

** The null hypothesis is accepted at the $p = .01$ level.

Table 49

Analysis of variance between means of subgroups based on the number of business courses taken and mean score for the topic section on finances

Criterion variable - Mean score on section on finances

Description of subpopulations

# courses taken	N	Mean	SD
0	217	45.8	17.9
1	26	55.2	13.9
2	20	60.0	17.8
3	1	30.0	.0
Total	264	47.6	18.0

Missing cases 5

ANALYSIS OF VARIANCE

Variance	SS	df	MS	F	Significance
Between groups	5722.11	3	1924.04	6.27	.0004 **
Within groups	52485.63	264	198.81		

** The null hypothesis is rejected. The difference between the subgroup population means is significant at the $p = .01$ level.

Table 50

Analysis of variance between means of subgroups based on the number of business courses taken and mean score for the topic section on purchases

Criterion variable - Mean score on section on purchases

Description of subpopulations

# courses taken	N	Mean	SD
0	217	69.8	17.5
1	21	79.1	15.5
2	20	76.7	14.8
3	1	88.9	.0
Total	264	71.3	17.4
Missing cases	5		

ANALYSIS OF VARIANCE

Variance	SS	df	MS	F	Significance
Between groups	2945.71	3	981.90	3.33	.0200 **
Within groups	76581.03	260	294.54		

** The null hypothesis is accepted at the $p = .01$ level.

Table 51

Analysis of variance between means of subgroups based on the number of business courses taken and total mean score for the consumer knowledge questions

Criterion variable - Total mean score on the consumer knowledge questions

Description of subpopulations

# courses taken	N	Mean	SD
0	217	64.4	10.0
1	21	69.1	7.7
2	20	70.7	9.0
3	1	75.8	.0
Total	264	65.4	9.9

Missing cases

5

ANALYSIS OF VARIANCE

Variance	SS	df	MS	F	Significance
Between groups	1264.24	3	421.41	4.42	.0047 **
Within groups	24772.46	260	95.28		

** The null hypothesis is rejected. The difference between the subgroup population means is significant at the $p = .01$ level.

Table 52

Self assessment of knowledge of physical and psychological influences on decisions by mean score for consumer knowledge questions and by sex

Question # 40A

"How would you rate your knowledge of the physical and psychological conditions which can influence consumer decisions in what to buy?"

Self Assessment	Respondents		
	Male	Female	Total
N	128	139	267
Very Good	70.1% ¹ 62.2% ² 21.9% ³	69.4% 37.8 12.2	69.8% 100.0 16.9
Good	68.0 50.7 54.7	66.0 49.3 48.9	67.0 100.0 51.7
Fair	65.1 37.3 21.9	59.4 62.7 33.8	61.5 100.0 28.1
Poor	62.6 22.2 1.6	49.8 77.8 5.0	52.7 100.0 3.4
Total	67.7 47.9 100.1	63.4 52.1 99.9	65.4 100.1 100.0
Missing cases	1	1	2

Totals may not equal 100% due to rounding

¹ Percent mean score for the questionnaire

² Row percentages

³ Column percentages

Table 53

Self assessment of respondents' understanding of the interrelationship between economic conditions and consumer decisions by mean score for consumer knowledge questions and by sex

Question # 41A

"How would you rate your understanding of the effect economic conditions and consumer decisions may have on each other?"

Self Assessment	Respondents		
	Male	Female	Total
N	126	140	266
Very Good	72.3% ¹	63.9%	70.0%
	72.2% ²	27.8	100.0 ³
	20.6 ³	7.1	13.5
Good	68.1	65.8	66.9
	48.1	51.9	100.0
	51.6	50.0	50.8
Fair	64.5	61.9	62.9
	36.7	63.3	100.0
	23.0	35.7	29.7
Poor	60.8	52.1	55.4
	37.5	62.5	100.0
	4.8	7.1	6.0
Total	67.8	63.3	65.4
	47.4	52.6	100.0
	100.0	99.9	100.0
Missing cases	3	0	3

Totals may not equal 100% due to rounding

- ¹ Percent mean score for the questionnaire
² Row percentages
³ Column percentages

Table 54

Self assessment of knowledge of credit by mean score for consumer knowledge questions and by sex

Question # 42A

"How much do you know about how to establish and use credit?"

