

A COMPARISON OF PERSONAL FINANCIAL KNOWLEDGES
OF SENIOR STUDENTS AT CENTRAL MISSOURI
STATE UNIVERSITY WITH IMPLICATIONS
FOR CURRICULUM DEVELOPMENT

By

LESLIE CHARLES GROW
"

Bachelor of Science in Education
Northwest Missouri State University
Maryville, Missouri
1964

Master of Arts
Central Missouri State University
Warrensburg, Missouri
1969

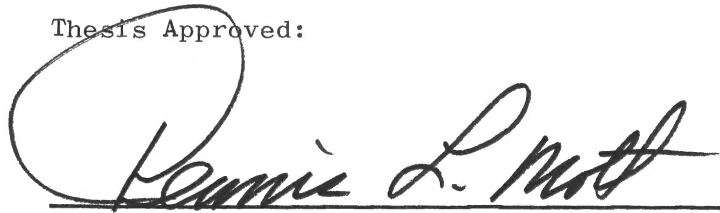
Submitted to the Faculty of the Graduate College
of the Oklahoma State University
in partial fulfillment of the requirements
for the Degree of
DOCTOR OF EDUCATION
December, 1977

Thesis
1977D
G 884c
cop. 2

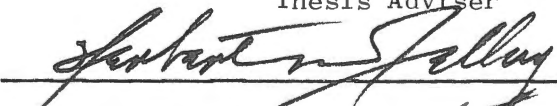


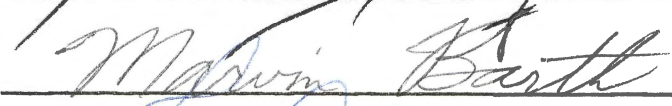
A COMPARISON OF PERSONAL FINANCIAL KNOWLEDGES
OF SENIOR STUDENTS AT CENTRAL MISSOURI
STATE UNIVERSITY WITH IMPLICATIONS
FOR CURRICULUM DEVELOPMENT

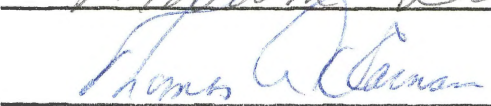
Thesis Approved:




Thesis Adviser









Dean of the Graduate College

PREFACE

This study was designed to determine whether differences in money management knowledges existed between Central Missouri State University seniors who completed the Personal Finance course and seniors who had not completed the Personal Finance course. I wish to thank Dr. Roy E. McAuley for granting permission to administer The College Achievement Test in Personal Finance to all graduating seniors during the spring term Senior Exams. Additional data for the study were collected by conducting telephone interviews with a random sample of 40 seniors who had completed the Personal Finance course.

To those people whose patience and understanding have made the completion of this doctoral study possible, I express my gratitude and appreciation. Special thanks must go to Dr. Dennis L. Mott who served as the chairman of my committee. His encouragement, guidance, and valued judgments were invaluable to me during the preparation of this dissertation. Appreciation is also expressed to the other committee members, Dr. Herbert Jelley, Dr. Thomas Karman, and Dr. Marvin Barth.

A note of thanks is given to Dr. Glenn Pettengill for his assistance with statistical computations and interpretations of the data. Thanks are also extended to Dr. Robert Pierce, Dr. Arthur Norton, and other colleagues who provided encouragement and assistance during the past years.

Finally, special gratitude is expressed to my wife, Linda, for her assistance, encouragement, and many sacrifices.

TABLE OF CONTENTS

Chapter	Page
I. INTRODUCTION	1
Statement of the Problem	2
Need for Personal Finance	2
Personal Finance at Central Missouri State University	4
Purpose of the Study	5
Objectives and Hypotheses	6
Procedures	8
Delimitations	9
Limitations	9
Definition of Terms	10
Summary	12
II. REVIEW OF RELATED LITERATURE	13
Historical Development of Personal Finance in Higher Education	13
Studies in Higher Education	15
Pertinent Secondary Studies	26
Theoretical Implications of Related Literature	30
Summary	33
III. RESEARCH PROCEDURES	34
Research Design	34
Description of the Sample	34
Personal Finance and Non-Personal Finance Students	36
Family Living Students	37
Transfer and Non-Transfer Students	37
Business and Economics Majors	38
Teacher Education Students	39
Business Education and Home Economics Education Majors	39
Married and Single Students	40
Male and Female Students	41
Age Grouping	41
Scholastic Ability of Groups	42
Achievement Test	43
Selection of the Test	43

Chapter	Page
Student Identification Questionnaire	46
Pilot Study of the Achievement Test	47
Achievement Test--Final Results	49
The Telephone Interview Survey Instrument	49
Collecting the Data	50
Achievement Test and Student	
Identification Questionnaire	50
Telephone Interviews	51
Analyzing the Data	53
Summary	54
IV. RESEARCH FINDINGS	56
Statistical Methodology	56
Comparison of Groups and Subgroups	58
Telephone Interviews	74
Money Management Background of Students	74
Practicality of Learning	75
Content of the Personal Finance Course	77
Over-All Evaluation of Personal Finance	81
Teaching Methodology	85
Summary	87
V. SUMMARY, FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS	88
Summary	88
Findings	90
Conclusions	95
Recommendations for Additional Study	98
BIBLIOGRAPHY	99
APPENDIXES	102
APPENDIX A - COLLEGE ACHIEVEMENT TEST IN PERSONAL	
FINANCE AND STUDENT IDENTIFICATION	
QUESTIONNAIRE	103
APPENDIX B - ITEM ANALYSIS PERCENTAGE DATA	117
APPENDIX C - TELEPHONE INTERVIEW GUIDE	121
APPENDIX D - TABULATION OF TELEPHONE INTERVIEWS	125

LIST OF TABLES

Table	Page
I. Classification of Senior Students According to Completion of Personal Finance	37
II. Classification of Transfer and Non-Transfer Students .	38
III. Classification of Business Majors	38
IV. Classification of Teacher Education Students	39
V. Classification of Married and Single Students	40
VI. Classification of Male and Female Students	41
VII. Classification of Age Groups	42
VIII. Comparison of Test Scores Between the Experimental and Control Groups	59
IX. Comparison of Test Scores of Family Living Students Without Personal Finance vs. Students With Personal Finance	60
X. Comparison of Test Scores of Transfer Students With Personal Finance vs. Non-Transfer Students Without Personal Finance	61
XI. Comparison of Test Scores of Transfer Students Without Personal Finance vs. Non-Transfer Students Without Personal Finance	62
XII. Comparison of Test Scores of Business and Economic Majors Without Personal Finance vs. Non-Business and Economic Majors With Personal Finance	63
XIII. Comparison of Test Scores of Business and Economic Majors Without Personal Finance vs. Business and Economic Majors With Personal Finance	65
XIV. Comparison of Test Scores of Teacher Education Majors Without Personal Finance vs. Teacher Education Majors With Personal Finance	66

Table	Page
XV. Comparison of Test Scores of Business and Home Economic Education Majors Without Personal Finance vs. Personal Finance Students	67
XVI. Comparison of Test Scores of Married Students With Personal Finance vs. Single Students With Personal Finance	68
XVII. Comparison of Test Scores of Married Control Group vs. Single Control Group	69
XVIII. Comparison of Test Scores--Experimental Group Male vs. Female	70
XIX. Comparison of Test Scores--Control Group Male vs. Female	71
XX. Comparison of Test Scores--Experimental Group Age 25 and Older vs. Age 24 and Under	72
XXI. Comparison of Test Scores--Control Group Age 25 and Older vs. Age 24 and Under	73
XXII. Student Evaluation of the Amount of Learning Grained From Personal Finance	76
XXIII. Students' Examples of Applied Learning From Personal Finance	78
XXIV. Personal Finance Topics Most Beneficial to Students .	80
XXV. The Responses of Sixteen Students to the Content Coverage in Personal Finance	82
XXVI. Item Analysis Percentage Data	118

CHAPTER I

INTRODUCTION

The increasing complexity of our economy in recent years has made it imperative for the consumer to know how to manage personal finances. Inflation, price increases, unemployment, energy shortages, and taxes are constantly emphasized in daily news releases. Today's citizens are bombarded with critical decisions about managing finances in order to live in a modern business oriented society.

Prior to the development of formal instruction in money management, consumers learned personal finance concepts from the family unit or through experience. Where and how will today's consumers learn about complex and rapidly changing techniques involved in money management? In the area of money management, learning from experience is very "costly" unless there are basic educational concepts from which to draw in times of need. Consumer education courses offered in high schools and colleges are one source from which the citizen can receive a background in money management.

Courses in personal finance and other related content areas have been the subject of several theses and dissertations in the past 25 years. Typically, the course Personal Finance is taught in Business and Economics Departments at a college or university. It is characterized by topics such as banking, savings, credit, insurance, home buying and rental, investments, wills, taxes, budgeting, and pensions. Personal

finance courses are designed to assist the student in managing income and expenditures with a minimum amount of confusion.

Statement of the Problem

This study is designed to determine whether differences in money management knowledges exist between Central Missouri State University seniors who have completed the course Personal Finance and seniors who have not completed the Personal Finance course.

Need for Personal Finance

Today, American families spend considerable time pursuing additional education to improve their earning power. Many times the wife takes a job and the husband moonlights at a second job. Yet, they spend very little time learning how to manage their money. A study completed at the University of Pennsylvania involving 300 married couples--some had sought marriage counseling and some had not--found finances to be the number one marital problem. Household management was found to be the second cause of marital conflict by the study.¹

Rapidly changing life styles require advanced and sophisticated skills to cope with the complexities of modern living. Prices, as measured by the Consumer Price Index, increased more than 66 percent between the years 1967-1975. In 1974, consumers faced double digit inflation as prices increased by 11.1 percent.² Taxes are increasing at

¹"Is Your Marriage a Fighting Affair?", Changing Times (February, 1971), Vol. 25, p. 26.

²U. S. Department of Labor, Bureau of Labor Statistics, Handbook of Labor Statistics 1975 (Washington, D. C.), Bulletin 1865, p. 313.

all governmental levels. At the federal level, the Social Security tax base and rate have both increased. During this period the base increased from \$4,800 to \$14,100 and the rate increased from 3.625 percent to 5.85 percent. In 1965, the maximum tax an employee paid was \$174, and in 1976, the maximum tax had increased to \$895.³ People are also paying more in federal income taxes. As their income increases, they move into a higher federal tax bracket. State and city income taxes, sales taxes, and local property taxes have increased to pay for expanded governmental services. Therefore, even with larger incomes it is more difficult to balance one's budget.

Formal education in personal finance is needed to keep the consumer aware of new money management concepts. New concepts in insurance include homeowner's policies for renters and condominium owners, no-fault auto insurance, and health maintenance organizations. New federal and state laws, high interest rates, increased home purchase prices, and a rapidly changing world of savings and investments continually confuse and bewilder consumers. Today's consumer must be aware of the numerous changes in laws and business practices to enable him to make difficult buying and credit decisions.

Troelstrup emphasized the need for personal finance in higher education with the following statement:

Universities and colleges spend a tremendous amount of time and money in teaching us how to make a good living, but they have almost neglected teaching us how to live and spend money. time, and energy for maximum happiness and good. There is no kind of education that is more important than that which seeks

³U. S. Department of Health, Education, and Welfare, Social Security Information for Young Families (Washington, D. C., January, 1977), pp. 2-15.

to make all of us intelligent about our economic problems and which helps us to become more effective consumers.⁴

Educational institutions should provide students with adequate knowledge for becoming more effective consumers and citizens. Coleman recommended that: "What is needed for the 1970's are comprehensive dynamic courses which provide solid instruction in the basic concepts of consumer education and personal and family money management."⁵

Personal Finance at Central Missouri

State University

The Personal Finance course at Central Missouri State University (CMSU) is a general education course designed to provide college students with insight and ability for handling personal income. As a general education course, it should assist the individual to function as an effective citizen in our democratic society. Johnson defined general education as follows:

General education is that part of education which is concerned with the common knowledges, skills, and attitudes needed by each individual to be effective as a person, a member of a family, a worker, and a citizen.⁶

CMSU lists no prerequisites for the Course 1820--Personal Finance. In addition to regular class sessions, the course is offered over the radio. Students are not required to attend classes for the radio course; but they do have to pass a final exam. The course may be taken on the pass-fail grading system.⁷

⁴ Arch W. Troelstrup, "Consumer Problems--A Basic Course," Business Education Forum, Vol. 8, No. 6 (March, 1953), p. 13.

