

CONSUMER EDUCATION KNOWLEDGE OF PROSPECTIVE TEACHERS AT TWO
MANITOBA UNIVERSITIES

by

ANNA TERESA THOR

A thesis
presented to the University of Manitoba
in partial fulfillment of the
requirements for the degree of
MASTER OF SCIENCE
in
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ABSTRACT

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Research in consumer education has predominantly involved probing high school students with tests to determine the amount of knowledge high school students gain from taking consumer education courses. However, little emphasis has been given to the examination of the knowledge of teachers who are selected to teach these consumer courses.

The purpose of this study was to examine a range of factors such as gender, age, marital status, childrearing experiences, consumer management experiences, previous consumer related coursework, major area of study, and feelings of confidence/competence that might have an influence on the knowledge of prospective teachers in consumer studies. Two research instruments were used, a questionnaire and an achievement test entitled the Test of Consumer Knowledge (TCK), to help identify and assess the importance of these factors as related to consumer knowledge of prospective teachers.

The research data were collected from two Manitoba universities, the University of Manitoba, and Brandon University. The sample consisted of certifying students from the Faculty of Education who plan to teach at the secondary school level. The certifying students had the following majors, or teaching electives: business, human ecology, mathematics, science, and social studies. The total sample size was 187, with 159 from the University of Manitoba and 28 from Brandon University. Males made up 51% of the sample and females made up 49%.

Chi-square analysis was used as the major statistical tool to test the hypotheses of the study. The results showed that prospective teachers between ages 28-51 scored significantly better on the Test of Consumer Knowledge (TCK) than the two groups of younger prospective teachers between 20-22, and 23-27. Those subjects who indicated they had many consumer management experiences, which were defined as those experiences that give knowledge and practice in understanding consumer concerns, scored significantly higher on the TCK than those with fewer consumer management experiences. Consumer related coursework, which examines issues such as marketplace transactions, wise credit use, energy conservation, or consumer law, was also found to significantly improve a prospective teacher's performance on the TCK. Respondents self-reported feelings of confidence/competence were also significantly related to performance on

the TCK. Those that had high levels of confidence/competence scored significantly higher on the TCK than those with low levels of confidence/competence. All the above variables were found to have positive relationships with the consumer knowledge of prospective teachers. Human ecology majors scored higher than the other program majors on the Test of Consumer Knowledge, however, no statistical analysis was performed to test for significance due to the variation in program major group sizes. It was not appropriate to group the majors together to do statistical testing because they were distinct groups. The variables of gender, marital status, and childrearing experiences were not found to be significantly related to consumer knowledge using chi-square analysis.

Multiple regression was used to develop a prediction formula that could predict consumer knowledge of prospective teachers using the variables identified in the study. It was found in this study that the variables selected were able to explain 26% of the variation in predicting consumer knowledge of prospective teachers. The prediction formula was not found to be as effective a forecaster of consumer knowledge as an achievement test, however the formula is still at a preliminary stage, and needs further research and development.

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CONTENTS

ABSTRACT iv

ACKNOWLEDGEMENTS vii

page

CHAPTER I 1

 INTRODUCTION 1

 STATEMENT OF PROBLEM 6

 Operational Definitions 7

 Age 7

 Marital Status 7

 Childrearing Experiences 7

 Major 8

 Consumer Management Experiences 8

 Consumer Related Coursework 8

 Feelings of Confidence/Competence 8

 Test of Consumer Knowledge (TCK) 8

 Objectives 9

 Hypotheses 9

CHAPTER II 11

 LITERATURE REVIEW 11

 Studies done in Consumer Education 11

 The Cognitive Domain of Bloom's Taxonomy 12

 Consumer Education Skill Requirements for
 Manitoba 13

 Scope of the Study 15

 Previous uses of Achievement Tests 16

 Present State of Research in Consumer
 Education 18

 Conclusion 21

CHAPTER III 22

 METHODOLOGY 22

 Description of Sample 22

 Research Design and Instrument 23

 Procedure for Data Collection 27

 Data Analysis 28

CHAPTER IV	31
RESULTS	31
Demographic Findings	31
General Findings	32
Sex of Participants	33
Age	33
Consumer Related Courses	34
Consumer Management Experiences	41
Prediction capabilities of Consumer Management Experiences	42
Marital Status	43
Childrearing Experiences	43
Majors	45
Confidence/Competence and Willingness to Teach	45
Prediction Formula	50
CHAPTER V	55
DISCUSSION	55
Gender of Prospective Teachers	55
Age of Prospective Teachers	57
Previous Consumer Related Courses	57
Consumer Management Experiences	58
Consumer Management Experiences as Predictor	59
Marital Status of Prospective Teachers	60
Childrearing Experiences of Prospective Teachers	61
Major Area of Study	62
Confidence/Competence of Prospective Teachers	63
Prediction Formula	65
CHAPTER VI	66
SUMMARY AND CONCLUSIONS	66
Summary	66
Strengths and Limitations of the Study	68
Implications	71
REFERENCES	73

<u>Appendix</u>	<u>page</u>
A.	76
B.	77

LIST OF TABLES

<u>Table</u>	<u>page</u>
1. Age of Prospective Teachers as it relates to Consumer Knowledge	36
2. Mean Test Scores of the Three Age Groups of Prospective Teachers	37
3. Chi-square Analysis for Independent Variables and Test Score	38
4. Distribution of Consumer Related Courses and Mean Test Scores of Prospective Teachers	39
5. Consumer Management Experiences of Prospective Teachers	40
6. Differences in Mean Test Scores of Prospective Teachers as related to Consumer Management Experiences	42
7. Childrearing Experiences of Prospective Teachers as they relate to Mean Test Score	44
8. Mean Test Scores of Prospective Teachers with different Program Majors	47
9. Feelings of Confidence/Competence of Prospective Teachers in Relation to Mean Test Scores	48
10. Chi-square analysis of Feelings of Confidence/Competence and Willingness to Teach	50
11. Multicollinearity between Select Independent Variables	52
12. Multiple Regression for Independent Variables and Test Score	53

CHAPTER I

INTRODUCTION

As society in general and the marketplace in particular have become more complex, the need for consumers to be well informed has increased dramatically. The public school system has been considered an appropriate arena for transmission of this information in the form of consumer education courses. In the United States for example, school administrators, for at least the past decade, have been implementing consumer education courses into the school curricula. In Canada as well, school administrators from several provinces have sought to include consumer education courses in school curricula, at both the elementary and secondary levels. For example, in the last few years the Manitoba Department of Education has attempted to develop new courses in consumer education and to integrate consumer related topics into existing courses in Manitoba schools. Administrators have acknowledged the significance of consumer education as a subject that provides the seeds for teaching students the life skills they require to live and operate successfully in our complex society. The result has been that the status of consumer education has risen to a level that warrants its integration into the school system curriculum.

Before proceeding further, it is necessary to identify what is meant by consumer education. Dalaba (1978) defined consumer education as "the development of the individual in skills, concepts, and understandings required for everyday life to achieve, within the framework of his own values, maximum utilization of and satisfaction from his resources", (Brown, 1983, p. 205). Willet (1979) stated that "Consumer education is an area of study which equips individuals and groups with the knowledge and skills to make effective choices and take action regarding the use and conservation of available resources in the public and private sectors consistent with individual values and societal needs", (Monsma & Bannister, 1979, p. 6). In a Manitoba Department of Education publication, consumer education is defined as "the process of developing skills and understandings in the considered use of personal and environmental resources to responsibly meet human needs and wants", (Idea Bank, K to 6, 1977, p. 1). Essentially, each definition states the same thing about consumer education and what it should achieve. Each definition stresses three elements that consumer education should equip pupils with : 1) knowledge, 2) values, and 3) skills in the face of making consumer decisions.

There are several major factors which have influenced the effectiveness of consumer education programs in the schools. One of these is that consumer education as a subject area has not been in existence long enough for all the problems

to be identified and improved. Considering the way consumer education is defined, one recognizes that it potentially captures a wide range of areas and problems associated with everyday living such as decision-making related to personal money management, buymanship, energy conservation, food buying, advertising, consumer laws, and numerous other areas. In light of the magnitude of consumer studies, consumer educators face an arduous task of teaching effectively in this particular subject area. Secondly, most educators have had very little, if any, training or preparation for teaching consumer education related subjects. There is considerable reluctance among educators to participate in teaching consumer education, possibly because the educators are ill-prepared in the first place. In Manitoba's case, for instance, the curriculum coordinator in the Department of Education stated that teachers designated to teach consumer education feel ineffective and incapable to teach these courses (Parasiuk, 1983).

Using Benjamin S. Bloom's Taxonomy of Educational Objectives, Handbook I: The Cognitive Domain (1956), it becomes possible to understand what may be the cause for teacher's feelings of ineffectiveness and incapability to teach consumer education. Bloom identifies a hierarchy of learning that takes place in the cognitive domain. The elements in this hierarchy are knowledge, comprehension, application, analysis, synthesis, and evaluation such that a learner be-

gins with low level memory skills identified as knowledge, and ends up with high level skills involving evaluation (Popham, 1981). Teaching involves a complex process whereby teachers need to first learn how to adopt skills, attitudes, and cultivate the cognitive knowledge needed to teach students effectively.

This study is concerned with examining whether prospective teachers in Manitoba have some level of knowledge (which is the first level of Bloom's cognitive domain) in consumer studies using a minimum competency or achievement test (Ebel, 1980). Bloom's definition of knowledge has been adopted for this study as that which "involves the recall of specifics or universals, the recall of methods and processes, or the recall of a pattern, structure, or setting" (Popham, 1981, p. 329). According to Bloom, this recall situation is nothing more than remembering appropriate facts or material (Popham, 1981). Only after a person has mastered this level can he/she move on to the next, more complex levels of the cognitive domain. For the purpose of this study it is the knowledge of prospective educators in the field of consumer studies that will be explored.

It is instrumental at this point to suggest that consumer education as a school subject differs from traditional disciplines. A student typically learns about physics, mathematics, history, or chemistry in the classroom. Most information in these disciplines is theoretical and less directly

related to everyday living. Consumer studies, however, is somewhat different. Consumer education, as it was defined earlier, involves the learning of skills and knowledge for everyday living. Consequently, knowledge about consumer issues can be acquired not only in the classroom but also outside the classroom through life experiences. By the same token, prospective teachers can learn about consumer affairs either through subject related coursework, through everyday experiences, or both. This unique situation necessitates that this study examine the sources of knowledge of prospective teachers using other channels. For this reason, this study will research not only whether consumer related courses affect the knowledge of prospective teachers, but whether some selected life experiences correlate with knowledge that prospective teachers have in consumer education. In other words, the purpose of the study is to examine the relationship between consumer education knowledge of prospective teachers and variables such as age, sex, marital status, childrearing experiences, consumer management experiences, and previous coursework.