Self Assessment	Respondents		
	Male	Female	Total
N	129	140	269
A great deal	71.4% ¹ 72.7% ² 12.4% ³	73.3% 27.3 4.3	71.9% 100.0 8.2
Some	70.0 54.5 41.9	67.7 45.5 32.1	68.4 100.0 36.8
Little	67.2 40.4 35.7	62.4 59.6 48.6	64.3 100.0 42.4
Nothing	58.8 38.2 10.1	54.0 61.8 15.0	55.9 100.0 12.6
Total	67.6 48.0 100.1	63.3 52.0 100.0	65.4 100.0 100.0

Totals may not equal 100% due to rounding

- ¹ Percent mean score for the questionnaire
- ² Row percentages
- ³ Column percentages

Table 55

Self assessment of knowledge to avoid being misled or cheated
by mean score for consumer knowledge questions and by sex

Question # 43A

"Do you feel that you know enough to avoid being misled or
cheated buying goods and services?"

Self Assessment	Respondents		
	Male	Female	Total
N	129	140	269
Yes	69.4% ¹ 62.9% ² 43.4% ³	67.1% 37.1 23.6	68.6% 100.0 33.1
Some, but not enough	66.6 43.1 53.5	63.7% 56.9 65.0	68.6 100.0 59.5
Little	60.2 15.8 2.3	53.4 84.2 11.4	54.4 100.0 7.1
Nothing	59.9 100.0 0.7	- - -	59.9 100.0 0.4
Total	67.6 48.0 99.9	63.3 52.0 100.0	65.4 100.0 100.0

Totals may not equal 100% due to rounding

¹ Percent mean score for the questionnaire

² Row percentages

³ Column percentages

Table 56

Self assessment of knowledge and ability to protect rights when
dissatisfied by mean score for consumer knowledge questions and by sex

Question # 44A.

"Do you feel that you know enough to be capable of protecting your
interests if you receive goods or services that are unsatisfactory?"

Self Assessment	Respondents		
	Male	Female	Total
N	129	138	267
Yes, a great deal	69.2% ¹ 55.7% ² 26.4% ³	66.8% 44.3 19.6	68.1% 100.0 22.8
Some, but not enough	67.2 49.7 64.3	64.6 50.3 60.9	65.9 100.0 62.5
Little	66.3 32.4 8.5	57.2 67.6 16.7	57.4 100.0 12.7
Nothing	61.6 20.0 0.8	56.4 80.0 2.9	57.4 100.0 1.9
Total	67.6 48.3 100.0	63.5 51.7 100.1	65.5 100.0 99.9
Missing cases	0	2	2

Totals may not equal 100% due to rounding

- 1 Percent mean score for the questionnaire
- 2 Row percentages
- 3 Column percentages

Table 57

Self assessment of ability to judge quality and prices by mean score for consumer knowledge questions and by sex

Question # 45A

"How would you assess your ability to judge the quality and prices of goods and services?"

Self Assessment	Respondents		
	Male	Female	Total
N	126	140	266
Very good	69.1 ¹ 64.0 ² 24.8 ³	67.0% 36.0 12.9	68.0% 100.0 18.7
Good	67.9 50.0 61.2	65.0 50.0 56.1	66.4 100.0 58.6
Fair	64.0 31.6 14.0	59.4 68.4 28.1	60.8 100.0 21.3
Poor	- - -	52.3 100.0 2.9	52.3 100.0 1.5
Total	67.6 48.1 100.0	63.5 51.9 100.0	65.5 100.0 100.1
Missing cases	3	0	3

Totals may not equal 100% due to rounding

¹ Percent mean score for the questionnaire

² Row percentages

³ Column percentages

Table 58

Analysis of variance between means of subgroups based on self assessment of knowledge about physical and psychological influences on decision making

Criterion variable - Mean score for consumer knowledge questions

Description of subpopulations

Assessment value	N	Mean	SD
Very Good	45	69.83%	9.33
Good	138	67.00	8.48
Fair	75	61.54	9.93
Poor	9	52.66	12.58
Missing	2	54.73	3.80
Total	269	65.38	9.91

ANALYSIS OF VARIANCE

Variance	SS	df	MS	F	Significance
Between groups	4041.95	4	1010.49	11.98	.0000 **
Within groups	22262.04	264	84.33		

** The null hypothesis is rejected. The difference between the subgroup population means is significant at the $p = .01$ level.