⁵ Larry D. Coleman, "Consumer Education Needed in Business Teachers Programs," Business Education Forum (Washington, D. C., N.E.A.), Vol. 26, No. 3, p. 33.

⁶ B. Lamar Johnson, General Education in Action (Washington, D.C., American Council on Education, 1952), p. 20.

⁷ Central Missouri State University Catalog 1976--1977, Warrensburg, Missouri: CMSU (June, 1976), pp. 34, 51-52, and 204.

Recommended instructional methods are lectures, outside speakers, case studies, discussion of current financial topics, and term projects. Major topics for course content are: Budgeting, credit and borrowing, insurance, buying a home, investments, income taxes, banking, savings, pensions, Social Security, and wills.⁸

Central Missouri students have considerable flexibility in the selection of their general education courses. Therefore, a CMSU student could graduate without formal money management preparation. Students cannot be required to take the Personal Finance course at CMSU; but students who have inadequate money management knowledges are often advised to include Personal Finance in their selection of general study courses.

Purpose of the Study

The purpose of this study was to analyze and compare the results of a test measuring money management knowledges of Central Missouri State University seniors. A secondary purpose was to make curriculum development suggestions based upon the results of the analysis concerning the Course 1820--Personal Finance. This course is offered in the CMSU School of Business and Economics by the Accounting and Finance Department. An additional goal was to make suggestions to Central Missouri State academic advisors who assist students in planning their educational programs. Results and recommendations of this study should provide insight for similar higher education institutions about money management needs of particular groups and subgroups of students.

⁸Syllabus for the Course 1820--Accounting and Finance (Warrensburg, Missouri: Central Missouri State University), April, 1974, pp. 1-4.

Objectives and Hypotheses

The general objectives of this study are as follows:

1. To determine whether significant differences in money management knowledges exist between seniors who completed the Family Living course and seniors who completed Personal Finance.
2. To determine whether significant differences exist between money management knowledges of transfer and non-transfer senior students.
3. To determine whether there are significant differences in money management knowledges of senior students with majors in business or economics who have completed the Personal Finance course and senior business and economics majors who have not completed the Personal Finance course.
4. To determine whether money management knowledges of senior teacher-education students differ significantly when they have completed Personal Finance.
5. To determine whether significant differences exist between money management knowledges of married and single senior students.
6. To determine whether significant differences exist between money management knowledges of male and female senior students.
7. To determine whether significant differences exist between money management knowledges of senior students 25 years and older and senior students under 25 years of age.

The following hypotheses, stated in the null, were tested at the .05 level of significance:

1. There will be no significant difference between the means of the test scores of college seniors who have completed Personal Finance and college seniors who have not completed Personal Finance.
2. There will be no significant difference between the test scores of college seniors who have completed Family Living and have not completed Personal Finance and college seniors who have completed Personal Finance.
3. There will be no significant difference between the means of the test scores of college seniors who are transfer students and have completed Personal Finance and college seniors who are non-transfer students and have completed Personal Finance.
4. There will be no significant difference between the means of the test scores of college seniors who are transfer students and did not complete Personal Finance and college seniors who are non-transfer students and did not complete Personal Finance.
5. There will be no significant difference between the means of the test scores of college seniors who are business and economics majors and have not completed Personal Finance and non-business and economics majors who have completed Personal Finance.
6. There will be no significant difference between the means of the test scores of college seniors who are business and economics majors and have completed Personal Finance and seniors who have completed Personal Finance and are not business and economics majors.
7. There will be no significant difference between the test scores of college seniors majoring in teacher-education who have not completed Personal Finance and college seniors majoring in teacher-education who have completed Personal Finance.
8. There will be no significant difference between the means of the test scores of college seniors in teacher-education that major in home economics or business-education who have not completed Personal Finance and college seniors who have completed Personal Finance.
9. There will be no significant difference between the test scores of college seniors who are married and have completed Personal Finance and college seniors who are single and have completed Personal Finance.
10. There will be no significant difference between the means of the test scores of college seniors who are married and have

not completed Personal Finance and college seniors who are single and have not completed Personal Finance.

11. There will be no significant difference between the means of the test scores of college female seniors who have completed Personal Finance and college male seniors who have completed Personal Finance.
12. There will be no significant difference between the test scores of college female seniors who have not completed Personal Finance and college male seniors who have not completed Personal Finance.
13. There will be no significant difference between the means of the test scores of college seniors age 25 and older who have completed Personal Finance and college seniors age 24 or under who have completed Personal Finance.
14. There will be no significant difference between the test scores of college seniors age 25 or older who have not completed Personal Finance and college seniors age 24 or under who have not completed Personal Finance.

Procedures

A review of literature on personal finance was the first step in the investigation. Valid testing instruments for measuring money management knowledges in personal finance were carefully examined. An extensive review of literature revealed Ogden's College Achievement Test in Personal Finance. It was selected as the testing instrument for the current study.

The second step was the administration of a pilot study. Ogden's test was given to college seniors at Central Missouri State University (CMSU) who completed their "Senior Exams" during the 1976 fall term. An item analysis of the tests was completed. Due to time constraints in administering the test and because of the results of the item analysis, five questions were removed from the College Achievement Test in Personal Finance. The content validity of the shortened test was verified by Personal Finance professors at CMSU.

In the third step, the shortened version of the test was administered to CMSU seniors completing Senior Exams in the spring of 1977. Test results were tabulated, and the data collected were then analyzed statistically to test the previously formulated hypotheses. Grade point averages were used to determine if scholastic differences influenced test scores in the comparison of student groups.

The fourth step was to review literature on the techniques of telephone interviewing so that interviews with students who had completed the Personal Finance course could be conducted. Ten interview questions were formulated, and a random sample of forty former Personal Finance students were telephoned. Information gained from the interviews was used to identify strengths and weaknesses of the course and to aid in the development of curriculum content for personal finance courses.

A final step in the study was to prepare a formal summation of the literature and interpret the data collected. Conclusions and recommendations were reached from the data and the findings were prepared.

Delimitations

The investigation was conducted at Central Missouri State University, Warrensburg, Missouri, and the findings regarding the students' money management knowledges are applicable to CMSU. The findings might, however, have implications for other similar universities.

Limitations

This study was limited to identifying differences in personal financial knowledges possessed by CMSU seniors and was not concerned with making value judgments concerning the amount of knowledge necessary

for a CMSU senior. Nor did the study measure those knowledges of students who dropped out or withdrew from the university without graduating.

The study depended upon the validity and reliability of Ogden's College Achievement Test for Personal Finance as revised. Ogden furnished extensive statistical data both for the complete test and for each individual item in the test. According to the criteria of experts in the field of tests and measurements, Ogden's test meets the validity and reliability requirements considered necessary for a test of this type.

Definition of Terms

Course

"Organized subject matter in which instruction is offered within a given period of time, and for which credit toward graduation or certification is usually given."⁹

Knowledges

"When information is organized into bodies of meaningful interconnected facts and generalizations, it is usually referred to as knowledge."¹⁰

⁹Carter V. Good (Ed.), Dictionary of Education (3rd ed., New York, 1973), p. 148.

¹⁰Robert M. Gagne' and Leslie J. Briggs, Principles of Instructional Design (New York, 1974), p. 55.

Money Management and Personal Finance

Money management, as used interchangeably with the term personal finance throughout this study, will refer to those knowledges, understandings, and applications that a person uses to solve financial dilemmas and problems confronting him throughout his lifetime.

Seniors

Refers to those students who have completed their Senior Exams in preparation for graduation during the summer, fall, winter, or spring terms of the school year 1976-1977.

Senior Exams

Students must take the examinations during the last term prior to graduation... The Senior Examinations consist of the Aptitude Test of the Undergraduate Record Examination for all examinees and of a Field Test of the Undergraduate Record Examination, if such is available in the student's major.¹¹

Transfer Students

Refers to those students who did not enter CMSU as freshmen but were part of the graduating class of 1976-1977. A transfer student had to transfer in more than 30 credit hours to be so classified.

¹¹Central Missouri State University Catalog 1976-1977, p. 41.

Summary

An American consumer must deal with many complex personal financial problems in our business oriented society. Financial errors can be costly and frustrating to the consumer. Assuming that one of the purposes of education is to prepare a person to live in his society, then it follows that educational institutions have a responsibility to prepare graduates to live in a business oriented world. This study was designed to measure the amount of personal financial knowledges possessed by graduating seniors at CMSU and to reach conclusions based on the data collected.

CHAPTER II

REVIEW OF RELATED LITERATURE

Studies of personal finance concerning schools of higher education served as a focus for the review of literature. Three studies in secondary education were found to be pertinent to the current study and are included in the review. An effort was made in reviewing the literature to locate an examination for measuring money management knowledges common to the higher education course entitled "Personal Finance". Certain variables effect the understandings of personal finance. Some of the variables revealed in previous studies are: Age, sex, formal instruction in personal finance, work experience, socio-economic level, academic achievement, and academic preparation. Topics in courses such as Family Finance and Consumer Finance were reviewed and found to have a content similar to that of Personal Finance. Studies in higher education which encompass these related subject areas were examined and selected for review.

Historical Development of Personal Finance in Higher Education

During the depression of the 1930's and for many years thereafter, emphasis was placed on managing one's income and expenditures. Secondary schools were the natural media for further development of consumer education at that time as few citizens were educated above the high

school level. In the 1940's, colleges began to offer some courses pertaining to financial problems of the consumer. In 1941, Alpheus Marshall stated that, "Most consumption economics courses, as a matter of fact, have been in existence less than ten years--especially those offered in departments of economics and business administration."¹

Colleges were sporadic in initiating money management courses from 1935 to 1945. Harap and Price conducted a survey on consumer education development in the years 1938 to 1944. It was found that 55 colleges offered a course in consumer finance in 1938, and 52 colleges had such a course in 1944.² Subject matter of courses designated as "Personal Finance" aimed at practicability and were found most often in business administration departments. They attempted to develop techniques and principles of saving, spending, and budgeting.³

Considerable growth was apparent in the development of personal finance courses on the college level in the late 50's and early 60's as evidenced by the Cohen and Hanson texts of 1948 and 1964. Between the two copyright dates, the number of colleges offering courses in personal finance grew from "250" to "650".⁴ Materials with personal financial

¹Alpheus Marshall, "Nine Hundred Twenty Courses in Consumption Economics," The Educational Record, XXII (January, 1941), p. 28.

²Henry Harap and Ray G. Price, "A Survey of Recent Developments in Consumer Education," Journal of Educational Research, XXXVIII (December, 1944), p. 278.

³Marshall, p. 36.

^{4a}Jerome B. Cohen and Arthur W. Hanson, Personal Finance (Homewood, Illinois: Richard D. Irwin, Inc., 1958), p. vii.

^{4b}Jerome B. Cohen and Arthur W. Hanson, Personal Finance, Principles and Case Problems (Homewood, Illinois: Richard D. Irwin, Inc., 1964), p. vii.

problems experienced a period of growth and change; but no study was found that dealt with the course "Personal Finance" on the collegiate level before 1952.

Studies in Higher Education

A survey conducted to determine course content was the earliest study found that related to the personal finance course. In 1952, Gustafson studied the financial needs and problems of current and former students of Fullerton Junior College, Fullerton, California. The purpose of his study was to provide financial data and practices as a basis for guidance in selecting and refining the content of Personal Finance, a general studies course taught in the Business Education Division.