The results of this study will be useful to school administrators by heightening their awareness of the many variables that influence a teacher's knowledge in the subject area of consumer education thus preparing them to better select certified teachers based on the factors that relate to knowledge of consumer studies. This is especially signifi-

cant in view of the fact that consumer education is becoming a recognized and integral part of high school education.

STATEMENT OF PROBLEM

The purpose of this study is to examine what factors affect the knowledge of prospective teachers in consumer studies, as measured by a test of consumer knowledge. A range of factors have been identified in the literature as being important in the assessment of consumer knowledge of prospective teachers. These factors include such variables as a) gender, b) age, c) marital status, d) childrearing experiences, e) consumer management experiences, f) previous consumer related coursework, g) major area of study, and h) feelings of confidence/competence. In this study, these variables have been identified as the independent variables which shall be tested in an attempt to discover if a relationship exists with the scores of prospective teachers on a test of consumer knowledge. The score of each prospective teacher has been identified as the dependent variable, such that any change in the independent variables will be related to change in the test score, or dependent variable.

Operational Definitions

Age. Prospective teachers between the ages 20-22 will constitute the first age group, prospective teachers between 23-27 years of age will constitute the second group, and prospective teachers between 28-51 years of age will constitute the third group.

Marital Status. This category found in the questionnaire will include married, single, divorced, separated and widowed.

Married refers to those prospective teachers who are legally married, and those living under a common law relationship.

Single refers to those prospective teachers who have never been married.

Divorced, separated, and widowed refers to those prospective teachers who had at one time been married, but are presently either divorced, separated, or widowed.

Childrearing Experiences. Childrearing experiences refers to the experiences involved in raising one's own children. Childrearing experiences will be recognized as experiences that prospective teachers are involved in presently, or in the past, in the case of those with children no longer living at home.

Major. This variable refers to the major area of university study, as reported by the respondent, or what is referred to as one's "teachable subject" in the Faculty of Education.

Consumer Management Experiences. This refers to those events in life whereby one has experienced legal, financial, and social transactions which may give knowledge and practice in understanding consumer concerns. A list of selected experiences was used for the study, and may be noted on Table 5.

Consumer Related Coursework. This refers specifically to any consumer related university credit course that a prospective teacher might have taken at either the University of Manitoba or Brandon University. A consumer related credit course includes any course at university that examines consumer issues such as energy conservation, consumer law, or credit use.

Feelings of Confidence/Competence. This refers to the self-reported feeling of competency, or confidence a prospective teacher indicates that he/she has in teaching consumer education, as measured by the confidence scale in the questionnaire.

Test of Consumer Knowledge (TCK). This test was adopted from Dlabay (1984) from the Scholastic Testing Service and was modified to fit a Canadian setting.

Objectives

The objectives of this study are the following:

1. To measure the consumer education knowledge of Manitoba's prospective teachers in the disciplines of business, mathematics, human ecology, science, and social studies using the TCK.
2. To ascertain whether previous consumer related coursework of prospective teachers will have an effect on their performance on the TCK.
3. To determine whether or not consumer management experiences of prospective teachers have an effect on their performance on the TCK.
4. To determine whether marital status, age, childrearing experiences, gender, and feelings of confidence/competence will have an effect on the prospective teachers' performance on the TCK.
5. To determine whether consumer related courses, and consumer management experiences have a similar effect on the prospective teacher's performance on the TCK.

Hypotheses

1. The group of prospective teachers aged 28-51 are expected to have significantly higher test scores on the Test of Consumer Knowledge than those prospective teachers in the age group 20-22 or 23-27.

2. Male prospective teachers will score significantly higher than female prospective teachers on the TCK.
3. Those prospective teachers who have taken consumer related courses at university will score higher on the Test of Consumer Knowledge than those with no consumer related courses.
4. Those prospective teachers with a high number of experiences in consumer matters will score higher on the Test of Consumer Knowledge than those with few experiences in consumer matters.
5. Experience in consumer matters is a better predictor of score on the TCK than number of consumer related courses taken.
6. Those prospective teachers that are married, or were previously married will score significantly higher than single prospective teachers on the TCK.
7. Irrespective of marital status, prospective teachers who have children will score significantly higher than prospective teachers without children.
8. Human ecology majors will score higher on the TCK than students majoring in business, mathematics, science, and social studies.
9. High scores on the TCK will be exhibited by those teachers who express confidence and willingness to teach consumer education.
10. A prediction formula can be developed that will predict the level of consumer knowledge as effectively as the TCK.

CHAPTER II

LITERATURE REVIEW

The following chapter contains a review of the literature on consumer education, provides a theoretical perspective on the subject, and details the scope of this study.

Studies done in Consumer Education

A search of the literature reveals that research in consumer education has concentrated predominantly on high school students. Researchers have probed consumer education students with tests and follow-up studies in their quest for determining the amount of knowledge students have in consumer matters (Langrehr, 1979, Mayer, 1981). On the other hand, apparently little emphasis has been given to the examination of the knowledge and skills of teachers who are designated to teach consumer courses. Davis (1979) and Garman (1979) both conducted an Autumn 1977 ERIC (Educational Resources Information Centre) search which revealed that there were no studies specifically dealing with teacher preparation for consumer education. Garman (1979) found few comprehensive studies attempting to determine the knowledge level of educators teaching consumer education. For the purpose of this study, an ERIC search was conducted in 1983

and in 1984, and only six studies were found examining the competency of consumer education teachers. It seems reasonable that one must assess teacher's consumer education knowledge before one can make any meaningful assessments about the consumer knowledge of students. In the words of Davis, "it is highly probable that if teachers are better prepared and competent for teaching consumer education, students will become more competent consumers" (Davis, 1979, p.191).

The Cognitive Domain of Bloom's Taxonomy

As stated earlier, Bloom's Taxonomy (1956) is used in this study as a viable tool to help us understand the process in which teachers may become more effective in their fields. The cognitive domain focuses on a person's intellectual skills (Popham, 1981). The six levels of the cognitive domain have been depicted as the following:

1. Knowledge involves the recall of specifics or facts, without any assessment.
2. Comprehension represents the lowest form of understanding, and how one can make use of the material or idea.
3. Application involves the use of abstractions that may be used in the form of general ideas or methods that must be remembered and applied.

4. Analysis involves the breakdown of communication into parts such that the relations between the expressed ideas are made explicit and clear.
5. Synthesis represents the combining of elements and parts so as to constitute a pattern or structure not clearly present before.
6. Evaluation requires qualitative and quantitative judgments about the value of material and methods for given purposes (Popham, 1981).

One can surmise from this that the preparation of teachers involves on the one hand the procurement of knowledge and the ability to apply it and, on the other hand, involves the need to be able to model critical behaviors and skills (Houston & Howsam, 1972; Popham, 1981).

Consumer Education Skill Requirements for Manitoba

In Manitoba, a range of skills and competencies have been selected as important for teachers to possess. For example, in a Department of Education publication called the Idea Bank of Consumer Education Learning Activities for K to 6, (1977), several of Bloom's elements were identified. The department outlines that teachers, besides those teaching kindergarten to grade 6, should be able to demonstrate certain skills in the classroom. Some of the key skills needed for consumer competency are identified as these:

1. Teachers should be getting at the facts, which involves studying information pertinent to consumer education,
2. Teachers should process the information for analysis,
3. In the area of decision-making, teachers should know the current market, should clarify their own values, and should recognize the implications of consumer choices on the environment and the economic system,
4. The teacher should understand marketplace transactions such as legal rights and responsibilities, credit and insurance, money systems, record keeping, bills and budgets, and
5. Teachers must strive to communicate effectively through different channels such as setting up displays and programs, giving talks and lectures, writing reports and producing art works (p. 7).

Upon examining the five points, one recognizes several elements of Bloom's Taxonomy, such as knowledge, comprehension, application, and analysis as the underlying base of the Department of Education publication. Apparently, the emphasis of the key skills are aimed at teachers to develop their cognitive knowledge in consumer education. As well, teachers are required to attain higher levels of the cognitive domain in that teachers must demonstrate an understanding of consumer education concepts, be able to analyze and apply them, and communicate them effectively in a school setting.

Scope of the Study

This study will not be assessing the higher level elements of Bloom's Taxonomy; comprehension, application, analysis, synthesis, and evaluation for various reasons. Some researchers such as Adams & Patton (1981), Heath & Nielson (1974), and Lindsey (1973-74), feel that to appropriately examine a teacher's performance skills one must observe them operating in complex teaching situations. Apparently, the various levels of the cognitive domain can be tested (Popham, 1981), however, to embark on this path would be too large a scope for a single study. Instead this study will examine only the knowledge component of the cognitive domain. This research will measure prospective teachers' knowledge of consumer studies through the use of an achievement test which is referred to as the Test of Consumer Knowledge (TCK). Consumer knowledge in this study is defined as the recall of specifics and facts that are based on major consumer economic topics provided in the TCK. Consequently, this research study cannot make general assessments about the competencies of prospective teachers in Manitoba, but can nonetheless make some valuable observations about the knowledge of prospective teachers in consumer studies.

Previous uses of Achievement Tests

The only evidence available to show that an individual has learned something is to overtly demonstrate that a behavioural change took place. Garman (1977) in his study on the consumer education literacy of prospective teachers used an achievement test to measure the cognitive knowledge of the participants. Dlabay (1984) used an achievement test in his study on consumer education involving 334 students from four Illinois high schools. Carsky, Lytton & McLaughlin (1984) also used an achievement test to assess the change in students' consumer knowledge as a result of a consumer education course. For this study it is assumed, based on the literature, that tests that measure what one knows about a subject are reasonably good indicators of the knowledge requisite to a higher level of cognitive understanding and eventually to effective teaching (Houston & Howsam, 1972).

An achievement test, however, tells very little about a prospective teacher's ability to teach a subject. As F. McDonald aptly stated, "It may be reasonable to assume that a person can teach a subject only if he knows it ; however, it certainly is unreasonable to assume that any person who knows a subject also can teach it" (Houston & Howsam, 1972, p. 59). Medley (1973) also makes a valid claim by stating that "teacher effectiveness is not a unidimensional trait but a very complex one" (p. 43). Consequently, it must be emphasized that this study cannot formulate inferences about

the prospective teacher's abilities to teach consumer education, but can only make statements about the knowledge that prospective teachers have in consumer education as part of Bloom's hierarchy in the cognitive domain.