Table 59

Analysis of variance between means of subgroups based on self assessment of understanding of the interrelationship between economic conditions and consumer decisions

Criterion variable - Mean score for consumer knowledge questions

Description of subpopulations

Assessment value	N	Mean	SD
Very Good	36	69.98%	9.12
Good	135	66.94	9.34
Fair	79	62.85	9.10
Poor	16	55.40	11.03
Missing	3	59.44	7.80
Total	269	65.38	9.91

ANALYSIS OF VARIANCE

Variance	SS	df	MS	F	Significance
Between groups	3291.30	4	822.83	9.44	.0000 **
Within groups	23012.69	264	87.16		

** The null hypothesis is rejected. The difference between the subgroup population means is significant at the $p = .01$ level.

Table 60

Analysis of variance between means of subgroups based on self assessment of knowledge about using and establishing credit

Criterion variable - Mean score for consumer knowledge questions

Description of subpopulations

Assessment value	N	Mean	SD
A great deal	22	71.89%	7.87
Some	99	68.41	8.05
Little	114	64.33	9.39
Nothing	34	55.86	10.50
Total	269	65.38	9.91

ANALYSIS OF VARIANCE

Variance	SS	df	MS	F	Significance
Between groups	5051.33	3	1683.78	21.00	.0000 **
Within groups	21252.67	265	80.20		

** The null hypothesis is rejected. The difference between the subgroup population means is significant at the $p = .01$ level.

Table 61

Analysis of variance between means of subgroups based on self assessment of knowledge to avoid being misled or cheated

Criterion variable - Mean score for consumer knowledge questions

Description of subpopulations

Assessment value	N	Mean	SD
A great deal	89	68.57%	8.57
Some	160	64.94	9.50
Little	19	54.45	11.19
Nothing	1	59.90	.00
Total	269	65.38	9.91

ANALYSIS OF VARIANCE

Variance	SS	df	MS	F	Significance
Between groups	3237.26	3	1079.09	12.40	.0000 **
Within groups	23066.74	265	87.04		

** The null hypothesis is rejected. The difference between the subgroup population means is significant at the $p = .01$ level.

Table 62

Analysis of variance between means of subgroups based on self assessment of ability to protect rights when dissatisfied with goods or services received

Criterion variable - Mean score for consumer knowledge questions

Description of subpopulations

Assessment value	N	Mean	SD
A great deal	61	68.11%	9.11
Some	167	65.89	9.41
Little	34	60.15	10.30
Nothing	5	57.42	7.32
Missing	2	47.94	23.78
Total	269	65.38	9.91

ANALYSIS OF VARIANCE

Variance	SS	df	MS	F	Significance
Between groups	2354.91	4	588.73	6.49	.0000 **
Within groups	23949.08	264	90.72		

** The null hypothesis is rejected. The difference between the subgroup population means is significant at the $p = .01$ level.

Table 63

Analysis of variance between means of subgroups based on self assessment of ability to judge quality and prices

Criterion variable - Mean score for consumer knowledge questions

Description of subpopulations

Assessment value	N	Mean	SD
Very good	50	68.30%	10.56
Good	157	66.44	9.11
Fair	57	60.82	9.70
Poor	4	52.31	7.18
Missing	1	64.76	.00
Total	269	65.38	9.91

ANALYSIS OF VARIANCE

Variance	SS	df	MS	F	Significance
Between groups	2470.60	4	617.65	6.84	.0000 **
Within groups	23833.39	264	90.28		

** The null hypothesis is rejected. The difference between the subgroup population means is significant at the $p = .01$ level.