Data for the study consisted of (1) personal financial questionnaires filled in by a selected group of former students who had attended Fullerton Junior College between 1920 and 1950, (2) personal financial case histories of students currently enrolled (1950-1951) in the course Personal Finance, and (3) evaluation questionnaires of students enrolled in the course through the school years 1951-1952.⁵

Analysis of the survey of former students indicated a definite need for courses in consumer economics and money management. Few former students had been educated in personal finance, and almost two-thirds recognized the need for formal training.⁶ Former students recommended

⁵Jessie C. Gustafson, "A Critical Study of the Content of and Implications for a Junior College Course in Personal Finance" (unpub. Ed. D. dissertation, University of California, Los Angeles, December, 1952), p. 246.

⁶Ibid., pp. 249-250.

that students receive training on the following topics: Savings funds, conservative installment buying, establishment of emergency funds, early participation in life insurance programs, home purchasing, credit and interest charges, and budgeting.⁷

Personal financial case histories of the students revealed some significant data about money management traits in the early 1950's. The students followed the habits established in their early years, especially the patterns and practices of their parents and family members. Students reared in homes owned by their parents appeared to be more financially independent than the students whose parents lived in rented homes. Family traits and habits regarding installment purchases were usually represented to a considerable degree by the financially independent students. Thus if parents did not make purchases on the installment plan, it was unlikely that their children would purchase freely in this manner. The experiences of the students in the Personal Finance course influenced them to direct their thinking toward planning for an occupation, marriage, and future financial security.⁸

Evaluation questionnaires completed by current students indicated that they were interested in more information about the topics of money, automobile insurance, budgeting, borrowing and installment buying, taxes, and wills and trust plans. Students appeared to be most interested in the current problems they faced as consumers. Topics of least interest appeared to be those which would not be of great immediate benefit to the students such as bonds, Social Security, and pensions.⁹

⁷Ibid., p. 257.

⁸Gustafson, pp. 252-253.

⁹Ibid., p. 254.

Gustafson's study indicated a need for better textbooks and teaching aids that specifically related to the course Personal Finance. It was recommended that teacher-training programs in college and university departments of education and business education include methods courses and practices in personal finance. Gustafson recommended that a personal finance course be included in the curriculum of every junior college youth so students could become economically competent.¹⁰

One of the first attempts to prepare a testing instrument in the area of family finance was made by Kell in 1961. A true-false evaluation instrument was prepared to measure the understandings of secondary school teachers who participated in family financial workshops. As a diagnostic test, it may point up areas of subject matter which should be included in in-service education programs. Kell recognized the need for a kind of evaluation that measured more than facts and knowledge--an evaluation which would measure broad understandings of subject matter principles.¹¹

Ogden constructed just such a test in 1964. The College Achievement Test in Personal Finance was designed to measure personal financial knowledges, understandings, and applications possessed by college students. Ogden went to considerable lengths in establishing the content of Personal Finance in order to design a comprehensive and valid testing instrument. The College Achievement Test in Personal Finance, a 60 question multiple choice test, was selected as the testing instrument for this study. The test was used because it was the only valid and reliable test found which specifically measured personal finance

¹⁰Ibid., p. 260.

¹¹Venetta B. Kell, "An Instrument for the Evaluation of Understandings in Family Finance," (unpub. Ed. D. dissertation, University of Oklahoma, 1961).

achievement at the college level. Chapter III of the current study includes a detailed description of the achievement test and Ogden's methods of construction.

Ogden recommended that the final version of his achievement test be used to measure differences of students in other curriculums as opposed to those students in personal finance. This represented one objective of the current study. Furthermore, he concluded:

The College Achievement Test in Personal Finance might be used to prove or disprove a need for enlarging or diminishing the offering of such a course as Personal Finance on the college or university level. ...and as a method for clarifying and re-evaluating objectives of a course in Personal Finance offered on the college or university level.¹²

In 1969, Bernardi utilized Ogden's College Achievement Test in Personal Finance to compare the knowledge of personal finance possessed by students completing the course with the amount of knowledge possessed by a similar group of students who had not had the course. The research was conducted at the University of Oklahoma where Bernardi selected a random sample of students enrolled in Personal Finance and a second random sample of non-personal finance students. One limiting fact about the non-personal finance sample was that all the students were enrolled in the College of Education and thus not representative of all college students. In order to ensure that the subjects of the two groups were

¹²Russell L. Ogden, "The Construction and Standardization of an Achievement Test Designed to Measure Personal Financial Knowledge, Understandings, and Applications Possessed by Selected College Students," (unpub. Ed. D. dissertation, Colorado State College, 1964).

of equal scholastic ability, a comparison of the American College Test (ACT) scores was used.¹³

Bernardi made some revisions in the test questions as six years had passed; however, it was basically the same test as previously constructed by Ogden. The College Achievement Test in Personal Finance was divided into seven content areas: Planning, buying, borrowing, saving, investing, protecting, and sharing (taxes).¹⁴

A t test of the difference between the means was utilized in analyzing the data. The personal finance group scored significantly higher at the .01 level of confidence than did the non-personal finance group on the over-all test and six of the seven content areas. One exception was the content area of sharing, or taxes.¹⁵

Bernardi's experimental group scored considerably better on the College Achievement Test in Personal Finance than did Ogden's experimental group. Ogden tested 833 students who were currently enrolled in Personal Finance, and the mean score was 27.07 with a range of scores from 11 to 47.¹⁶ Bernardi's group consisted of 84 students currently enrolled in Personal Finance. The mean was 37.07 with a range of scores from 26 to 56.¹⁷

¹³Ray D. Bernardi, "The Collegiate Course in Personal Finance: Measurement of Learning Accomplished by Selected College Students," (unpub. Ed. E. dissertation, University of Oklahoma, 1970), pp. 38-41.

¹⁴Ibid., pp. 46-47.

¹⁵Ibid., pp. 66-70.

¹⁶Ogden, p. 104.

¹⁷Bernardi, p. 64.

Due to the similarity of the current study, two of Bernardi's conclusions were especially relevant:

1. ...evidence in this study indicates that certain personal aspects of finance and business can make a substantial contribution to the general education of all college students.
2. This investigation corroborates the conclusions of other researchers that students can more significantly increase their basic knowledge and understanding of money management in actual classroom situations than in normal everyday experiences.¹⁸

Through the use of open-end interviews in 1968, Taylor studied the money management policies and attitudes of married students at the University of Oklahoma. Taylor categorized his data under six area headings: Planning, buying, borrowing, protecting, saving, and sharing or taxes. The experiences and observations of collecting the data led Taylor to the conclusion that nearly all married couples were having some difficulty in one or more areas of money management, with many of them experiencing problems in all areas. He also observed that married university students who lived apart in their own environment with other married students interacted and learned from each other, thereby undergoing a developmental process of learning.¹⁹

Students faced with family financial problems solved them through a trial and error approach. Taylor recommended that this represented an "incentive point" at which students should be provided with three

¹⁸Ibid., pp. 70-80.

¹⁹Richard B. Taylor, "Money Management Practices and Attitudes of Married Students," (unpub. Ed. D. dissertation, University of Oklahoma, 1968), p. 123.

types of competent financial counseling.

1. ...information of general needs and interest could be disseminated in large groups.
2. More specialized needs of a few individuals could be discussed in smaller guidance sessions.
3. The ultimate in the learning process would be individual counseling by specialists trained in specific areas of financial needs.²⁰

Individualized counseling assists students in learning how to ask questions. It also provides the information needed for students to formulate their own answers rather than the counselor giving specific answers to all questions.

Taylor also suggested that since students seldom seek out the answers to family financial problems, the university should take education, counseling, and consulting to the students--preferably in or near the housing areas. Taylor's study points out the need for competent money management by a particular group in society. Other studies in the 1970's continued to analyze various groups who could benefit the most from formal instruction in family or personal finance.

Bennington, 1974, conducted an extensive study to explore the family financial knowledges of pre-service consumer education teachers in Georgia. He identified six areas of consumer education: (1) Financial planning, (2) buying, (3) borrowing, (4) protecting, (5) investing and saving, and (6) sharing. The areas were similar to the areas covered in personal finance although consumer education places greater emphasis on wise purchasing.²¹

²⁰Ibid., p. 124.

²¹Richard R. Bennington, "Understandings of Pre-Service Teachers of Family Financial Aspects of Consumer Education," (unpub. Ed. D. dissertation, University of Georgia, 1974), p. 9.

Because he could find no test to measure those knowledges he considered important, Bennington constructed a Test of Family Financial Aspects of Consumer Education. To determine the content of his test he surveyed six educational authorities from Georgia. Bennington's final test consisted of 55 multiple choice questions; however he did not include an item analysis of the test questions or a Kuder-Richardson correlation coefficient of reliability.²²

Bennington's research design was an experimental versus control group method. The experimental group consisted of college seniors with subject matter concentration in business-education or home economics-education at selected higher education institutions in Georgia. Students in the experimental group were enrolled in pre-service education and represented future teachers of consumer education. Students from the control group had subject matter concentrations similar to the experimental group except that they were not planning to be teachers of consumer education. The control group was composed of three subgroups: (1) Business Administration seniors, (2) Home Economics seniors, and (3) Education seniors.²³

From the several findings, five were relevant to the current study. Based upon his Test of Family Financial Aspects of Consumer Education, Bennington found that: (1) Pre-service teachers majoring in Home Economics Education were more knowledgeable than seniors majoring in Business Education. (2) Business Administration majors were more knowledgeable than Business Education majors. (3) Home Economic Education majors and Business Education majors who had previously completed

²²Ibid., pp. 39-46.

²³Bennington, pp. 46-49.

a course in personal or family finance did not score significantly higher on the test than those who had not completed such a course. (4) Marriage had a significant positive effect on the knowledge of pre-service consumer education teachers. (5) Pre-service consumer education teachers who were 22 or older did not score significantly higher than students 18 to 21 years of age.²⁴

Bennington recommended that educators evaluate their programs to learn why business-education majors scored significantly lower than home economic majors on his test. He recommended that those responsible for the training of home economic-education majors consider the possibility that they needed additional training. Even more specifically:

Teachers in the area of personal or family finance should re-evaluate their course content in an attempt to ensure that this course makes a valuable contribution to the knowledge of the students in the areas of financial planning, buying, borrowing, protecting, investing and saving, and sharing.²⁵

He further recommended that samples be obtained to see if sex would make a difference on the test.

Smith examined the relationship between attitudes and achievement of college students toward consumer finance. She also examined the relationship between attitudes and achievement on the following: Borrowing money for educational expenses vs. non-borrowing, work experience vs. non-work experience, physical level of work experience, complexity of work experience, and socio-economic status of college students.²⁶

²⁴Ibid., pp. 96-97.

²⁵Bennington, p. 98.

²⁶Kathleen F. Smith, "Consumer Finance Attitudes of College Students," (unpub. Ed. D. dissertation, Boston University School of Education, 1973), pp. 25-26.

A modified version of the Beattie Survey of Student Opinions Toward Personal Finance was the testing instrument used by Smith to measure attitudes of the students. Beattie's attitude survey measures four areas of personal finance: Money management, savings and investments, insurance, and credit. A consumer information test was prepared to measure achievement in the same four areas measured in the attitude survey. Smith's achievement test was a 90 question multiple choice test designed to measure cognitive learning as defined by Bloom's Taxonomy of Educational Objectives, Cognitive Domain. Knowledge, comprehension, and application were the three areas of measurement in Bloom's definition of cognitive learning. The achievement test was examined for content validity by a jury of experts, administered to a pilot group, and subjected to an item analysis of the test items. A revised and final form of the test scored a .76 coefficient of reliability on the Kuder-Richardson Formula 21 estimate of internal reliability.²⁷

Both tests were administered to an experimental group of 170 students enrolled in a family economics course offered by the College of Home Economics at the Kingston Campus of the University of Rhode Island during 1971-1972. Content of the course included the study of the four areas measured by the two tests. A control group for the study included 176 students who had not received formal instruction in personal finance content areas.²⁸

There was not a strong relationship between attitude and achievement as measured by the Pearson product-moment correlation coefficient. Thus students apparently can learn the subject matter without developing

²⁷Smith, pp. 27-32.