Some researchers argue that a high level of knowledge in a subject matter is not critical to effective teaching (Medley, 1973; Pigge, 1978; and Popham, 1971); however, according to McDonald, these claims are usually based on anecdotal evidence which show that some untrained person with little knowledge in a subject taught it well (Houston & Howsam, 1972). Yet no one can explain what process takes place for an educator to teach what he/she does, such that either he/she teaches him/herself before teaching others, or maybe he/she learns as he/she teaches (Gage, 1972). In either situation, it is evident that the educator has learned what to teach but through a different process. Nonetheless, most people would agree that they would prefer to be taught by someone who knows more than the basic minimum about a subject he/she is to teach. Fagan and Ponder (1981) found that research supports the idea that, relatively speaking, the better the qualifications of a teacher, the better the student performance.

Present State of Research in Consumer Education

It was stated earlier that consumer education is becoming more integrated into the school system; as a consequence more teachers are needed to teach consumer education courses. Uhl (1972) found that teachers were not sufficiently equipped to teach consumer education and there was a need for qualified teachers in consumer education. Davis (1979) found that there was a statistically significant difference (using chi-square analysis with $p=0.01$) between those teachers who had no courses in consumer education or related subjects and those who had some preparation in these areas. The teachers with some preparation were better equipped to teach consumer education. Garman (1979) too, discovered in his survey of 4,309 subjects that prospective teachers who finished one or more consumer education courses scored higher on an achievement test than those without any consumer related courses. A t-test revealed significant differences at the 0.001 level. Carsky, Lytton, and McLaughlin (1984) found in their study involving 182 university undergraduates enrolled in a consumer education class that postsecondary consumer education courses can lead to positive changes in consumer competency of these students. This positive change was determined using analysis of variance with $p=0.05$. Langrehr (1979) also found significant differences in consumer knowledge between students enrolled in consumer education classes and those in other classes.

Garman (1979) found that major and minor area of study, and gender affected performance on the general test of consumer knowledge. Participants with majors in social studies, science, and home economics (human ecology) scored higher on the test, and participants with minors in home economics and business scored higher than those with other minors. Garman (1979) also found that gender was a possible factor influencing consumer knowledge. In his study, males scored significantly higher on the consumer test than did females with a t value of 9.15 and a significance level of $p=0.001$.

Besides finding that consumer related courses helped equip teachers to teach consumer education, Davis (1979) also found a statistically significant difference between teachers who felt competent and those who did not feel competent to teach consumer education using chi-square statistic with $p=0.01$. Those teachers who had credit courses in consumer studies, workshops, or both did feel more effective and competent to teach. Her findings were that 58.2% of 600 teachers in Kentucky felt competent to teach, and 32.7% of teachers teaching consumer education did not feel competent to teach. As well, 46.4% did not have any training in consumer education, and 48.1% did not feel their teacher preparation was sufficient. Apparently, according to Davis, if a teacher feels competent the teacher is likely to feel prepared to teach.

Research in the area of teacher preparation in consumer education has dealt little with an examination of factors, other than coursework and feelings of competence, which are helpful in preparing and indicating the willingness of teachers to teach consumer education. No research has been found that attempts to examine other factors such as age, marital status, and consumer management experiences that may have influenced the preparation of teachers. Based upon past research in the social sciences (Hilgard, 1975), it is reasonable to surmise that older and/or married prospective teachers will have more consumer management experiences to draw upon that will enhance their knowledge of consumer issues. This premise reflects the principles of learning theory. Thorndike (1874-1949), for example, found that success at solving and understanding a problem increased with more trials. He believed that learning and knowledge was built up through experiences (Bruno, 1972). Other psychologists refer to this complex form of learning as cognitive learning (Hilgard, 1975), which involves organizing relationships and meaning. Generally, learning theorists agree that learning is a process that occurs over time, and one gets better at it with more practice, and opportunity. Therefore, older and/or married prospective teachers are expected to have had more time, and opportunity to experience consumer related situations, and learn from them.

Conclusion

Research indicates that knowledge in a subject area is of definite importance to teaching. This study will examine the relationship of specific variables such as gender, age, marital status, childrearing experiences, consumer related courses, feelings of confidence/competence, consumer management experiences, and major area of study with knowledge of prospective teachers using a minimum-competency test called the Test of Consumer Knowledge, TCK.

CHAPTER III

METHODOLOGY

This chapter will outline a description of the sample, research design and instrument, explain the procedure for data collection, and explain the procedures for data analysis.

Description of Sample

Participants in this study consisted of prospective teachers, male and female, registered in the Faculty of Education at both the University of Manitoba and Brandon University. All participants were in the certifying year of education during the regular session of fall 1984 to spring 1985. The sample size for this study was 160 participants from the University of Manitoba and 28 participants from Brandon University, making the total sample size 188.

Specifically, the sample included all those prospective teachers who were designated to teach in secondary schools, and had the following majors or teaching electives: business, human ecology, mathematics, science, and social studies. Neither business nor human ecology majors were offered at Brandon University.

Research Design and Instrument

In part, this study resembles a study done by Garman (1977) from Virginia in the United States entitled A National Assessment of the Consumer Education Literacy of Prospective Teachers from all Academic Disciplines. The present study, however, differs in many respects from Garman's study in that it is not a national survey of prospective teachers from all academic disciplines, but is instead a survey of those who are graduating from Manitoba universities, with teaching electives of business, human ecology (home economics), mathematics, science, and social studies. In addition to an achievement test similar to the one used by Garman, a questionnaire was also administered in this study. The instrument is included in Appendix B.

Questionnaire A is a questionnaire designed to:

1. Determine the number of consumer related courses that have been taken by each participant.
2. Measure some particular life experiences of prospective teachers which include childrearing experiences, and consumer management experiences (Dlabay, 1984; Gordon, 1972; Jelley, 1973) that may affect performance on the Test of Consumer Knowledge, TCK.
3. Measure the feelings of confidence/competence of prospective teachers for teaching consumer education courses.

4. Obtain demographic information regarding age, sex, and marital status.

In this study, the variable called consumer management experiences was measured and hypothesized to have an influence on how well prospective teachers performed on the TCK. Twenty-five experiences were identified using several consumer education textbooks (Dlabay, 1984; Gordon, 1972; Jelly, 1973). Consumer management experiences were defined as those events in life such as legal, financial, and social transactions which may give knowledge and practice in understanding consumer concerns. A panel of five experts in the field of consumer studies was selected to participate in an assessment of the relative importance of the consumer management experiences. The panel members were asked to give a numerical value between 1-5 to each of the twenty-five experiences in terms of their importance as consumer experiences. The numerical values that were given by the panel members were consistently similar to one another, with minimal variation. Each participant in the study was given a final score by adding up the individual values assigned to each consumer management experience that each participant indicated he/she had (see page 40). The range of scores was 0-65. This final score of every participant was used as the tool to measure whether consumer management experiences influenced how well prospective teachers performed on the TCK.

The Test of Consumer Knowledge (TCK) is an achievement test similar to the one used by Garman (1977), which had been designed by Stanley (1975). The test used in this study is a revised version of Stanley's achievement test designed by Dlabay (1984). Dlabay's test was obtained from the Scholastic Testing Service in Illinois as a replacement for Stanley's test.

Dlabay's test is entitled The Mastery Test of Consumer Economics, and it measures knowledge as it relates to consumer issues. The test items, as in Stanley's standardized test, were grouped into sections based on major consumer economic topics outlined in various state education agency and professional organization curriculum guides (Dlabay, 1984). Validity in Dlabay's test as well as Stanley's test was based on performance objectives which were derived from curriculum guidelines (Garman, 1977, Scholastic Testing Service, 1984). Like Stanley's test, Dlabay used multiple choice categories which had been pre-tested and tested for construct validity. Dlabay administered the test in the United States to 334 students enrolled in senior high schools in Illinois. Unfortunately, the administrator's manual from the Scholastic Testing Service did not provide any information regarding the reliability of the test.

For this study, Dlabay's test was modified to better suit a Canadian setting, and was pre-tested using 45 students enrolled in a consumer related course at the University of

Manitoba in March, 1984. The mean percent of the pre-test group was 76.6% with a standard deviation of 4.86, compared with a mean percent score of 65.4% in Dlabay's test of senior high students. The higher mean score for the Canadian pre-test group can be explained by the fact that the pre-test group was composed of university students that had completed a consumer course.

A test was conducted to check for internal reliability in the revised test. The Kuder-Richardson formula Number 20 was used to test the individual items on the test for various reasons. Firstly, the Kuder-Richardson formula minimizes selection bias of test items as does a split-half analysis, and secondly, Stanley's test (1975) was tested using Kuder-Richardson formula so this study chose this formula to test for internal reliability of the test for comparison reasons. The reliability test was done on the test group of 187 subjects, and the reliability coefficient was found to be 0.997. This means that the test was accurately measuring some characteristic of the people taking it. Stanley's (1975) Form "A" and Form "B" test had a reliability coefficient of 0.733 and 0.738 respectively (Garman, 1977). A high reliability coefficient of .70 or higher also means that the individual items on the test were producing similar patterns of responses in different people (Bruning & Kintz, 1977). A high reliability coefficient of .997 means that the test items were homogeneous, and therefore reliable.

Procedure for Data Collection

Both the test and questionnaire were administered to students in their certifying year during the methods classes in each of business, human ecology, mathematics, science and social studies. The testing was conducted during the first few weeks of classes at the University of Manitoba and Brandon University in September, 1984. Each test and questionnaire was coded in a way to insure that both could be traced to each respondent. The questionnaire was answered by the participants before beginning the TCK. This was done so that the content information contained in the test questions would be less likely to prejudice any of the answers on the questionnaire. The primary investigator was present at all the sessions to make certain that the conditions for each group taking the test were as similar as possible.

A cover letter was attached to each package explaining the terms for participating in the study, such as purpose of the study, confidentiality of participation, and voluntary nature of participation. There were no non-respondents in this study. Once the participants completed the questionnaire and test, the answer sheets were collected and processed for data analysis.

Data Analysis

The answer sheets for the TCK were scored by the optical scanning technique. The accompanying printouts contained respondents' individual scores, as well as means, and standard deviations. The independent variables which were expected to affect the TCK scores were coded from Questionnaire A for the purpose of statistical analysis.

For descriptive purposes a series of crosstabulative analyses were made using categorized data. The dependent variable, score on the TCK, was examined using the Chi-square statistic, and in some cases gamma was used to test for any relationships with the independent variables (Goodman, 1979 ; Mendenhall, 1979). The significance level (alpha score) for chi-square was set at $\alpha < .05$ for testing the hypotheses in this study.