²⁸Ibid., pp. 35-36.

favorable attitudes toward consumer finance. A mean score for the experimental group on the achievement test was 56.58 as compared with a mean score of 21.92 for those students without formal instruction in personal finance. It was concluded that students with formal instruction in consumer finance had more knowledges about the subject than students without formal instruction.²⁹

Further results of the study revealed that students who had borrowed for educational expenses did not score significantly higher at the .10 level of confidence on the four areas of the achievement exam. Smith found that students with work experience scored significantly higher on the achievement test than students without work experience. Sedentary work experience resulted in higher scores than physical work experience, but not always significantly higher in all areas of the test.³⁰

Complexity levels of the occupation did not have a significant effect on the scores. Smith stated that, "The complexity of the jobs held by college students is less important than the exposure of the students to the world of work."³¹ Socio-economic status of the college students did not significantly effect their attitudes and understandings of consumer finance. Smith's finding differed with Jelley's and Litro's studies conducted at the high school level. They found that students from higher socio-economic levels of society were significantly more knowledgeable about money management.

²⁹Smith, p. 59.

³⁰Ibid., pp. 75-76.

³¹Ibid., p. 82.

Pertinent Secondary Studies

Numerous studies have been conducted about money management understandings of high school students. A pertinent study was made by Jelley in 1958.

Jelley's investigation was to determine money management understandings of second semester high school seniors. His first step was to isolate the most important money management topics to be taught in the secondary school curriculum. A word count of money management topics from eight selected textbooks resulted in the isolation of 43 topics. These 43 topics were presented to a group of 26 selected educators who rated the topics according to importance. Seventeen topics were computed to be "very important" and from these "very important" topics a test was constructed.³²

Jelley's next step was to prepare an achievement test to measure twelfth grade understandings of the selected money management topics. His test was constructed with careful consideration given to the readability of the test and based upon the Yoakam formula, the test had a 6.8 grade level readability. Three sections were included in the achievement test: (1) Borrowing money and using credit, (2) managing personal finances, and (3) insurance. An item analysis was computed from an experimental group of seniors, and all test items were positive discriminators. To authenticate the results of the achievement test, an

³²Herbert M. Jelley, "A Measurement and Interpretation of Money Management Understandings of Twelfth-Grade Students," (unpub. Ed. D. dissertation, University of Cincinnati Teachers College, 1958), p. 220.

interview guide was prepared and 102 of the 603 students completing the achievement test were interviewed.³³

Tests were analyzed to determine if significant differences existed in money management understandings of students who differed in socio-economic status, academic achievement, and sex. Students in the upper socio-economic group scored significantly higher than the middle socio-economic group on borrowing, using credit, and insurance sections of the test; but not significantly higher on the section about managing personal finances. On all three sections of the test the middle socio-economic group scored significantly higher than the lower socio-economic group. The students in the higher academic achievement group scored significantly higher than students in the middle academic group on the achievement test. Students in the middle academic group scored significantly higher than the lower academic group. There was no significant difference between male and female on borrowing, using credit, and managing personal finances sections of the test. However the mean score of the male students was significantly higher than the females on the insurance section of the test. Results of the interviews paralleled the results of the achievement test.³⁴

Jelley made several recommendations for curriculum planning. He recommended that all secondary school students should have an opportunity to participate in money management learning activities; that low socio-economic students receive relatively more time in money management learning activities; and that money management instruction is important

³³Jelley, pp. 64-71.

³⁴Ibid., pp. 222-228.

for both boys and girls. The recommendation most relevant to the current study was that:

Teachers must be prepared to cope with the problems of teaching groups of students who knowledges vary from slight understandings to unusual insight. Providing for such individual differences will present a real challenge to the teacher; it will require the teacher to develop and use unusual initiative and creativeness.³⁵

Beattie modified and utilized the Jelley money management test and prepared an attitude inventory to test the hypothesis: "There is no relationship between the amount of information known and the direction of pupils' attitudes toward personal finance."³⁶ He divided Jelley's test into four areas of personal finance--money management, credit, savings and investments, and insurance. Four variables were examined: Sex, grade, test, and socio-economic level.

Beattie's attitude inventory consisted of non-factual statements which were judged as expressing favorable or unfavorable feelings toward the topics in personal finance. The attitude inventory used the Likert scale of five category responses ranging from "strongly agree" to "strongly disagree". Preliminary tests of 421 items were presented to a jury of nine qualified experts on consumer information. Six of the nine judges had to agree on the scoring direction of the item before it was retained. On the basis of the judges' analyses, 284 of the original items survived. Two hundred items were selected for the final form of the inventory with 50 items from each of the four areas of personal finance.

³⁵Ibid., p. 231.

³⁶A. Donald Beattie, "Relationships Between High School Pupils' Information and Attitudes Toward Personal Finance," (unpub. Ph. D. dissertation, University of Minnesota, 1962), p. 97.

A population of the study was represented by 506 pupils enrolled in consumer education classes in Minnesota high schools during the 1960-1961 school year. Most of the relationships between attitude and money management were found to be significant. Although the correlation coefficients were considered to be significant, Beattie believed that further consideration needed to be given to the degree of the relationships. He found the coefficient to be "very low" or "low"; and for practical purposes little relationship exists between the amount of information known and the direction of one's attitude toward personal finance. Beattie concluded, "One, therefore, should not expect to teach desirable attitudes toward personal finance on the basis of information alone."³⁷

Litro (1969) used both Beattie's Consumer Attitude Inventory and the (Jelley) Beattie Consumer Information Test to compare the consumer understandings and the attitudes with the social positions of 614 eleventh grade students from Connecticut high schools. He discovered a definite relationship between students' social positions and their consumer understandings and attitudes. Students from lower social classes were more deficient on the achievement test than students from higher social classes in practically all consumer areas. Litro further concluded that all students exhibited a relatively low level of consumer competency.³⁸

³⁷Beattie, p. 104.

³⁸R. F. Litro, "Relation of Students Social Position to Consumer Attitudes and Understandings," Delta Pi Epsilon Journal, Vol. 12--2nd Quarter (1970), pp. 1-5.

A second purpose of Litro's study was to investigate the relationship between academic programs (college preparatory, business education, and general education) and consumer attitudes and understandings of students. Generally the results of the attitude inventory were the same as those found on the achievement test: College preparatory students scored significantly higher than did business education students, and business education students scored significantly higher than general education students.

Litro also examined the variable of sex and found no significant difference due to sex on the total achievement test scores. Female students, however, did score significantly higher on the money management section of the test. He concluded that there were no outstanding differences between the levels of consumer attitudes exhibited by male and female students.³⁹

Theoretical Implications of Related Literature

There is considerable opinion that the study of personal finance is valuable to the over-all educational experience of most students. Regardless of this fact, research indicates that many groups of students are not receiving adequate education in this area and are deficient in their understanding of how to manage their personal finances.

One implication from previous research is that many American consumers are not acquiring knowledges and understandings while in high school or college to function as effective consumers. Surveys of students who have graduated from colleges indicated a need for more

³⁹Litro, p. 4.

formal instruction in money management. Married students attending colleges or universities readily admit deficiencies in money management. In fact, they learn how to manage their finances through a trial and error approach. They seldom seek assistance from others with the exception of their peers.

Several studies have concluded that students are significantly more knowledgeable about personal finances after receiving formal instruction. Most of the studies examined the knowledges of students who were currently enrolled in the course. However Bennington studied pre-service teachers who had previously received formal instruction in family or personal finance and found they did not score significantly better on his consumer education test.

Research indicates that secondary school teachers preparing to teach in the area of personal finance or consumer education may lack the necessary knowledge to be effective teachers. Bennington (1974) found that home economics teachers were more knowledgeable than business education teachers on a consumer education test. Bennington, Gustafson, Taylor, Jelley, and others recognized the necessity of highly motivated, well-trained, creative teachers in this area. Research implies that teaching institutions need to evaluate their teacher preparation programs to ensure competent high school teachers of consumer education and money management.

At the collegiate level few studies have been conducted to determine the personal financial knowledges possessed by students who major in business and economics. Bennington found that business administration students scored significantly better on his consumer understandings test than did business education students. However there was no attempt to

determine whether the business majors learned about consumer finance from the business curriculum or from a course in personal finance.

Many independent variables have been examined in personal finance studies. Surveys by Gustafson and Taylor indicate that experience is a valuable learning tool. Gustafson learned that home training is an important factor in the ability to manage your finances wisely. Smith studied the affects of work experience and concluded that sedentary work experience can significantly contribute to personal finance understandings. Bennington did not find significant differences on his test when students borrowed money for college, purchased life insurance, opened a savings account, or purchased an automobile. Research indicates that narrow experiences may not contribute to personal financial understandings but a combination of related financial experiences favorably affects understandings about money management.

Age, according to the Bennington study, did not result in significant differences in consumer understandings. The study divided students into two groups, age 18 to 21, and age 22 and over. Bennington did find that married and divorced students scored significantly higher on his consumer achievement test.

At the secondary level, socio-economic status affects the understanding of personal finance. Students in higher socio-economic groups scored significantly higher on money management achievement tests. However Smith found that socio-economic status did not significantly affect personal finance understandings at the collegiate level.

Neither Jelley or Litro found significant differences between sexes in their research. Both studies were based upon the completion of formal instruction in money management. Previous research revealed a need to

determine whether money management differences exist between males and females who have not been instructed in personal finance.

Studies correlating student attitudes to cognitive understandings did not indicate a strong relationship between attitudes and knowledges. Students can apparently learn the subject matter without developing favorable attitudes toward consumer finance.

Summary

Early research concerning personal financial knowledges investigated and surveyed consumers in an effort to authenticate the need for formal instruction in this area. Studies attempted to discover which financial knowledges were needed by consumers and to identify economic deficiencies. Research revealed that many consumers lack the necessary skills and understandings to efficiently manage their financial resources.

In the 1960's and 1970's researchers utilized achievement tests to measure money management knowledges of both high school and college students. Special attention was given to the knowledges possessed by specific groups or subgroups in our society. The literature revealed an opportunity to conduct research about certain groups of students who have completed a course in personal finance and compare those groups to students who had not completed a personal finance course.

CHAPTER III

RESEARCH PROCEDURES

The purpose of this study was to measure, analyze, and evaluate the money management knowledges possessed by seniors at Central Missouri State University (CMSU). A causal-comparative research design was utilized. For comparative purposes the seniors were divided into two groups, students who had completed Personal Finance and students who had not completed Personal Finance. Selected subgroups of students were formed to determine whether significant differences existed in the personal financial knowledges of the seniors. A review of the literature revealed an achievement test--The College Achievement Test in Personal Finance--designed to measure personal finance knowledges. A Student Identification Questionnaire was prepared and attached to the test to gather the pertinent data about the students. As a preliminary procedure, a pilot study of the achievement test was administered to a sample of CMSU seniors. Following the pilot study, the achievement test was revised.

A telephone questionnaire was used to assist in the evaluation of the Personal Finance course. It was administered to a sample of students who had completed the course Personal Finance. Data collected from the achievement test and the telephone questionnaire was analyzed and the hypotheses were tested. A detailed description of the procedures used in the study follows.

Research Design

The research design used the causal-comparative study method. A causal-comparative method is often used instead of an experimental method to test research hypotheses about cause and effect relationships. According to Borg and Gall, the first step in a causal-comparative study is to identify subjects with some particular characteristic and to study them in comparison with a normal or control group.¹

Senior students who had completed the course Personal Finance and had received formal instruction in money management represented the experimental group. Students who had not completed Personal Finance--the remainder of the graduating seniors--represented the control or normal group. An objective of the research design was to determine what caused some senior students to have better understandings about money management than other students. The study also examined the effect of the Personal Finance course on senior students' money management understandings.