Multiple regression analysis was also used as a statistical tool ($Y = a + b_1x_1 + b_2x_2 + \dots + b_nx_n + E$). Multiple regression analysis requires a linear and additive relationship among variables. The F test from the analysis of variance was used to test the significance of the overall equation. The null hypothesis that no linear relationship exists between the dependent variable and each independent variable was rejected if the calculated t ratio exceeded the table t ratio at the .05 level of significance (SAS, 1983).

In the multiple regression analysis of variables, continuous data was used. The usual regression coefficient for each independent variable provided a measure of how much change was expected in the dependent variable by a unit change in the independent variable when the other independent variables were controlled for. The beta weight (standardized regression coefficient) provided a measure of the relative importance of each independent variable in predicting TCK. The adjusted coefficient of multiple determination (R^2) was used to explain the proportion of variation in the dependent variable as explained by the independent variables.

The Pearson product-moment correlation coefficient (r) was used to measure the strength of the relationship between independent variables. The problem of multicollinearity, which occurs when the independent variables are highly correlated with each other, was examined using the SAS tolerance option ($1-r^2$) in the regression model (SAS, 1983). If tolerance was beyond the 10-20% level, or if r^2 was very high, then there were problems with multicollinearity and variables were omitted accordingly.

Scatterplots of the residuals, which are deviations of an observed Y score from an estimated Y value, were examined for all regression equations to ensure that error components were distributed randomly about the TCK score. This helped ensure the condition of homoscedasticity or a consistent

variation over the residual values of each independent variable.

CHAPTER IV

RESULTS

This study examined certain factors that were believed to affect the knowledge of prospective teachers in consumer studies. A demographic description of the sample is provided. As well, the results of this study are presented using descriptive statistics such as means, standard deviations, percentages, frequencies, and crosstabulative analyses (Chi-square) of categorized data. Multiple regression was used as a statistical tool to describe the relationship that exists between the dependent variable, and each independent variable.

Demographic Findings

In this study the sample was drawn from the University of Manitoba and Brandon University. There were 160 participants from the University of Manitoba, and 28 participants from Brandon University, making a total sample size of 188 subjects. One subject however was disqualified from the University of Manitoba sample because this person was not designated to teach at the secondary school level. Consequently, the sample size dropped by one to 187 subjects.

The sample was composed of 96 males (51%) and 91 females (49%). This percentage is similar to that reported in the Institutional Statistics Book of University of Manitoba, 1983-1984 whereby males made up 56% of the total university population and women made up 44% (ISB, 1983-1984). Examination of the sample group showed that the majority of prospective teachers were in their early twenties. Prospective teachers between the ages of 20-24 made up 62% of the total sample, and those 25 years and over made up the remaining 38%. The majority of the participants (67%) were single, and the remaining 33% were either married, divorced or separated, and none was widowed.

General Findings

The test scores on the 48-item test called Test of Consumer Knowledge were marked on a percentage basis, with 48 correct answers out of 48 questions scoring 100%. In general terms the test results can be sub-divided into three groups of achievers; low achievers, moderate achievers, and high achievers. In the low achiever category 56 (30%) of participants scored between 35.4%-69.99%. In the moderate achievers category 70 (37%) scored between 70.00%-79.99%. Finally, in the high achievers category, 61 (33%) scored between 80.00%-91.7%. In the chi-square analyses of hypotheses, test score was grouped into low, moderate, and high achievers throughout the study. Of the 187 completed tests,

the mean achievement raw score on the 48-item test was 35.7 or 74.3% with a standard deviation of 4.63.

Sex of Participants

The mean test score for the males on the Test of Consumer Knowledge (TCK) was 74.37%, with a standard deviation of 10.66. For the females, the mean test score was 74.46% with a standard deviation of 8.59. In this study, females scored 0.09% better than males on the Test of Consumer Knowledge, however it was not found to be significant using the chi-square statistic whereby $x^2=1.08$ with a probability of $p=0.5817$ (see Table 3). The hypothesis that male prospective teachers would score higher than female prospective teachers on the TCK was not supported.

Age

Age of prospective teachers was categorized into three main groups (see Table 1 and 2). Those between the ages of 20-22 made up 37% of the sample size. They had a mean test score of 71.67% with a standard deviation of 9.65. Those prospective teachers between the ages of 23-27 made up 44% of the sample size. This group had a mean test score of 75.32% with a standard deviation of 9.52. The last group of prospective teachers was between the ages of 28-51. This final group made up 19% of the sample size and had a mean test score of 77.90% with a standard deviation of 9.06. It

is apparent that compared with the 20-22 group and 23-27 group, the 27-51 age group received a higher score on the achievement test. For statistical analysis, age was grouped in the three categories as outlined and was correlated to the test score's three groups of achievers. A relationship between age and test score was shown to be significant using the chi-square statistic whereby $\chi^2=13.36$ with a probability level $p=0.0096$ (see Table 3). The hypothesis that the older age group would have a higher test score on the Test of Consumer Knowledge (TCK) was supported by the results of this study.

Consumer Related Courses

In the questionnaire, subjects were required to indicate if they had completed any consumer related courses. They were to identify by title or course number any consumer related courses that they had taken at university. Of the 187 prospective teachers, 144 had not completed any consumer related courses, while 43 had completed from one to seven courses (see Table 4). Those prospective teachers who completed no consumer related courses had a mean test score of 73.46%, with a standard deviation of 9.80. The prospective teachers who completed two courses had a mean test score of 75.00% with a standard deviation of 9.76, and those who completed three courses had a mean test score of 80.88% with a standard deviation of 4.4. The prospective teachers who had

four or more consumer related courses are omitted from these tabulations because only one subject was present in each category. Overall, the test scores remained higher for those with consumer related courses than for those without any consumer related courses.

To test the hypothesis that those prospective teachers with consumer related courses would score higher on the TCK than those without consumer related courses, the chi-square statistic was used. The variable 'consumer related courses' had to be grouped as those without courses, and those with one course or more to avoid difficulties with the cell size using chi-square analysis (Erickson, 1977). The test score was grouped according to the low, moderate, and high achievers categories. As was hypothesized, consumer related courses were significantly correlated to test score whereby $x^2=8.08$, with a probability of $p=0.0176$ (see Table 3). Therefore, those subjects who had taken consumer related courses were more likely to achieve higher scores on the TCK than those without these courses.

TABLE 1
Age of Prospective Teachers as it relates to Consumer
Knowledge

Age	Mean % score on TCK	Standard deviation	Frequency n=185	Cumulative percent (100%)
20	75.01	7.84	11	5.94
21	71.89	8.43	22	17.83
22	70.48	10.80	35	36.75
23	77.58	7.45	25	50.27
24	74.44	9.48	22	62.16
25	75.15	9.92	16	70.81
26	76.83	8.00	8	75.13
27	70.63	13.80	10	80.54
28	81.24	8.08	5	83.24
29	71.87	17.57	4	85.40
30	70.86	7.21	3	87.02
31	79.20	2.42	4	89.18
32	72.50	10.77	5	91.89
33	79.20	--	1	92.43
34	81.26	10.99	3	94.05
35	85.40	--	1	94.59
37	87.50	--	1	95.13
38	80.56	3.1	3	96.75
39	85.40	--	1	97.29
40	75.00	--	1	97.83
42	81.25	2.89	2	98.91
45	83.30	--	1	99.45
51	75.00	--	1	100.00

TABLE 2

Mean Test Scores of the Three Age Groups of Prospective Teachers

Age	Mean % score on TCK	Standard deviation	Frequency n=185	Percent (100%)
20-22 yrs.	71.67	9.65	68	37
23-27 yrs.	75.31	9.51	81	43
28-51 yrs.	77.90	9.06	36	20

TABLE 3

Chi-square Analysis for Independent Variables and Test Score

Variable	Test Score (percent)			Total number	Total percent
	Low (n=56) ≤69.99	Moderate (n=70) 70.0-79.99	High (n=61) ≥80.00		
Sex n=187					
Male	27	40	33	96	(100)
Female	33	34	33	91	(100)
	$\chi^2 = 1.083, d.f.=2, p=0.5817$				
Age n=185					
(20-22)	43	37	20	68	(100)
(23-27)	25	40	35	81	(100)
(28-51)	17	33	50	36	(100)
	$\chi^2 = 13.362, d.f.=4, p=0.0096^{**}$				
Consumer related courses n=187					
None	34	38	28	144	(100)
1 or More	16	35	49	43	(100)
	$\chi^2 = 8.082, d.f.=2, p=0.0176^*$				
Consumer management experiences n=187					
Low	51	30	19	81	(100)
Moderate	17	46	37	71	(100)
High	9	37	54	35	(100)
	$\chi^2 = 33.298, d.f.=4, p=0.0001^{***}$				
Marital status n=187					
Single	35	33	32	125	(100)
Married and/or previously married	19	47	34	62	(100)
	$\chi^2 = 5.681, d.f.=2, p=0.0584$				
Childrearing experiences n=187					
None	30	37	33	160	(100)
1 or More children	30	37	33	27	(100)
	$\chi^2 = 0.007, d.f.=2, p=0.9964$				
Confidence/competence n=187					
Low	47	34	19	62	(100)
Moderate	24	39	37	76	(100)
High	18	39	43	49	(100)
	$\chi^2 = 14.704, d.f.=4, p=0.0054^{**}$				
Willingness to teach n=186					
Yes	25	36	39	137	(100)
No	45	39	16	49	(100)
	$\chi^2 = 10.386, d.f.=2, p=0.0056^{**}$				

p<0.001***

p<0.01**

p<0.05*

TABLE 4

Distribution of Consumer Related Courses and Mean Test Scores of Prospective Teachers

Consumer related courses score on TCK	Mean %	Standard deviation	Frequency n=187	Cumulative percent (100%)
0	73.46	9.80	144	77.00
1	78.77	8.92	10	82.35
2	75.00	9.76	18	91.97
3	80.88	4.44	11	97.86
4	87.50	--	1	98.39
5	77.10	--	1	98.93
6	62.50	--	1	99.46
7	83.30	--	1	100.00

gamma=0.395, d.f.=2

TABLE 5
 Consumer Management Experiences of Prospective Teachers¹

Consumer management experiences	Panel score	Had experience		Did not have experience	
		number	percent	number	percent
bankruptcy	3	2	1	185	99
buying a home	4	31	17	156	83
getting a loan	4	111	59	76	41
ombudsman, BBB	2	13	7	174	93
subscribe to consumer magazine	4	35	19	152	81
consumer action group	4	4	2	183	98
buying car on loan	4	57	30	130	70
buying property	4	32	17	155	83
exchanging property	2	14	7	173	93
consolidating a loan	3	19	10	168	90
applying for credit	3	90	48	97	52
furniture on credit	3	28	15	159	85
investing in RRSP's	3	33	18	154	82
renting	4	118	63	69	37
investments	3	56	30	131	70
insulating a home	2	20	11	167	89
litigation	2	7	4	180	96
suing	2	4	2	183	98
contacting a lawyer	2	56	30	131	70
grocery shopping	4	141	76	46	24
filing income tax	4	128	69	59	31
business loan	2	6	3	181	97
member of conservation group	1	19	10	168	90
involved in environmental issues	2	28	15	159	85
obtaining life insurance	3	58	31	129	69