Description of the Sample

CMSU, a state supported university located in Warrrensburg, Missouri, permitted senior students to be tested for personal financial knowledges during the 1976-1977 academic year. Student enrollment at CMSU in 1976-1977 was approximately 9,000 undergraduate and graduate students.

¹Walter R. Borg and Meredith D. Gall, Educational Research--An Introduction (New York: David McKay Company, Inc., 1971), p. 299.

During four testing periods in the academic school year, 1,333 students completed Senior Exams required of all graduating seniors. These 1,333 senior students represented the population of the study. On April 2, 1977, the College Achievement Test in Personal Finance was administered to 513 seniors who took their Senior Exams in the spring testing session. Thirteen tests were not usable as nine seniors were currently enrolled in the Personal Finance course and four seniors filled in their answer sheets incorrectly. This left a total of 500 senior students to represent the sample of the study. The sample of 500 students was divided into selected groups and subgroups to assist in testing the hypotheses formulated in Chapter I. Information concerning characteristics of the sample are identified in the following sections.

Personal Finance and Non-Personal Finance Students

As illustrated in Table I, the experimental group was comprised of 125 students who had completed Personal Finance. The experimental group represented 25 percent of the total number of students in the sample. Seventy-five percent or 375 students in the sample represented the control group.

TABLE I
CLASSIFICATION OF SENIOR STUDENTS ACCORDING
TO COMPLETION OF PERSONAL FINANCE

Group	Number of Students	Percentage of Total
Experimental	125	25%
Control	<u>375</u>	<u>75%</u>
Total	500	100%

Family Living Students

Students at CMSU are required to complete 8 to 10 hours of general study credit in an area called "Personal Living" as part of their general study requirements. Family Living and Personal Finance are both included in the area of Personal Living.² There were 201 students who had completed Family Living and had not completed Personal Finance. Test scores of these 201 students were compared with the 125 students who had completed Personal Finance.

Transfer and Non-Transfer Students

Table II shows that 151 of the 500 seniors transferred into CMSU. Seniors were considered transfer students if they had 30 or more transfer hours. Transfer students were less likely to have completed Personal Finance than were non-transfer students in this study.

²Central Missouri State University Catalog 1976-1977, p. 52.

TABLE II
CLASSIFICATION OF TRANSFER AND NON-TRANSFER STUDENTS

Group	Transfer Seniors	Percent Transfer Seniors	Non-Transfer Seniors	Percent Non-Transfer Seniors
Experimental (N=125)	27	22%	98	78%
Control (N=375)	<u>124</u>	33%	<u>251</u>	67%
TOTAL (N=500)	151	30%	349	70%

Business and Economics Majors

There were 77 business and economics majors (see Table III). The subgroup included students with declared majors in the areas of business or economics but did not include students with business and economic minors. There were 15 business and economic students who had completed Personal Finance.

Table III
CLASSIFICATION OF BUSINESS MAJORS

Group	Business Majors	Percent Business Majors
Experimental (N=125)	15	12%
Control (N=375)	<u>62</u>	17%
TOTAL (N=500)	77	15%

Teacher Education Students

Teacher education students were a part of this study because several research studies recognized the need for teachers to be competent in the area of money management. There were 134 seniors enrolled in teacher education (see Table IV). The teacher education group represented 27 percent of the entire sample of 500 seniors but only 24, or 19 percent, of these future teachers had completed Personal Finance.

TABLE IV
CLASSIFICATION OF TEACHER EDUCATION STUDENTS

Group	Senior Teacher Education Majors	Percent Senior Teacher Education Majors
Experimental (N=125)	24	19%
Control (N=375)	<u>110</u>	29%
TOTAL (N=500)	134	27%

Business Education and Home Economics

Education Majors

Since it is especially important for business and home economics teachers to be competent in teaching about money management, a subgroup of these future teachers was formed. Twelve business and home economics

teachers who had not completed Personal Finance were compared with the 125 seniors who had completed Personal Finance.

Married and Single Students

As shown in Table V there were more single students than married students in the sample. Married students represented 24 percent of the entire sample but comprised 27 percent of the experimental group. Single students comprised 76 percent of the total sample and 72 percent of the experimental group.

At the request of CMSU, students were not asked if they were divorced. Therefore students were divided into two subgroupings-- married or single.

TABLE V
CLASSIFICATION OF MARRIED AND SINGLE STUDENTS

Group	Married Seniors	Percent Married Seniors	Single Seniors	Percent Single Seniors
*Experimental (N=125)	34	27%	90	72%
*Control (N=375)	<u>85</u>	23%	<u>289</u>	77%
TOTAL (N=500)	119	24%	379	76%

* Total percent does not equal 100% because one student in each group did not specify marital status.

Male and Female Students

There were more male students (278) than female students (222). As shown in Table VI male students represented 56 percent of the sample and 66 percent of the experimental group, whereas females represented 44 percent of the sample and 34 percent of the experimental group. It appears that males are more likely and females are less likely to complete Personal Finance.

TABLE VI
CLASSIFICATION OF MALE AND FEMALE STUDENTS

Group	Males	Percent Males	Females	Percent Females
Experimental (N=125)	82	66%	43	34%
Control (N=375)	<u>196</u>	52%	<u>179</u>	48%
TOTAL (N=500)	278	56%	222	44%

Age Grouping

Students were divided into two subgroups according to age; 25 and older and 24 and under. Age 25 was selected as the dividing line to determine if older students' personal experiences would influence their achievement test scores. As shown in Table VII there were fewer students

age 25 and older (101), but the older subgroup was more likely than the younger subgroup to have completed Personal Finance. The older subgroup represented 20 percent of the sample and 24 percent of the experimental group.

TABLE VII
CLASSIFICATION OF AGE GROUPS

Group	Seniors 25 & Over	Percent Seniors 25 & Over	Seniors Under 25	Percent Seniors Under 25
*Experimental (N=125)	30	24%	93	74%
Control (N=375)	<u>71</u>	19%	<u>304</u>	81%
TOTAL (N=500)	101	20%	397	79%

* Total percent does not equal 100% because two students who completed Personal Finance failed to report their age.

Scholastic Ability of Groups

During the administration of the College Achievement Test for Personal Finance, each student reported his Grade Point Average (GPA). The purpose of obtaining GPA's was to determine whether the experimental and control groups were comparable in scholastic ability. Students receive their cumulative GPA's at the end of each quarter and would have

received their GPA's approximately three weeks prior to taking the exam. Reported GPA's were rounded to the nearest tenth for computation. Students in the experimental group had a mean GPA of 3.027 as compared with students in the control group with a mean GPA of 2.990. To determine whether the groups were of equal ability, a t test was computed between the means of the GPA's of the two groups. A computed t value of .756 was not significant at the .01 level of confidence. Both groups were considered comparable in their scholastic ability.

Achievement Test

Selection of the Test

Results of the study depended heavily upon the quality of a measuring instrument. In the review of literature, one test was found that specifically measured college students' knowledge and understanding of personal finance. That test was developed by Ogden for a doctoral study in 1964. It was further used by Bernardi in 1970, when he compared the knowledges of an experimental group of students enrolled in Personal Finance to a control of students not enrolled in Personal Finance.

Ogden was careful to ensure that his test possessed content validity and reliability. He utilized four steps in establishing content validity. They were as follows:

1. Topical analysis of textbooks in personal finance.
2. Determination of topics currently taught on college and university campuses.
3. Judgment by national authorities of the importance of topical areas obtained in step two above.

4. Judgment by national authorities of the importance of "levels of learning" to be measured by the standardized test.³

Eight currently used textbooks were selected as a basis in determining the major and subtopical areas included in college courses in personal finance. Thirteen major topics were deemed important as a result of the analysis of the textbooks. The topics were: Budgeting Income and Expenses, Buying on Credit, Borrowing Money, Using Your Bank, Types and Purposes of Various Methods of Transferring Funds, Savings, Buying Life Insurance, Health and Accident Insurance, Buying or Renting a Home, Investment in Financial Securities, Federal Income Taxes, Social Security, and Retirement Planning.⁴

A list of topical areas was submitted to college professors of personal finance from various colleges and universities. They were asked either to agree or to disagree with the inclusion of the various areas in the study of personal finance. Twelve of the fifteen professors responded to the questionnaire. The questionnaire was revised in accordance with the suggestions of the college professors teaching personal finance.⁵

Sixteen national authorities in personal finance were asked to rate both the major and subtopical areas on a "5 to 1" (descending order) rating basis to determine the importance they attached to each of the areas. Twelve of the national authorities responded to the second questionnaire. Ratings of the national authorities on the topical

³Ogden, p. 41.

⁴Ibid., pp. 43-45.

⁵Ibid., p. 46.

areas were used to determine the percentage of the test items to be allocated to each major area.⁶

Ogden's test was designed to measure three levels of learning: Knowledges, understandings, and applications. These cognitive learning abilities are used to solve varied and complex financial problems. National authorities ranked understandings first; applications, second; and knowledges, third.⁷

After establishing the content validity, Ogden proceeded to construct and administer the test. One-hundred multiple choice questions were formed from information gathered from eight college textbooks. Test items were administered in a pre-tryout and a final tryout. Further, the items were reviewed by three teachers of English for grammatical errors and improvement in test items. A final version of the test contained 60 multiple choice questions. Answers were "keyed" by four authorities in personal finance, and questions were revised when the answers differed.

A final form of the achievement test was administered to 833 personal finance students at eight state colleges in the North Central section of the United States. Ogden's population consisted of more male than female students; 65 percent of the students were male. Furthermore, the largest portion of the population were freshmen--45 percent of the students tested. All of the students tested were currently enrolled in personal finance.

⁶Ogden, p. 48.

⁷Ibid., p. 56.

An analysis of each individual test item resulted in an average item discrimination coefficient of .316 and a range from .06 to .59. According to authorities, an average item discrimination of .316 is acceptable. Analysis of the 180 alternative options to the multiple choice items indicated that 90 percent were satisfactorily discriminating between the upper and lower scoring population tested. An index of difficulty for the test was .45 with a range from .12 to .78.⁸ Borg and Gall recommend that a discriminating test should have about a .50 difficulty level.⁹ Measured by Kuder-Richardson Formula 20 the coefficient of reliability for the achievement test was .74.¹⁰

Statistical norms computed for the Ogden test were: (a) Range--36 points, (b) Mean 27.07, (c) Standard Deviation--6.88, and (d) Standard Error of Measurement--3.54. Percentile Ranks were also established for individual groups.¹¹

Student Identification Questionnaire

A Student Identification Questionnaire was prepared to accompany the achievement test. The purpose of the questionnaire was to obtain a concise body of information about each respondent. Specific information collected from students were: Name, telephone number, Social Security number, age, sex, major, minor, grade point average, completed Personal Finance, enrolled in Teachers Education Program, transfer student,

⁸Ogden, p. 75.

⁹Borg and Gall, p. 356.

¹⁰Ogden, p. 103.

¹¹Ibid., p. 113.

completed Family Living course, and marriage status. Appendix A contains The Student Identification Questionnaire and The College Achievement Test in Personal Finance.

Pilot Study of the Achievement Test

Borg and Gall recommend that whenever possible a pilot study should be carried out, including an analyses of the data.¹² A pilot study was administered during the fall semester, 1976, to 210 students as part of the Senior Exams.

Prior to the fall semester the questions on Ogden's achievement test were reviewed, and a few modifications were made on questions where certain data and facts had changed since the original administering of the exam. During the exam the students completed the student questionnaire and were allowed 35 minutes to complete the 60 multiple choice questions. Test items were analyzed for discrimination and difficulty; and a Kuder-Richardson reliability coefficient of .667 was computed. This compared with a .74 Kuder-Richardson reliability coefficient on Ogden's original administration of the test.

Results of the pilot study revealed that 25 to 30 percent of the students did not complete the test. Because of a time constraint in administering Senior Exams, it was necessary to shorten the achievement test. After an item analysis, two questions were found to be discriminating in a negative manner. These two questions were removed from the exam. Three more questions were removed from the examination based upon two criteria: First, the questions had to have a low positive

¹²Borg and Gall, pp. 60-61.

discrimination. Second, the questions had to come from different content areas of the test. The five questions removed from the achievement test were from the following major topical areas: Budgeting Income and Expenses, Buying on Credit, Savings, Retirement Planning, and Investment in Financial Securities.

Content of the test was then reviewed by four CMSU professors who have taught or were currently teaching Personal Finance. They concurred that the test represented the content that should be included in a Personal Finance course.

According to Remmers, Gage, and Rummel, several factors can affect the reliability coefficient of a test. Groups with a greater amount of variability (from several grades) will result in a higher reliability coefficient.¹³ Because Ogden tested freshmen, sophomores, juniors, and seniors and this study tested only seniors might account for the reduction in the reliability coefficient from .74 to .667.

Another factor affecting reliability coefficient is the length of the test. A shorter test will result in a lower reliability coefficient. The decision to shorten the test could have further reduced the reliability coefficient. Remmers, Gage, and Rummel state that, "For research purposes tests may be useful if their reliability coefficients fall as low as .50, especially if group performance only is at issue."¹⁴ It was decided that the Ogden test as modified was a valid and reliable testing instrument for this study.

¹³H. H. Remmers, N. L. Gage, and J. Francis Rummel, A Practical Introduction to Measurement and Evaluation (New York: Harper and Row, 1965), p. 132.

¹⁴Ibid., p. 133.

Achievement Test--Final Results

Results of the College Achievement Test in Personal Finance were similar to results obtained by Ogden in his original study. Some differences would be expected since Ogden tested only students currently enrolled in Personal Finance. This study tested senior students who had previously completed Personal Finance and also senior students who had no formal instruction in Personal Finance. Also the test was shortened and modified slightly for the current study. An item analysis revealed that the 55 test questions discriminated in a positive manner. A mean score of 21.6 with a standard deviation of 5.523 was computed. The Kuder-Richardson 20 coefficient of reliability was .632. Appendix B presents the item analysis of the achievement test.

The Telephone Interview Survey Instrument

A telephone interview guide was prepared to collect information from students who had completed the Personal Finance course at CMSU. Borg and Gall recommended the use of a telephone interview when the questions asked of the respondents are not highly personal or too numerous.¹⁵ Telephone interviews made it easier to contact the seniors personally, especially those not living on campus. Many seniors were student teaching, had completed their coursework and taken a job, or were commuters to the CMSU campus. Other advantages of the telephone interview method were: (1) The interviewer would not have to travel, (2) no appointments had to be made with the respondents, and (3) there need not be any concern whether respondents would complete a mail-in survey.

¹⁵Borg and Gall, p. 189.

Identification of the objectives to be achieved by the survey was the first step in preparing the Telephone Interview Guide. Objectives were to ask the students about the content, methodology, practicality, and an over-all evaluation of the course. Question 10 asked students if they thought they could have learned the material using an individually paced method of instruction.

Questions in the telephone interview were structured to make it easier to collect the data. As the questions were formulated, care was exercised to avoid the use of leading questions. Before the interview guide was used, it was submitted to three CMSU business professors for review and criticism. Utilizing the suggestions of the professors, the interview guide was revised and improved and administered to several students on an experimental basis. A final revision of the interview guide was completed and duplicated. Appendix C presents The Telephone Interview Guide used to collect data on the Personal Finance course.

Collecting the Data

Achievement Test and Student Identification

Questionnaire

Data for this study were collected through administration of the College Achievement Test in Personal Finance and the Student Identification Questionnaire to the experimental and control groups during the spring quarter of Senior Exams, 1977. Telephone interviews were completed during the following three weeks. On the morning of April 2, 1977, the exams were administered at several locations on the CMSU campus. Selected professors from the School of Business and Economics assisted in the administration of the exams. Professors were advised

on testing procedures and on the importance of a proper testing environment. Instructions were provided on the cover sheet of the testing booklet for student reference. Each student could complete the Identification Questionnaire and The College Achievement Test in Personal Finance without assistance. Students were allowed ample time to complete the Student Identification Questionnaire. They were asked to read the instructions on the College Achievement Test in Personal Finance and to place their answers on separate IBM answer sheets. All students were allowed 36 minutes to complete the examination.

Analysis of the answer sheets and item analysis indicated that the majority of the students completed the test. Some students could have used a few more minutes; but Ogden in the original preparation of the test stated that the test was a power test, and regardless of the time allotted for the test some students would not finish.¹⁶ The total number of subjects to whom the tests were administered was 513 of which 500 were usable. Thirteen unusable tests included nine students who were currently enrolled in Personal Finance and four students who filled in the answer sheets incorrectly.

Telephone Interviews

Determining the size of the sample to be interviewed was the first step in using the Telephone Interview Guide. One formula for determining sample size given a small population is presented in Equation (1).

Symbol definitions for the formula are as follows:

¹⁶Ogden, p. 65.

N = size of the population

n = required sample size

e = error for confidence interval

Z = Z value determined by confidence coefficient

p = estimated proportion in the population

$$n = \frac{\frac{Z^2 (p) (1-p)}{e^2}}{1 + \frac{Z^2 (p) (1-p)}{e^2 N}} \quad (1)$$

An error term selected for the study was .125 which determines the acceptable confidence interval. The Z value confidence coefficient was 1.645 or .90 which means that 90 percent of the time the confidence interval will contain the true responses of the Personal Finance population of students. The p, or estimated proportion, was .50 and is the most conservative estimate of p. It should be used when p is unknown. The N or number in the population was 125. A computed n value was 32 and thus a sample of at least 32 respondents was needed. In order to increase the credibility of the sample 40 students were actually interviewed.¹⁷

A sample of 40 students was randomly selected from the 125 seniors who had completed Personal Finance. Each Student Identification Questionnaire was numbered consecutively. A table of random numbers was employed in selecting the students to be interviewed. There were 41 telephone interviews conducted, 40 of which included the sampling. One

¹⁷Morris Hamburg, Basic Statistics: A Modern Approach (New York: Harcourt Brace Jovanovich, 1974), pp. 160-165.

student transferred the Personal Finance course from another institution to CMSU and this interview was not used in the sample. Of the random sample, only one student interviewed was uncooperative. Most answers and opinions were constructive and expressed with apparent sincerity. Two of the sample received credit for Personal Finance from the radio course offered by the University. Both interviews were included in the sampling especially for the sake of comparison with students who received credit for the course by the traditional classroom method of instruction.

Analyzing the Data

Answer sheets of the College Achievement Test in Personal Finance obtained from the respondents were graded by the use of electronic data processing equipment. Test items were submitted to an item analysis. Data from the Student Identification Questionnaire were tabulated by hand according to the various groups and subgroups. All data were key punched into punch cards, and the actual computations were then made utilizing the computer facilities at CMSU.

Test scores were analyzed to determine if the t test was applicable. According to Borg and Gall, the t test makes three assumptions about the test scores: (1) Scores form an interval or ratio scale of measurement, (2) scores in the population are normally distributed, and (3) score variances for the population under study are equal.¹⁸ To verify the third assumption the groups were tested for homogeneity of the variances.

¹⁸Borg and Gall, pp. 304-305.

Since the population variance was unknown, the following formula in Equation (2) uses sample data.¹⁹

$$F = \frac{s_1^2}{s_2^2} \quad (2)$$

The group with the largest variance was the numerator and the denominator was the variance of the remaining group. A computed F ratio was compared with the tabled F values at the five percent level of confidence to determine whether the differences in the variances was significant. Groups with homogeneous variances were tested with the t test statistic. A chi-square statistic was used in testing the groups that failed to meet the t test homogeneity assumption. Both the t test and the chi-square statistics are discussed in Chapter IV. Fourteen hypotheses presented in Chapter I were stated in the null and tested at the five percent level of confidence.

Summary

A causal-comparative research design was utilized for the study. The objective of the study was to measure and make comparisons of money management knowledges of CMSU graduates. Selected groups and subgroups were formed to determine if differences existed in the money management knowledges possessed by the seniors. Randomly selected students who had completed Personal Finance were interviewed in an effort to evaluate the course.

¹⁹Charles Clark and Lawrence Schkade, Statistical Analysis for Administrative Decisions (Cincinnati: South-Western Publishing Co., 1974), p. 443.

To obtain the data necessary to complete the study, the following steps were undertaken:

1. Permission was sought from and granted by CMSU to conduct the study.
2. The review of literature revealed the College Achievement Test in Personal Finance by Ogden. The test was specifically designed to measure knowledges, applications, and understandings of personal finance.
3. A Student Identification Questionnaire was prepared to collect precise data about the seniors.
4. A preliminary form of the achievement test and student questionnaire was administered to a pilot group of 210 seniors during fall term Senior Exams.
5. The achievement test and student questionnaire were revised based upon the pilot study and administered to a sample of 513 seniors during spring term Senior Exams.
6. Data collected was used to test the hypotheses utilizing the t test and chi-square statistics.
7. A Telephone Interview Guide was prepared based upon the objectives of the survey; and a random table was used to select personal finance students to be interviewed. Data for evaluating the course were collected by telephoning 40 seniors who had completed Personal Finance.
8. Data collected from the telephone interview were analyzed and presented in tables using descriptive statistics.

CHAPTER IV

RESEARCH FINDINGS

Findings and interpretations based upon collected data from the study are recorded in Chapter IV. Statistics used to analyze data obtained from the achievement test and student questionnaire are discussed in the first section of the chapter. Tests of the fourteen hypotheses were analyzed and findings were presented. Current findings were related to previous findings for the formulation of possible theoretical interpretations and applications. Results of the sample of 40 telephone interviews with seniors previously enrolled in Personal Finance are presented in the last section. Implications of the findings are related to the Central Missouri State University Department of Accounting and Finance.

Statistical Methodology

A variety of statistical tools can be used in causal-comparative studies. Borg and Gall stated that, "The t test is probably the most commonly used statistical tool in causal-comparative studies."¹ Since the t test proved to be effective in testing most of the hypotheses in the study, it was the primary statistic used. The t test is a parametric statistic used in testing the significance of the difference between

¹Borg and Gall, p. 304.

group means. Selected groups and subgroups were formed, and the mean scores of the groups or subgroups were compared to determine whether significant differences existed in the money management knowledges of the subgroups. Equation (3) is a replication of the t test used to test the hypotheses of the current study.

$$t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{\frac{(n_1 - 1) s_1^2 + (n_2 - 1) s_2^2}{n_1 + n_2 - 2}}} \quad (3)$$

The symbols of the formula are defined as follows:

t = the t value

\bar{x}_1 = mean of group one

\bar{x}_2 = mean of group two

s_1^2 = variance of group one

s_2^2 = variance of group two

n_1 = number of members in group one

n_2 = number of members in group two

As stated in Chapter III, the chi-square statistic was used when the groups studied did not have homogeneous variances. The non-parametric test provides a method to determine whether or not a significant difference exists between the observed number of cases falling into a category, and the expected number of cases, based upon the null hypothesis. If a significant chi-square value (significant difference between observed and expected results) occurred, the null hypothesis was rejected. The basic formula used was:

$$\chi^2 = \sum_{i=1}^k \frac{(f_o - f_e)^2}{f_e} \quad (4)$$

The symbols of the formula are as follows:

χ^2 = the chi-square value

f_o = the observed number in a given category

f_e = the expected number in that category

$\sum_{i=1}^k$ = the sum of the ratio over all k categories

Comparison of Groups and Subgroups

Hypothesis 1

There will be no significant difference between the means of the test scores of college seniors who have completed Personal Finance and college seniors who have not completed Personal Finance.