¹n=187

Consumer Management Experiences

The findings showed that 81 (43%) of prospective teachers had relatively few consumer management experiences (see Table 5). This group of prospective teachers had consumer management experiences ranging from 0-15 as a final score. The second group of prospective teachers had an average number of consumer management experiences scoring from 16-30, and comprised 71 (38%) of the sample. The third group of prospective teachers had a high number of consumer-management experiences scoring from 31-65, and comprised the remaining 35 (19%) of the sample (see Table 6). Test score results for each of the three groups was as follows: the mean test score for the first group was 69.87% with a standard deviation of 10.53, mean test score for the second group was 76.70% with a standard deviation of 7.61, and mean test score for the third group was 80.30% with a standard deviation of 6.10. The hypothesis that those with a high number of previous experiences in consumer matters would score higher on the TCK was tested using chi-square analysis. Test score was grouped into low, moderate, and high categories as were consumer management experiences. As was hypothesized, consumer management experiences were very significantly correlated with test score with $x^2=33.29$ and $p=0.0001$ (see Table 3).

TABLE 6

Differences in Mean Test Scores of Prospective Teachers as related to Consumer Management Experiences

No. of consumer management experiences	Mean % score on TCK	Standard deviation	Frequency n=187	Percent (100%)
low 0-15	69.86	10.53	81	43
moderate 16-30	76.70	7.61	71	38
high 31-65	80.30	6.1	35	19

$\gamma=0.518$, d.f.=4

Prediction capabilities of Consumer Management Experiences

The hypothesis that previous experience in consumer matters is a better predictor of score on the TCK than the number of consumer related courses taken was strongly supported. Using the gamma statistic, the significance level of

consumer related courses to test score was 0.395 (see Table 4), while the significance of consumer management experiences to test score was 0.518 (see Table 6). It is apparent that consumer management experiences are more strongly related to score on the TCK than consumer related courses, consequently it is a better predictor of test score.

Marital Status

In this study, the majority of prospective teachers, or 67% of the sample size was single, 33% were either married, divorced or separated, and none was widowed. Those prospective teachers who were married, or previously married, did slightly better on the Test of Consumer Knowledge with a mean test score of 77.19% than those who were single with a mean test score of 73.34%. However, the chi-square statistic did not show it to be significant with a $x^2=5.68$ and a probability level of $p=0.0584$ (see Table 3). The hypothesis that married or previously married prospective teachers would score significantly higher on the TCK than single prospective teachers was not supported.

Childrearing Experiences

The findings of this study showed that 27 (14%) of the sample had children, while 160 (86%) had no children (see Table 7). The group with children had a mean test score of 75.78% with a standard deviation of 8.95, while the group

without any children had a mean test score of 74.18% with a standard deviation of 9.8. By examining the mean test scores one sees that there was relatively no difference between the two groups. The hypothesis that prospective teachers with children would score significantly higher on the Test of Consumer Knowledge was not supported by the chi-square analysis. No relationship existed between the variable of childrearing experiences and test score with a $x^2=0.007$ and a probability of $p=0.9964$ (see Table 3).

TABLE 7

Childrearing Experiences of Prospective Teachers as they relate to Mean Test Score

Childrearing experiences	Mean % score on TCK	Standard deviation	Frequency n=187	Percent (100%)
no children	74.18	9.81	160	85
one or more children	75.78	8.95	27	15

$x^2=0.007$, d.f.=2, $p=0.9964$

Majors

The prospective teachers surveyed as to their major gave 16 different responses. Table 8 lists the majors and the achievements of each group on the Test of Consumer Knowledge. The highest scoring majors in descending order were human ecology (77.92%), science (77.78%), mathematics (77.42%), business (76.65%), English (75.0%), and social studies (73.61%). Apparently, human ecology prospective teachers did slightly better than science and math prospective teachers; however, program majors were not compared statistically with TCK score because of the variability in category size. Human ecology and mathematics both had too small a number of prospective teachers to make any meaningful comparisons with other program majors. This researcher felt the majors were different from each other and could not be grouped for statistical purposes.

Confidence/Competence and Willingness to Teach

In the questionnaire, prospective teachers were asked to rate, on a scale of 1-9, what their feelings of confidence would be if they were required to teach consumer education (see Table 9). Findings showed that those with very little confidence at the low level of the scale (at 1) obtained a much lower score on the test of consumer knowledge at 67.62% with a standard deviation of 12.99 than those with a high level of confidence (at 9) with a test score of 79.18% with

a standard deviation of 3.28. Test score was positively related with degree of confidence in that, as confidence went up, test score went up also. The confidence scale was grouped into three categories; low, moderate, and high confidence. Those with a low level of confidence (33%) rated 1-3 on the scale, those with a moderate level of confidence (41%) rated 4-6, and those with a high level of confidence (26%) rated 7-9 on the scale. Chi-square analysis was used to test the relationship of the three levels of confidence with low, moderate and high test scores. Results found that a higher level of confidence was significantly related to a higher test score with a $\chi^2=14.70$ and a probability of $p=0.0054$ (see Table 3).

TABLE 8

Mean Test Scores of Prospective Teachers with different
Program Majors

Program major	Mean % score on TCK	Standard deviation	Frequency n=187
business	76.65	10.61	24
human ecology	77.92	5.29	10
social studies	73.61	9.39	58
science	77.78	9.29	24
mathematics	77.42	9.09	12
art	81.30	--	1
music	65.63	9.93	6
physical education	69.60	10.42	27
English	75.00	8.33	11
languages	73.95	4.45	2
social studies/math.	76.05	10.25	2
social studies/English	74.00	7.31	4
social studies/phys.ed.	70.85	14.77	2
social studies/science	79.20	2.96	2
phys.ed./languages	66.70	--	1
science/math.	89.60	--	1

TABLE 9

Feelings of Confidence/competence of Prospective Teachers in
Relation to Mean Test Scores

Feelings of confidence/ competence	Mean % score on TCK	Standard deviation	Frequency n=187	Percent (100%)
low end of scale				
1	67.61	12.99	11	6
2	71.83	9.07	21	11
3	71.12	9.78	30	16
4	74.63	9.36	22	12
5	76.19	7.23	30	16
6	76.05	9.55	24	13
7	75.88	9.48	31	16
8	79.16	11.34	13	7
9	79.18	3.2	5	3
high end of scale				

Prospective teachers were also asked to respond to a question in the questionnaire dealing with whether participants would accept a position requiring them to teach consumer education. Of the respondents, 137 (73%) said they would teach consumer education, and 49 (27%) said they would not. One respondent did not indicate either yes or no. Those that responded they would teach consumer education had a mean test score of 75.67% with a standard deviation of 9.30. Those prospective teachers that indicated they would not teach consumer education had a mean test score of 70.84% with a standard deviation of 10.07. Apparently, those who showed a greater willingness to teach consumer education had a higher test score than those who were not willing to teach consumer education. The chi-square analysis showed that willingness to teach consumer education was significantly related with test score, with $\chi^2=10.386$ and probability level of $p=0.0056$.

The hypothesis that those prospective teachers with higher test scores would have more confidence and willingness to teach consumer education was supported. Chi-square analysis was used to test for a significant relationship between the prospective teachers' confidence to teach consumer education, and their willingness to teach consumer education. Chi-square analysis showed that there was a very significant relationship between the two variables whereby $\chi^2=64.217$, with a $p=0.0001$ (see Table 10).

TABLE 10

Chi-square analysis of Feelings of Confidence/competence and Willingness to Teach

Feelings of confidence/competence	Willingness to teach (percent)			
	Yes will teach n=137	No will not teach n=49	Number 186	Percent (100)
Low 1-3	37	63	62	(100)
Moderate 4-6	91	9	75	(100)
High 7-9	94	6	49	(100)

$\chi^2=64.217$, d.f.=2, p=0.0001

Prediction Formula

Multiple regression was used to develop a prediction formula that would predict consumer knowledge as effectively as an achievement test. The variables age, consumer related courses taken and marital status had to be withdrawn from the regression equation because of multi-collinearity between age, marital status and consumer management experiences, and between consumer related courses and business and human ecology majors (see Table 11). Collinearity inflated the variance on parameter estimates, and consequently re-

duced the hypothesis testing power of the linear regression (Institute for Social and Economic Research, 1985). The remaining variables of consumer management experiences, feelings of confidence/competence, grade-point average, childrearing experiences, gender, major (science, business and human ecology combined, social studies, English, and mathematics) were used in the regression model (see Table 12). Scatterplots of the variable residuals from the equation showed that they were randomly distributed, as a result there was no problem of heteroscedasticity.

It was found that overall, the variables in the equation accounted for an adjusted R^2 of 0.2593, suggesting that this study had 26% ability in predicting consumer knowledge from the variables included in the equation. It became apparent that there were numerous unknown variables that influence consumer knowledge, in addition to those identified in this study. Therefore, little can be said about the prediction formula other than at this stage more research needs to be done before a prediction formula can be designed which forecasts consumer knowledge as well as an achievement test. Nonetheless, this study does account for 26% of the variation in predicting consumer knowledge compared to an achievement test score, and has set the stage for further refinement of a prediction formula.

TABLE 11

Multicollinearity between Select Independent Variables

Independent variables	Pearson r (n=156)					
	Age	Marital status	Consumer related courses	Business/ human ecology	Child-rearing experiences	Consumer management experiences
age	1.00					
marital status	0.47	1.00				
consumer related courses	0.23	0.16	1.00			
business/ human ecology	0.15	0.20	0.48	1.00		
childrearing experiences	0.60	0.52	0.26	0.20	1.00	
consumer management experiences	0.69	0.59	0.28	0.22	0.54	1.00

condition index 38.35, d.f.=16, F value=4.60

TABLE 12

Multiple Regression for Independent Variables and Test Score

independent variables	B values	Beta	t value	tolerance
consumer management experiences	0.26	0.39	0.0002***	0.45
feelings of confidence/competence	0.78	0.17	0.0490*	0.62
GPA	2.95	0.11	0.1194	0.81
childrearing experiences	-4.59	-0.17	0.0575	0.60
sex	-0.80	-0.04	0.5843	0.79
science	6.54	0.22	0.0099**	0.62
business/human ecology	3.76	0.15	0.1360	0.43
social studies	3.62	0.18	0.0689	0.48
English	6.61	0.17	0.0406*	0.64
math	7.50	0.20	0.0102*	0.73
$R^2=0.3068$, d.f.=10, $F=6.46$				
adjusted $R^2=0.2593$, n=156				

***p<0.001

**p<0.01

*p<0.05

The results of this study showed that the variables of age, consumer related coursework, feelings of confidence/competence, and consumer management experiences were significantly related to how well a prospective teacher performed on the Test of Consumer Knowledge. It is apparent that these variables have some bearing on the level of consumer knowledge of prospective teachers. As well, it was found that marital status, gender, and childrearing experiences were in no way related to a prospective teacher's performance on the Test of Consumer Knowledge which is contrary to what was hypothesized. A discussion of the findings will follow in the next chapter.

CHAPTER V

DISCUSSION

This study examined certain variables believed to have an effect on the knowledge of prospective teachers in consumer studies. The following chapter will review the results and compare them to the findings of studies cited in the literature review.

Gender of Prospective Teachers

In this study, the findings indicated that sex of the prospective teacher was not significantly related to test score, contrary to what was hypothesized. Both males and females performed equally as well on the test of consumer knowledge, with males having a mean test score of 74.37%, and females having a mean test score of 74.46%, with no significant relationship between gender and test score at $p=0.5817$. These results do not support the findings of Garman (1977) in his national study whereby males scored significantly better on the achievement test than did females with a t value of 9.15 which had a significance level beyond $p=0.001$.

This study used the same consumer economics topics in the achievement test used by Garman, so the difference in findings is not due to any significant difference between Garman's achievement test and that used in this study. It is possible that from the time of Garman's study in 1977, to this study in 1984, the status of women may have changed enough to partially explain the increase in knowledge of consumer studies. It is evident that women in the latter part of the seventies and early eighties have become more actively involved in the workforce, more women are living independently and more are making decisions about purchases such as automobiles and life insurance. In this study women had similar consumer management experiences to men. It is possible that women today are experiencing consumer related situations more directly through their participation in the marketplace. This premise is supported by data collected by the Department of Labour, Women's Bureau, which found that in 1981, single women between the ages of 20-24 years, 80.3% participated in the labour force. During an assessment done over the time span between 1970-1980, it was found that the number of women in the labour force increased by 63.3% (Canada, Department of Labour, 1983). These data show that women's participation in the labour force has grown significantly; consequently, it is highly probable that women have become more involved in the marketplace and, as a result, experience consumer related situations directly. The difference in the findings between this study and Garman's

(1977) may be due to the factors that were outlined; however, further analysis is necessary before conclusions can be drawn from the findings.

Age of Prospective Teachers

Based upon the results of this study, age was shown to have a definite impact on how well a prospective teacher performed on the Test of Consumer Knowledge, TCK. Those prospective teachers aged 28 years and over, performed significantly better on the test than did the other prospective teachers, $p=0.0096$. This finding was supported by the premise of learning theory which stated that learning is a process that occurs over time; consequently, as one gets older, one can organize relationships and meaning better with more practice and opportunity (Hilgard, 1975). The TCK was designed to measure how much knowledge a prospective teacher had in consumer studies. A prospective teacher was required to recall facts and specifics about consumer studies which undoubtedly was easier for older prospective teachers because they were expected to have had more time and opportunity to experience consumer related situations.

Previous Consumer Related Courses

The finding that prospective teachers who had taken consumer related courses at university scored higher on the TCK supported the findings of other researchers. Carsky, Lyt-

ton, McLaughlin (1984); Davis (1979); Garman (1977); and Langrehr (1979) all found that those subjects who had taken consumer related courses had more consumer knowledge and consequently performed better on an achievement test than those without any consumer related courses. Apparently, what is learned in a consumer related course is useful and can be recalled at appropriate times by the person that took the course. This was true also in the pretest of 45 students enrolled in a consumer related course in the Faculty of Human Ecology. Their mean percent score on the TCK was 76.6% as compared to 73.4% for the study's sample of 144 that had no consumer related courses.

In the literature review it was found that one of the shortcomings in consumer education is that teachers have had little, if any training or coursework in consumer studies (Parasiuk, 1983; Uhl, 1972). Perhaps to foster training and coursework in consumer studies, universities need to develop special emphasis in the area of consumer education.

Consumer Management Experiences

The variable consumer management experiences was found to have the most significant relationship with test score, $p=0.0001$. Those prospective teachers with more previous experience in consumer matters had a higher test score than those with less previous experience. This finding reflects the principles of learning theory as set out by Thorndike

(Bruno, 1972). He found that learning and knowledge are built up through experience. It naturally follows that, with more experience, a person has had more opportunity to learn and attain knowledge through the experience. The findings showed that those with a high test score had a broader range of consumer management experiences than those with lower scores.

Surprisingly, no research was found that examined consumer management experiences as part of an assessment of factors that influence consumer knowledge. This study, however, found consumer management experiences to be highly related with consumer knowledge.

Consumer Management Experiences as Predictor

It was not surprising to find that previous experience in consumer matters was a better predictor of score on the TCK than the number of consumer related courses taken because people tend to learn and remember more from first hand experience than they do from dealing with something in the abstract as one would in a consumer related course. Dewey, for example, brought forth the principle of educative experience, whereby what a person learns depends upon the quality of the experience which is had (Dewey, 1939). People actively learn from their experiences, while in a traditional educational setting, learning is of a passive, quantitative form, and for many much of what is learned is

forgotten and weakened instead of being intensified as through experience (Dewey, 1939). Dewey's principle of educative experience was supported by the findings of this study in that experiences of prospective teachers were more valuable to them than consumer related courses were in terms of developing their consumer knowledge.

Marital Status of Prospective Teachers

It was found in this study that married, and/or previously married prospective teachers did not score significantly higher than single prospective teachers on the TCK as was expected, $p=0.0584$. It was hypothesized that married, and/or previously married prospective teachers would perform better on the achievement test than single prospective teachers based on the belief that these individuals might have been more involved in consumer related situations such as buying a home, obtaining a mortgage, or managing money.

Several reasons can be developed to explain why the hypothesis was not supported. Using Pearson Product correlation between all the variables in this study, it was found that marital status had pairwise correlations with variables age, childrearing experiences, and consumer management experiences. The correlation coefficients were 0.47, 0.52, and 0.59 respectively. It is known that collinearity obscures the role of individual variables, and may be responsible for the apparently insignificant role of marital sta-

tus in determining consumer knowledge of prospective teachers. On the other hand, perhaps the variable is not a good indicator of how much a person would know about consumer related matters. In terms of the implications of the findings, based on this study, school administrators should not select consumer education teachers on the basis that they are married and should know more about consumer studies. This study found marital status did not affect the score on the Test of Consumer Knowledge. Perhaps a different form of a test rather than an achievement test would be able to draw out any differences between single and married, and/or previously married prospective teachers with regard to consumer knowledge. Further research needs to be done which tests marital status as a variable affecting consumer knowledge.

Childrearing Experiences of Prospective Teachers

The hypothesis that those prospective teachers with children will score significantly higher than prospective teachers without children was not supported. Chi-square analysis showed there was no relationship between test score and prospective teachers with children $p=0.9964$. It was believed that prospective teachers with children would have experienced more consumer related situations such as buying of food, and taking precautions buying childrens' toys and clothing according to consumer reports on health and safety.

As with the variable of marital status, childrearing experiences also had collinearity problems with some variables. There were pairwise correlations between childrearing experiences and age 0.60, marital status 0.52, and consumer management experiences 0.54. It is possible that the variable childrearing experiences was ambiguous due to collinearity problems, and this may account for the lack of significant findings in the study involving this variable. However, it is possible the achievement test was unable to help reveal differences between prospective teachers with and those without children, and/or perhaps the variable of childrearing experiences was a weak variable and had little to do with consumer knowledge.

As with marital status, the findings showed that childrearing experiences did not affect prospective teachers knowledge of consumer studies, which suggests that prospective teachers with children would not be more knowledgeable of consumer matters than prospective teachers without children.

Major Area of Study

It was hypothesized that human ecology majors would score higher on the TCK than students majoring in business, mathematics, science, and social studies. The hypothesis was based on the fact that there are a larger proportion of consumer courses in human ecology than in any other Faculty

(University of Manitoba, Calendar, 1984); consequently, human ecology students would have greater access and opportunity to take consumer related courses. The findings of the study showed that human ecology students did score the highest on the TCK, (77.92%), slightly above science majors (77.78%); however, no statistical analysis was done to test the significance of this finding because there were only 10 human ecology majors compared to 24 in science, 58 in social studies, 24 in business and 12 in mathematics. The remaining students had majors in other categories.

Garman (1977) found that the highest scoring majors on the Test of Consumer Competencies were the following in descending order: social studies with a mean percent score of (63.96), science (63.80), and home economics (63.60). A one-way analysis of variance revealed significant differences among the majors at or beyond the 0.0001 level. In this study, the category sizes were not sufficiently large enough to be representative in some statistical analyses, and this researcher felt it was not appropriate to group the majors together because they were distinct groups.

Confidence/Competence of Prospective Teachers

Confidence/competence of a prospective teachers to teach consumer education was found to be significantly related to test score. Those that indicated they had a high level of confidence scored significantly higher on the Test of Con-

sumer Knowledge than did those that indicated they had a lower level of confidence, with $p=0.0054$. This finding supports similar findings by Davis (1979). In Davis' study, teachers who felt competent or confident to teach consumer education felt better prepared to teach consumer education. This study sought to determine whether those prospective teachers that indicated they had a high level of confidence/competence also had more knowledge in consumer studies and would display a greater willingness to teach consumer education. The finding did show that this relationship was significant using chi-square with $p=0.0001$.

Of those subjects who indicated they had a high level of confidence/competence, 43% scored high on the TCK, and 39% indicated a willingness to teach. From the findings, it can be assumed that the prospective teachers that scored high on the achievement test obviously had more knowledge about consumer matters and this was reflected in the amount of confidence/competence they indicated they had, and in their willingness to teach consumer education. Conversely, of those that had low knowledge about consumer matters, 47% displayed low confidence/competence on the scale, and 45% indicated they were not willing to teach consumer education. These findings may be useful to school administrators as part of their process for selecting consumer education teachers. Perhaps, school administrators can use confidence/competence scales to determine which teachers should be teaching con-

sumer education since these findings indicate a high level of confidence/competence is associated with more knowledge.