Hypothesis 1 was designed to compare the scores of the experimental and control groups on the College Achievement Test in Personal Finance. Students representing the experimental group had completed a course in Personal Finance, in many instances three or four years prior to the taking of the achievement test, while students in the control group had not been enrolled in Personal Finance. As is shown in Table VIII, the t value for the comparison of the experimental and control groups was 5.26. The t value was significant at the .01 level making it possible to reject the hypothesis at the .05 level. Therefore the course Personal Finance increases money management knowledges of graduating seniors.

TABLE VIII
COMPARISON OF TEST SCORES BETWEEN THE
EXPERIMENTAL AND CONTROL GROUPS

	Experimental	Control	t
Sample Size	125	375	5.26*
Mean	23.95	20.89	
Standard Deviation	5.79	5.22	

* Significant at the .01 level of confidence.

Hypothesis 2

There will be no significant difference between the test scores of college seniors who have completed Family Living and have not completed Personal Finance and college seniors who have completed Personal Finance.

Hypothesis 2 was designed to determine whether seniors learned as much about personal finance in the Family Living course without completing the Personal Finance course as did the students who completed Personal Finance. The Family Living course was offered by the Home Economics Department, and some of the subject matter was similar to the content of the Personal Finance course. If students learned about money management in Family Living, they would not need to take Personal Finance.

As is shown in Table IX, there was a significant difference in the test scores of the two groups as determined by the chi-square statistic of 31.40 (a chi-square of 6.64 was necessary to be significant at the .01 level). Hypothesis 2 was rejected, and senior students who completed

Family Living did not acquire as many money management concepts as a senior who had completed the Personal Finance course.

TABLE IX
COMPARISON OF TEST SCORES OF FAMILY LIVING STUDENTS
WITHOUT PERSONAL FINANCE vs. STUDENTS
WITH PERSONAL FINANCE

Status of Seniors	Lower ½ of Scores	Upper ½ of Scores	Total
Family Living Without Personal Finance	130	71	201
Personal Finance Students	<u>41</u>	<u>84</u>	<u>125</u>
TOTAL	171	155	326

$$\chi^2 = 31.40 \text{ (significant at the .01 level).}$$

Hypothesis 3

There will be no significant difference between the means of the test scores of college seniors who are transfer students and have completed Personal Finance and college seniors who are non-transfer students and have completed Personal Finance.

Hypothesis 3 was designed to make comparisons between transfer and non-transfer students who had completed Personal Finance. Table X illustrates that there was no significant difference between the test score means of the two groups. The transfer students' mean score was 24.93 while the non-transfer students' mean score was 23.68. Hypothesis 3 was not rejected and no significant differences between the two

subgroups on personal finance knowledges was found.

TABLE X
COMPARISON OF TEST SCORES OF TRANSFER STUDENTS
WITH PERSONAL FINANCE vs. NON-TRANSFER
STUDENTS WITH PERSONAL FINANCE

	Transfer With Personal Finance	Non-Transfer With Personal Finance	t
Sample Size	27	98	.908*
Mean	24.93	23.68	
Standard Deviation	6.48	5.59	

* Not significant at the .05 level.

Hypothesis 4

There will be no significant difference between the means of the test scores of college seniors who are transfer students and did not complete Personal Finance and college seniors who are non-transfer students and did not complete Personal Finance.

Hypothesis 4 was similar to Hypothesis 3 except that the two subgroups had not completed Personal Finance. Table XI illustrates the comparisons of the two subgroups. A t value of .146 was not significant at the .05 level of confidence; thus there was no significant difference between the test scores of transfer and non-transfer seniors who had not completed Personal Finance. A mean score for the transfer seniors was

20.94 and the mean score of the non-transfer seniors was 20.86.

Hypothesis 4 was not rejected.

TABLE XI
COMPARISON OF TEST SCORES OF TRANSFER STUDENTS
WITHOUT PERSONAL FINANCE vs. NON-TRANSFER
STUDENTS WITHOUT PERSONAL FINANCE

	Control Transfer	Control Non-Transfer	t
Sample Size	124	251	.146*
Mean	20.94	20.86	
Standard Deviation	5.61	5.02	

* Not significant at the .05 level.

The purpose of Hypotheses 3 and 4 was to determine whether the money management knowledges were different for transfer students. Transfer students' scores were comparable to those of non-transfer students, and no differences existed between the two subgroups.

Hypothesis 5

There will be no significant difference between the means of the test scores of college seniors who are business and economics majors and have not completed Personal Finance and non-business and economics majors who have completed Personal Finance.

Hypothesis 5 was designed to compare the money management knowledges of business and economics students to non-business and economics students who had completed Personal Finance. As can be observed in Table XII, the business and economics majors without Personal Finance scored higher (a mean score of 25.09) on the achievement test than did the subgroup who had completed Personal Finance (a mean score of 23.40). The t value was 1.83, which was not significant at the .05 level of confidence; although it would be significant at the .07 level of confidence. Hypothesis 5 was not rejected since there was no significant difference in the money management knowledges of the two subgroups.

TABLE XII

COMPARISON OF TEST SCORES OF BUSINESS AND ECONOMIC MAJORS
WITHOUT PERSONAL FINANCE vs. NON-BUSINESS AND
ECONOMIC MAJORS WITH PERSONAL FINANCE

	Majors Without Personal Finance	Non-Majors With Personal Finance	t
Sample Size	62	110	1.83*
Mean	25.08	23.40	
Standard Deviation	5.98	5.44	

* Not significant at the .05 level--significant at the .07 level of confidence.

Hypothesis 6

There will be no significant difference between the means of the test scores of college seniors who are business and economics majors and have completed Personal Finance and seniors who have completed Personal Finance and are not business and economics majors.

Hypothesis 6 was designed to determine whether business and economics majors with Personal Finance would score significantly higher than the remaining Personal Finance senior students. Those senior business and economics majors who had completed Personal Finance numbered 15 and compiled a mean score of the achievement test of 28.00. There was 62 business and economics majors without Personal Finance, and that subgroup's mean score was 25.08. Even though the business and economics majors who had completed Personal Finance scored higher than the majors without Personal Finance, the t value of 1.53 was not significant at the .05 level of confidence (see Table XIII). Hypothesis 6 was not rejected. Business and economics students learn additional knowledges from the Personal Finance course but do not know significantly more about money management than do business and economics majors who do not complete Personal Finance.

TABLE XIII

COMPARISON OF TEST SCORES OF BUSINESS AND ECONOMIC MAJORS
WITHOUT PERSONAL FINANCE vs. BUSINESS AND ECONOMIC
MAJORS WITH PERSONAL FINANCE

	Majors Without Personal Finance	Majors With Personal Finance	t
Sample Size	62	15	1.53*
Mean	25.08	28.00	
Standard Deviation	5.98	6.77	

* Not significant at the .05 level of confidence.

Hypothesis 7

There will be no significant difference between the test scores of college seniors majoring in teacher-education who have not completed Personal Finance and college seniors majoring in teacher-education who have completed Personal Finance.

Many of the research studies cited in the review of literature recognized the need for competent teachers in the area of consumer education or money management. Consumer education and money management knowledges are usually taught on the secondary level in business or home economics courses. Previous researchers assumed that these knowledges can and should be integrated with other subject matter content at both the primary and secondary level of education.

Hypothesis 7 compared money management knowledges of seniors in teacher education. As is shown in Table XIV, future teachers who had completed Personal Finance scored significantly higher than the group

of future teachers without Personal Finance. Hypothesis 7 was rejected as the chi-square computed statistic of 8.03 was significant at the .01 level of confidence. The data clearly indicates that students enrolled in teacher education benefit from the Personal Finance course.

TABLE XIV
COMPARISON OF TEST SCORES OF TEACHER EDUCATION MAJORS
WITHOUT PERSONAL FINANCE vs. TEACHER EDUCATION
MAJORS WITH PERSONAL FINANCE

Status of Seniors	Lower ½ of Scores	Upper ½ of Scores	Total
Teacher Education With Personal Finance	7	17	24
Teacher Education Without Personal Finance	<u>67</u>	<u>43</u>	<u>110</u>
TOTAL	74	60	134

$\chi^2 = 8.03$ (Significant at the .01 level of confidence.)

Hypothesis 8

There will be no significant difference between the means of the test scores of college seniors in teacher-education that major in home economics or business-education who have not completed Personal Finance and college seniors who have completed Personal Finance.

Hypothesis 8 was similar to Hypothesis 7 except that it compared the money management knowledges of business education and home economics education majors with all other students who had completed Personal

Finance. There were 12 seniors who were business education or home economics education majors who had not completed Personal Finance, and their mean score was 21.33 (see Table XV). The 125 senior students who had completed Personal Finance had a mean score of 23.95. The computed t value was 1.77 which was significant at the .098 level of confidence. Thus Hypothesis 8 was rejected at the .05 level of confidence.

TABLE XV
COMPARISON OF TEST SCORES OF BUSINESS AND HOME ECONOMIC
EDUCATION MAJORS WITHOUT PERSONAL FINANCE
vs. PERSONAL FINANCE STUDENTS

	Bus. & H.Ec. Ed. Without Personal Finance	Seniors With Personal Finance	t
Sample Size	12	125	1.77*
Mean	21.33	23.95	
Standard Deviation	4.79	5.79	

* Not significant at the .05 level (significant at the .098 level of confidence).

Hypothesis 9

There will be no significant difference between the test scores of college seniors who are married and have completed Personal Finance and college seniors who are single and have completed Personal Finance.

Hypotheses 9 and 10 were designed to determine whether marital status had a significant effect on test scores. Hypothesis 9 divided the experimental group of personal finance students into married and single subgroups and compared the test scores of the two subgroups. The married subgroup scored significantly higher than the single subgroup.

TABLE XVI
COMPARISON OF TEST SCORES OF MARRIED STUDENTS
WITH PERSONAL FINANCE vs. SINGLE STUDENTS
WITH PERSONAL FINANCE

Status of Seniors	Lower ½ of Scores	Upper ½ of Scores	Total
Single	54	36	90
Married	<u>8</u>	<u>26</u>	<u>34</u>
TOTAL	62	62	134

$$\chi^2 = 13.13 \text{ (significant at the .01 level).}$$

As presented in Table XVI, the chi-square statistic was 13.13 which was significant at the .01 level of confidence. Thus Hypothesis 9 was rejected. Further scrutiny of the data revealed that 26 of the 34 married students scored in the higher category of the contingency table.

Hypothesis 10

There will be no significant difference between the means of the test scores of college seniors who are married and have not completed Personal Finance and college seniors who are single and have not completed Personal Finance.

In Hypothesis 10 the control group of seniors was divided into married and single subgroups. Again the married students scored significantly higher at the .01 level of confidence. The computed t value, as shown in Table XVII, was 4.53. Hypothesis 10 was rejected.

TABLE XVII
COMPARISON OF TEST SCORES OF MARRIED CONTROL
GROUP vs. SINGLE CONTROL GROUP

	Married	Single	t
Sample Size	85	289	4.53*
Mean	23.19	20.19	
Standard Deviation	5.30	5.01	

* Significant at the .01 level.

Collected data suggests that married seniors with or without Personal Finance have learned more about money management perhaps through personal experiences than have seniors who are single.

Hypothesis 11

There will be no significant difference between the means of the test scores of college female seniors who have completed Personal Finance and college male seniors who have completed Personal Finance.

Hypotheses 11 and 12 were designed to determine whether sex had a significant effect on money management knowledges. Hypothesis 11 compared male and female students who had completed Personal Finance. The mean score of the male students was slightly higher, 24.49, and the females' mean score was 23.05 (see Table XVIII). A difference in scores resulted in a t value of 1.26, which was not significant at the .05 level of confidence. Hypothesis 11 was not rejected in that no significant difference in the scores was found.

TABLE XVIII
COMPARISON OF TEST SCORES--EXPERIMENTAL GROUP
MALE vs. FEMALE

	Experimental Male	Experimental Female	t
Sample Size	81	43	1.26*
Mean	24.49	23.05	
Standard Deviation	5.41	6.41	

* Not significant at the .05 level of confidence.