Prediction Formula

This study attempted to develop a prediction formula that could forecast consumer knowledge as effectively as an achievement test. It was found that the variables that were used in the regression equation accounted for an adjusted R^2 of 0.2593. This suggested that those variables in the equation were responsible for 26% of the variation in predicting consumer knowledge compared to an achievement test score.

Before the formula can become a better predictor, there are still many unknown variables which influence consumer knowledge needing identification. Further research needs to be done in consumer education to help identify these unknown variables and determine their affect on consumer knowledge. Perhaps, at some future stage, enough data and information will be available to develop a prediction formula that forecasts consumer knowledge as effectively as an achievement test. The prediction formula could then have uses for school administrators in that the selection of consumer education teachers could be based upon the prediction formula's ability to determine consumer knowledge without having to administer an achievement test. This formula could assist administrators in their selection process, and help them choose those teachers that are better prepared to teach consumer education in terms of their consumer knowledge.

CHAPTER VI

SUMMARY AND CONCLUSIONS

The following chapter will present a summary of this study, its strengths and limitations. The conclusion of the chapter contains implications for school administrators, and some suggestions for further research.

Summary

This study examined a number of variables hypothesized to influence consumer knowledge of prospective teachers. Variables such as gender, age, marital status, childrearing experiences, major area of study, feelings of confidence/competence, consumer related courses, and consumer management experiences were tested to see if a relationship existed between each variable and consumer knowledge. Consumer knowledge was measured on the basis of how well each subject performed on an achievement test called the Test of Consumer Knowledge.

The objectives of the study were aimed at a) determining if a relationship existed between previous consumer related coursework of prospective teachers and performance on the Test of Consumer Knowledge, TCK, b) determining if a rela-

tionship existed between consumer management experiences and performance on the TCK, c) determining if gender, marital status, and childrearing experiences were related to performance on the TCK, d) determining if feelings of confidence/competence were related to performance on the TCK, and e) determining if a relationship existed between the various program majors, business, human ecology, mathematics, science, and social studies and performance on the TCK.

The sample was composed of 187 students certifying in Education from the University of Manitoba and Brandon University, with program majors in business, human ecology, mathematics, science, and social studies, and who were designated to teach at the secondary school level. A questionnaire and achievement test were administered to the sample group with the principal researcher present at all times to insure conditions were as similar as possible.

The test results were divided into low, moderate, and high achievers with 30% of the sample scoring below 70% on the TCK, 37% scoring between 70-79.9%, and 33% scoring 80% and above. Using chi-square analysis, significant relationships were found between higher test scores and age, previous consumer related courses taken, feelings of confidence/competence, and consumer management experiences of prospective teachers. No relationships were found between higher test scores and gender, marital status, and childrearing experiences of prospective teachers. No statistical analysis

besides frequencies, and means was done with program majors because of the variability in the sizes of the groups. This researcher felt the majors were different from each other and could not be grouped for statistical purposes. Nonetheless, descriptive statistics did indicate that human ecology majors performed marginally better on the TCK than the other program majors.

A prediction formula was designed using multiple regression which tested the strength of the variables for their ability to predict consumer knowledge as effectively as the Test of Consumer Knowledge. The formula was able to predict 26% of the variability in consumer knowledge of prospective teachers when compared with the achievement test.

Strengths and Limitations of the Study

This study attempted to disclose the present status of consumer knowledge of prospective teachers in Manitoba. Little research had been done in the field of consumer education in trying to determine how much prospective educators know about a particular subject as compared to what they are required to know. The Manitoba Department of Education outlined in its publication Idea Bank of Consumer Education Learning Activities what they believe a consumer education teacher ought to know. In this study, the TCK was used to help disclose the present level of consumer knowledge of prospective teachers based on the concepts in the Idea Bank.

It was found that 30% of the prospective teachers with scores between 35.4-69.9% did not do as well on the TCK than did the other prospective teachers, which may suggest that they had a low level of consumer knowledge in relation to the Manitoba Department of Education publication outlining knowledge requirements for educators.

A major strength of this study was that it was the first study done in Canada that looked at the educator who might be expected to teach in a relatively new field of education, called consumer education. Little was known about the status of teacher preparation other than what teachers in the field reported about their experiences teaching consumer education (Parasiuk, 1983; Uhl, 1970). They reported feelings of incompetence, lack of training, and ill-preparation. This study wanted to find an explanation for the reported problems beginning with an analysis of prospective teachers using Bloom's lowest level of the cognitive domain, that being knowledge. It was presumed that inadequate preparation at the lowest level of the cognitive domain would lead to inadequate development in the higher levels of the cognitive domain, and prevent a teacher from progressing to a level of preparation and competence. Conceivably, this study provided the rudimentary information for much needed research in the area of teacher preparation.

Another strength of this study was that the sample consisted of all prospective teachers in Manitoba who were in

their certifying year, with teaching majors in business, human ecology, mathematics, science, and social studies, and were to teach at the secondary school level. It follows then that certain generalizations can be made about the present condition of consumer knowledge among prospective educators in Manitoba with those teaching electives that were outlined.

One of the major limitations of this study was that nothing was known about the internal reliability of the testing instrument designed by Dlabay (1984) on which the TCK was based. Although an internal reliability test was performed on the revised version of Dlabay's test, there were no means by which to compare the reliability coefficient of this study's test to that of Dlabay's test. As well, Dlabay's test was designed to test consumer knowledge of senior high school students, and may not have been suitable for testing consumer knowledge of prospective teachers in their final year in the Faculty of Education. Perhaps an achievement test with more difficult test-items would have been more suitable; however, the achievement test that was used was able to provide much valuable information with relation to differentiating those variables that influence consumer knowledge.

Implications

It is apparent from the study that consumer knowledge was influenced by age, consumer management experiences, feelings of confidence/competence, and number of consumer related courses taken by prospective teachers. Only 33% of the sample were classified as scoring high on the achievement test, and a major portion of these high scorers were made up of those that were older, had more consumer management experiences, had a high degree of confidence/competence, and had taken consumer related courses. The findings of this study reinforced the idea that knowledge about consumer matters is not only attainable from the classroom, but is also gained from life experiences. School administrators would benefit if they kept these factors in mind while they select teachers to teach consumer education. Also based upon the finding that consumer related courses were significantly related to consumer knowledge, it may be beneficial to the school administration to provide training or workshops for teachers that would be teaching consumer education.

Concurrently, the findings of the study suggest that school administrators should not select consumer education teachers based upon gender, marital status, or childrearing experiences as might be intuitively expected. It was found that these variables had no bearing on the level of consumer knowledge of prospective teachers. This study did not find that one sex had more consumer knowledge than the other,

that married and/or previously married subjects scored higher on the Test of Consumer Knowledge than single subjects, or that those with the experience of raising children had more consumer knowledge than those without children.

Another recommendation, based upon the findings of this study and others, would be for school administrators to select consumer education teachers with majors in human ecology, science, mathematics, business, and social studies because the study showed that these prospective teachers scored better on the Test of Consumer Knowledge, especially human ecology majors, than other majors.

Future research should attempt to examine teacher effectiveness in teaching consumer education by testing the higher levels of Bloom's cognitive domain; comprehension, application, analysis, synthesis, and evaluation. This would give researchers and practitioners more information concerning teacher preparation than was found in this study concerning consumer knowledge. More than simple basic knowledge in a subject is needed before a teacher can adequately teach a course. By using the various levels of Bloom's cognitive domain, researchers will have a clearer picture of the present state of teacher preparedness and competence in consumer education.

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Appendix A

Test Scores of Pre-test Group

ATTEMPTED CORRECT S.D. MEAN SCOPE S.D.
 MEAN S.D. MEAN S.D.

48.0 0.21 36.8 4.86 36.8 4.86

QUESTION	ANS.1	ANS.2	ANS.3	ANS.4	ANS.5	ANS.6	CORRECT	BISERIAL	POINT
1	2	0	1	4	0	0	2	0	4.11
2	1	4	2	1	0	0	8	+	1.46
3	2	2	1	1	0	0	5	+	0.181
4	1	4	0	0	0	0	5	+	0.324
5	4	1	0	0	0	0	1	+	0.277
6	2	2	1	4	0	0	7	+	0.271
7	0	7	1	2	0	0	4	+	0.567
8	1	4	3	1	0	0	9	-	0.119
9	1	3	2	0	0	0	1	-	0.143
10	1	3	1	0	0	0	9	+	0.039
11	2	1	3	3	0	0	4	+	0.356
12	8	1	0	2	0	0	6	+	0.456
13	0	1	1	2	0	0	8	+	0.214
14	1	7	2	1	0	0	1	+	0.077
15	1	0	3	2	0	0	7	+	0.277
16	1	3	2	1	0	0	1	+	0.392
17	1	3	0	1	0	0	0	+	0.560
18	1	0	5	2	0	0	8	+	0.060
19	1	2	1	0	0	0	2	+	0.184
20	1	2	0	2	0	0	9	+	0.413
21	1	4	1	0	0	0	9	+	0.164
22	2	3	3	1	0	0	4	+	0.448
23	2	5	7	1	0	0	7	+	0.440
24	2	3	7	0	0	0	7	+	0.316
25	3	1	3	1	0	0	5	+	0.244
26	2	1	4	1	0	0	6	+	0.318
27	0	2	4	0	0	0	9	+	0.060
28	0	1	0	3	0	0	2	+	0.069
29	0	4	2	1	0	0	7	+	0.526
30	2	1	3	0	0	0	1	+	0.126
31	3	1	3	1	0	0	8	+	0.260
32	0	5	4	3	0	0	3	+	0.275
33	3	2	4	3	0	0	5	+	0.435
34	3	3	3	3	0	0	3	+	0.273
35	3	3	3	3	0	0	8	+	0.308
36	3	2	3	1	0	0	5	+	0.373
37	7	2	0	0	0	0	6	+	0.176
38	3	4	2	0	0	0	2	-	0.194
39	1	5	3	2	0	0	7	+	0.468
40	1	5	4	0	0	0	5	+	0.374
41	5	0	4	1	0	0	8	+	0.466
42	3	2	3	1	0	0	9	+	0.259
43	4	0	4	1	0	0	1	+	0.164
44	1	4	2	1	0	0	8	+	0.582
45	1	2	2	1	0	0	2	+	0.529
46	1	2	0	1	0	0	4	+	0.029
47	1	3	0	1	0	0	6	+	0.415
48	3	3	1	3	0	0	7	+	0.390

Appendix B

T E S T

O F

C O N S U M E R

K N O W L E D G E

COVER LETTER

This package contains a questionnaire and achievement test, which combined together will take approximately 25 minutes to complete. The questionnaire contains questions about your personal background, and the achievement test is designed to test your knowledge in consumer studies. A coding system at the top right hand corner of the questionnaire and computer sheet is being used in this study for the simple purpose of assuring that the answers to the questionnaire and test can be traced to each respondent. The code is in no way linked to your name or student number. Confidentiality in this study will be strictly upheld. If you want to find out your score on the achievement test, write down the code number located on your computer sheet, and call me at 334-1945 in about a week's time.

If you do not wish to participate in this study, you are not required to do so.

Check (✓) the one that applies to you:

1) Sex

- (0) male
- (1) female

2) Date of birth:

____/____/____
year mon day

3) Marital status:

- (0) single (never married)
- (1) married
- (2) divorced/separated
- (3) widowed

4) Do you have any children?

- (0) no
- (1) yes (includes those living at home, and those that have left home)

5) University you are attending:

- (0) University of Manitoba
- (1) University of Brandon

6) What is your expected GPA this year? _____

7) Are you presently in your certifying year?

- (0) yes
- (1) no

8) At what school level are you being certified to teach?

- (0) secondary
- (1) elementary

9) Check off (✓) your program major:

- (1) business
- (2) human ecology
- (3) social studies
- (4) science
- (5) math
- (6) other, specify _____

10) State your program minor in the space provided:

11) State the year you completed high school:

12) State the year you entered the Faculty of Education:

13) If you have completed another university degree, indicate what it is in, and the year completed:

name of degree _____

major _____

year _____

14) Indicate by checking (✓) any that apply, what you were doing before entering the Faculty of Education, (and give approx. length of time)

- (0) university and/or school
(length _____)
- (1) working, (Length _____)
- (2) had a summer job, (length _____)
- (3) unemployed, (length _____)
- (4) been a housewife, (length _____)
- (5) been a househusband, (length, _____)
- (6) stayed at home because chose not to work (length _____)
- (7) other, (specify) _____

15) Indicate in the space provided how many university level consumer-related courses* you have completed. (Give the name(s) of the course(s) and course number(s).

*consumer-related courses include any courses that have examined a topic from a consumer's perspective.

16) Have you at any time been personally involved in one, or more of these actions: (Check any that apply)

- (1) bankruptcy
- (2) buying a home
- (3) getting a loan
- (4) contacting an ombudsman, or BBB
- (5) subscribe to consumer magazine
- (6) involved in a consumer action group
- (7) buying a car on loan
- (8) buying property
- (9) exchanging property
- (10) consolidating a loan
- (11) applying for credit
- (12) buying furniture on credit
- (13) investing in RRSP's
- (14) renting
- (15) investments
- (16) insulating a home
- (17) litigation
- (18) suing
- (19) contacting a lawyer
- (20) grocery shopping on regular basis
- (21) filing own income tax
- (22) getting a business loan
- (23) membership with conservation group
- (24) been involved in environmental issues
- (25) obtaining life insurance
- (26) other, _____

17) Would you accept a position requiring you to teach consumer education:

- (0) yes
- (1) no

18) Circle the number which best describes your feelings of confidence if you were asked to teach a consumer education course when you graduate.

1	2	3	4	5	6	7	8	9
not at all				very				
confident				confident				

19) List any teaching methods you think are necessary for teaching a consumer education course:

Each item, mark the best answer choice. Mark your answers on your answer sheet.

CONSUMER IN THE MARKETPLACE

An example of an illegal business practice would be

- a) selling an item below the list price.
- b) selling a product at cost.
- c) advertising a product without giving the price.
- d) advertising a product which is not available.

Most consumer complaints are solved by

- a) joining a labour union.
- b) contacting the business.
- c) hiring a lawyer.
- d) writing to a MLA.

The most reliable source of consumer information about a product may be obtained from

- a) advertising.
- b) the label.
- c) a sales clerk.
- d) other consumers.

CONSUMER IN THE ECONOMY

Consumers influence business most often by

- a) advertising.
- b) buying decisions.
- c) legal action.
- d) voting.

The price of a product or service is most influenced by

- a) competition.
- b) government.
- c) advertising.
- d) labour unions.

The wages received by a worker are most influenced by

- a) job location.
- b) demand for labour.
- c) labour unions.
- d) inflation.

PERSONAL MONEY MANAGEMENT

7. The main purpose of money management is to help people

- a) buy on credit.
- b) plan for retirement.
- c) live within their income.
- d) save for the future.

8. A flexible expense item in a family's budget would be

- a) rent.
- b) auto payment.
- c) food.
- d) mortgage payment.

9. The difference between a person's assets and liabilities is known as

- a) fixed expenses.
- b) net worth.
- c) profit.
- d) savings.

CONSUMER CREDIT FUNDAMENTALS

10. The amount which allows a consumer to compare the true cost of credit is the

- a) total finance charge.
- b) monthly payment.
- c) annual percentage rate.
- d) total down payment.

11. The highest interest rates for borrowing money are usually charged by a

- a) bank.
- b) credit union.
- c) life insurance company.
- d) finance company.

12. A type of credit plan which allows the consumer a choice of paying for all or part of the total amount owed each month is a(n)

- a) installment contract.
- b) revolving charge account.
- c) mortgage.
- d) consolidation loan.

USE OF CREDIT

person's credit rating would be most influenced by

- completing high school.
- having a regular job.
- using a chequing account.
- having a driver's license.

person may be denied credit on the basis

- income.
- address.
- education.
- sex.

an agreement which allows the lender to take the security, or goods covered in a loan if the borrower defaults on his loan is called

- promissory note
- chattel mortgage
- consolidated loan
- cooling-off period

BUYING

and name food products usually cost more than store brands or generic items because of

- inflation.
- advertising.
- processing costs.
- nutritional value.

ingredients are listed on food labels in order of

- decreasing weight.
- food group.
- nutritional value.
- cost.

the least expensive item per gram or ounce may be determined by using

- open dating.
- brand names.
- unit pricing.
- advertising.

HOUSING

19. A major advantage of apartment renting is

- income tax deductions.
- little maintenance.
- pride of ownership.
- increasing equity.

20. A type of housing in which a person purchases a living unit in a building and shares ownership of common areas (halls, elevators, etc.) is a(n)

- apartment.
- condominium.
- industrial complex.
- mobile home.

21. People usually purchase a house or condominium with the use of

- a mortgage.
- a lease.
- equity.
- a contract deed.

TRANSPORTATION

22. Highway mileage is roughly double city. The dominant factor causing poor city mileage is

- Fuel wasted during idling
- Braking and/or engine braking
- Poor acceleration fuel economy
- Traffic lights

23. An automobile feature which would increase gas mileage is

- power windows.
- a manual transmission.
- air conditioning.
- a stereo radio.

24. A person would get the least service when buying a used car from a(n)

- new car dealer.
- used car dealer.
- private party.
- automobile rental company.

FURNITURE, APPLIANCES, CLOTHING

An unwritten warranty which guarantees that a product will serve the purpose for which the item is designed is an example of a(n)

- full warranty.
- limited warranty.
- implied warranty.
- express warranty.

The most important factor regarding the wise purchase of furniture is the

- brand name.
- store.
- quality.
- warranty.

The consumer would usually receive the most personal service when buying clothing at a

- department store.
- discount store.
- factory outlet.
- specialty store.

RECREATIONAL AND HEALTH SERVICES

Consumers can save money when purchasing prescription medicines by

- using credit wisely.
- shopping by mail.
- buying generic brands.
- comparing label information.

The recreational activity which is usually the most expensive is

- skiing.
- golfing.
- swimming.
- camping.

Services are more difficult to compare than products because services

- are more expensive.
- are not used frequently.
- are usually bought on credit.
- vary greatly in quality.

BANKING SERVICES

31. What savings account earns the most interest

- regular savings account.
- daily interest account.
- term deposit.
- savings-checking account.

32. The balance of a person's chequing account would be increased by a

- deposit slip.
- service charge.
- certified cheque.
- canceled cheque.

33. An item which might require the protection of a safe deposit box is a

- certified cheque.
- credit card.
- stock certificate.
- traveler's cheque.

SAVINGS AND INVESTMENTS

34. A person who desires a set rate of return would invest in

- rare coins.
- real estate.
- a mutual fund.
- a corporate bond.

35. A person most concerned with being able to obtain cash quickly would desire an investment high in

- safety.
- risk.
- liquidity.
- yield.

36. The value of a share of stock would most likely increase as a result of

- increased government spending.
- increased dividend payments.
- decreased company profits.
- increased interest rates.

RANCE

The type of insurance which protects a person's automobile from fire and theft is

- a) property damage liability.
- b) comprehensive.
- c) collision.
- d) third party liability.

The main purpose of life insurance is to

- a) avoid financial risks.
- b) protect dependents.
- c) reduce the cost of accidents.
- d) save cash for the future.

The amount a person pays for property insurance would be reduced with an increase in

- a) claims.
- b) the coverage amount.
- c) inflation.
- d) the deductible amount.

AND GOVERNMENT

A major portion of tax money collected by the federal government of Canada goes for

- a) national defense.
- b) economic development & support.
- c) transportation & communication.
- d) public debt.

An item which is deductible from personal income when computing federal taxes is

- a) lunch at work.
- b) rent payments.
- c) donations to charity.
- d) gifts for friends.

A tax with higher rates for a person with higher earnings is the

- a) local property tax.
- b) excise tax.
- c) provincial sales tax.
- d) federal income tax.

THE CONSUMER IN SOCIETY

43. A person's responsibility to read and use consumer publications goes along with a person's basic right to

- a) choose.
- b) safety.
- c) be heard.
- d) be informed.

44. An action by consumers which will increase the costs of products is

- a) wise buying.
- b) shoplifting.
- c) investing.
- d) budgeting.

45. The most effective form of consumer protection is

- a) government regulation.
- b) a consumer boycott.
- c) personal knowledge.
- d) legal action.

THE CONSUMER AND THE ENVIRONMENT

46. The major contributor to pollution in a city is

- a) carbon monoxide.
- b) littering.
- c) aerosol spray.
- d) sulphur dioxide.

47. The most environmentally safe form of energy for heating buildings is

- a) fuel generated electricity.
- b) gas.
- c) nuclear power.
- d) solar.

48. Most heat in a house is lost through the

- a) walls.
- b) basement.
- c) weather stripping.
- d) windows.