Hypothesis 12

There will be no significant difference between the test scores of college female seniors who have not completed Personal Finance and college male seniors who have not completed Personal Finance.

Hypothesis 12 divided the control group into male and female sub-groups to determine whether significant differences existed between test scores. A chi-square value of 3.65 was computed, and Hypothesis 12 was not rejected at the .05 level of confidence (see Table XIX). To be significant at the .05 level of confidence, a chi-square of 3.84 was necessary. The computed chi-square value of 3.65 was significant at the .10 level of confidence. Although not significant at the .05 level of confidence, the finding of Hypothesis 12 indicates that males without formal instruction in Personal Finance understand money management better than females without formal instruction in Personal Finance.

TABLE XIX
COMPARISON OF TEST SCORES--CONTROL GROUP
MALE vs. FEMALE

Status of Control Group	Lower ½ of Scores	Upper ½ of Scores	Total
Male	80	107	195
Female	<u>99</u>	<u>81</u>	<u>180</u>
TOTAL	187	188	375

$\chi^2 = 3.65$ (Not significant at .05 level; but significant at .10 level.)

Hypothesis 13

There will be no significant difference between the means of the test scores of college seniors age 25 or older who have completed Personal Finance and college seniors age 24 or under who have completed Personal Finance.

Hypotheses 13 and 14 were designed to determine whether older students who may have accumulated money management knowledge through experience would score significantly higher on the test than younger students. The age of 25 or older was selected as the dividing line because it was assumed that students would have accumulated some experience by this age.

In Hypothesis 13, the experimental group was divided into subgroups of 25 years and over and 24 years and under. As revealed in Table XX, the subgroup of older students had a mean score of 27.40, whereas the subgroup of younger students had a mean score of 22.83. Using the t test, the difference in the means resulted in a t value of 3.60 which was significant at the .01 level of confidence. Hypothesis 13 was rejected, and students 25 years and older had a significantly better understanding of personal finances.

TABLE XX

COMPARISON OF TEST SCORES--EXPERIMENTAL GROUP
AGE 25 AND OLDER vs. AGE 24 AND UNDER

	Experimental 25 & Over	Experimental 24 & Under	t
Sample Size	30	93	3.60*
Mean	27.40	22.83	
Standard Deviation	6.28	5.25	

*Significant at the .01 level of confidence.

Hypothesis 14

There will be no significant difference between the test scores of college seniors age 25 or older who have not completed Personal Finance and college seniors age 24 or under who have not completed Personal Finance.

Hypothesis 14 was employed to determine whether there were significant differences in money management knowledges within the control group due to a difference in age. Table XXI reveals that 47 of the 71 students in the older age subgroup scored in the upper one-half on the test. A computed chi-square value was 9.34 which was significant at the .01 level of confidence. Hypothesis 14 was rejected as the older age subgroup scored significantly higher than the younger age subgroup.

TABLE XXI
COMPARISON OF TEST SCORES--CONTROL GROUP
AGE 25 AND OLDER vs. AGE 24 AND UNDER

Status of Control Group	Lower ½ of Scores	Upper ½ of Scores	Total
24 and Under	164	140	304
25 and Over	<u>24</u>	<u>47</u>	<u>71</u>
TOTAL	188	187	375

$\chi^2 = 9.34$ (significant at the .01 level).

Telephone Interviews

A sample of 40 telephone interviews were conducted for the purpose of asking the students pertinent questions about the Personal Finance course at Central Missouri State University. The objective of the interviews was to solicit student views on the practicality, content, methodology, and over-all opinion of the course. In the following sections results of the telephone interviews are presented with attempts to determine implications for the CMSU Accounting and Finance Department. See Appendix D for the complete tabulation results of the Telephone Interview.

Money Management Background of Students

Question 1.

Did you have a good background in money management before you enrolled in Personal Finance? If yes, was it from: High School, Learned from Family Members, Learned from Experience, Learned from a Spouse, Family Living Course, or Other?

The purpose of Question 1 was to determine whether students had learned about money management before they enrolled in Personal Finance at CMSU. According to students a majority of them did not have a good background in money management. Twenty-five students (62.5 percent) stated that they did not have a good background in money management prior to their enrollment in Personal Finance.

Fifteen students (37.5 percent) professed to have a good background in money management before their enrollment in Personal Finance. Eight of those students stated that they previously learned about money management from experience, five from educational courses, and four from family members (2 of the 15 students gave more than one response). Further

examination of the student data revealed that 8 of the 15 respondents were 25 years and older.

Practicality of Learning

Question 2.

On a scale of A-B-C-D-F, do you believe that you learned enough from Personal Finance to manage your personal financial resources and solve your money management problems?

Question 3.

Have you applied any of the topics and specific units you learned in Personal Finance to your personal money management problems? If yes, give a couple of examples.

Questions 2 and 3 pertained to the practicality of learning in the Personal Finance course at CMSU. Question 2 asked about the specific grade or rank that students would evaluate as personal money management knowledges gained from the course. Question 3 followed-up with the applications of these knowledges or acquired learnings.

Results of the rating or grading of money management knowledges students felt they gained from the course (Question 2) were as follows: Thirty-six students, or 90 percent, felt they gained an adequate knowledge in order to manage their monetary resources by giving a rating of "C" or better. Over half of the students interviewed felt they gained above average knowledges (55 percent) from Personal Finance. Only four students, or 10 percent, said they gained little knowledge from the course and evaluated their learning as "D" or "F". See Table XXII, page 76.

Of the 40 students interviewed, 80 percent had applied some of the money management knowledges they gained from Personal Finance (Question 3).

TABLE XXII
STUDENT EVALUATION OF THE AMOUNT
OF LEARNING GAINED FROM
PERSONAL FINANCE

Grade	Number of Students	Percent of Students
A	7	17½%
B	15	37½%
C	14*	35 %
D	2	5 %
F	2	5 %

* 2 Radio Course Students

Table XXIII shows the most useful topical areas given as examples of applied learning by 32 of the students as: Insurance, budgeting, banking, and credit and borrowing. Topical areas given less often by the students as examples of applied learning were: Social Security, investments, income taxes, and where to find needed information on money management. Subjects such as wills, estate planning, pensions, inflation, and home buying were not mentioned by the students. See Table XXIII, page 78.

Students felt that the Personal Finance course helped them gain above average money management knowledges, and 80 percent of the students had applied some of the knowledge learned from Personal Finance. Implications from the questions on practicality of learning was that students were most concerned with those knowledges that provided immediate benefit and personal use. Personal Finance is a freshman level course and most students complete the course during their freshman or sophomore year. It appears that the knowledges learned in Personal Finance should assist the students to solve their financial problems during college.

Content of the Personal Finance Course

Question 4.

Which topics from Personal Finance do you feel will benefit you the most in the future?

Question 5.

Was there any topic in Personal Finance that should have been stressed more or less?

TABLE XXIII
STUDENTS' EXAMPLES OF APPLIED LEARNING
FROM PERSONAL FINANCE

Topics Applied By the Students	Number of Responses
Insurance Life Insurance Automobile Insurance	17
Budgeting	15
Banking Checking Accounts Savings	11
Credit and Borrowing Loans Interest	11
Investments	4
Social Security	2
Income Tax	1
Publications about Finance	1

Questions 4 and 5 were employed to determine student opinion about the content of the Personal Finance course at CMSU. On Question 4, students were asked to choose the topics which would benefit them the most in the future. Students were not limited to one choice.

Question 4 was posed in order to determine which topics were of more value to students. The following were the five content areas selected most often by the students: Insurance, credit and borrowing, home buying and rental, budgeting, and banking. The five topics listed by the students represent areas usually given considerable coverage in textbooks and the classroom. See Table XXIV, page 80.

One topic not mentioned as often by students but covered by several chapters in textbooks was the area of investments. Eight student responses indicated a future need for investments. Two topics of current interest to many consumers were inflation and occupations. Inflation was mentioned by five students, and occupations by four students. It appears that students are not particularly concerned about these topics.

On Question 5 students were asked whether any Personal Finance topics should have been stressed more or less. Responses seemed to indicate that students were satisfied with the content coverage in Personal Finance. Twenty-three, or 57.5 percent, of the students responded that the topical areas were covered adequately.

Sixteen students felt that certain topics in Personal Finance needed more coverage or less coverage. One student did not remember the amount of specific content coverage enough to answer. Many of the sixteen students responding to Question 5 mentioned more than one

TABLE XXIV
PERSONAL FINANCE TOPICS MOST BENEFICIAL
TO STUDENTS

Personal Finance Topics	Number of Responses
Insurance	26
Credit and Borrowing	23
Home Buying or Rental	18
Budgeting	16
Banking	15
Income Taxes	11
Estate Planning and Wills	8
Investments	8
Social Security	6
Inflation	5
Occupations	4
No Response	1

content area. These responses are tabulated in Table XXV, page 82. Six respondents felt that income taxes should be given more classroom coverage. Remaining responses did not indicate a need for more coverage of a specific content area. There were only four responses to less stress of a topic in the Personal Finance course. Two of the four students thought investments were over-stressed.

Based upon the data from Questions 4 and 5 it would appear that the content of the Personal Finance course is generally approved of by the students. Student responses indicate that the current topical areas being stressed in the course are those that are most important to the student, with investments the possible exception.

Textbooks selected for Personal Finance should emphasize topics of immediate use to the students and should not over-emphasize the area of investments. Teachers need to determine student interests and teach accordingly. It appears that teachers need to be more familiar with income tax procedures and incorporate adequate coverage.

Over-All Evaluation of Personal Finance

Question 6.

General studies courses assist the student to function as a citizen in a free society. How would you compare Personal Finance in regards to other general studies courses?

Question 7.

Would you recommend the course to a friend?

TABLE XXV
 THE RESPONSES OF SIXTEEN STUDENTS TO THE
 CONTENT COVERAGE IN PERSONAL FINANCE*

More Coverage	Number of Responses	Less Coverage	Number of Responses
Income Tax	6	Investments	2**
Home Buying	3	Budgeting	1
Stocks and Bonds	2	Social Security	1
Wills	2		
Banking	1		
Budgeting	1		
Credit and Borrowing	1		
Everyday Living	1		
Home Management	1		
Inflation	1		
Insurance	1		
In Depth About Loans	1		
Everything	1		

* Students gave more than one response.

** "We had investments practically the whole term."

Question 8.

Do you think every college student should be required to take Personal Finance? Why or why not?

Questions 6, 7, and 8 were designed to solicit student evaluations of the Personal Finance course at CMSU. Question 6 asked the student to compare Personal Finance with other general studies courses at the University. Thirty-three, or 82.5 percent, of the students stated that Personal Finance was more important than other general studies courses. None of the students thought Personal Finance was less important than other general studies courses. The remaining seven students stated that Personal Finance was equally as important as the other general studies courses. All of the 40 students interviewed felt that Personal Finance was of equal or more importance than other general studies courses at CMSU.

Question 7 asked students if they would recommend Personal Finance to a friend. Ninety-five percent (38) of the students stated they would recommend Personal Finance to a friend. Of the two students who said they would not recommend the course to a friend, one stated that it depended upon the instructor. The data indicated that students would advise their friends to enroll in Personal Finance because they felt that it is an important and worthwhile course.

Question 8 went a step further than Question 7 and asked the students whether Personal Finance should be required of every college student. At CMSU, students have options within an area of general studies courses, with no general studies course being required of students. The students interviewed basically thought that the Personal Finance course should be required of all students. Twenty-six,

or 65 percent, of the 40 students stated that all students should be required to take Personal Finance.

Students were also asked why they should or should not be required to take Personal Finance. The student's responses provided an interesting insight into their opinions of Personal Finance and are included in Appendix D. Examples of typical responses of students who felt that Personal Finance should not be a required course were:

- (1) Students may already have a good background in money management;
- (2) Counselors should recommend the course, but it should not be required; and
- (3) General studies courses should not be required because of the policy of required courses in majors and minors.

Students who felt that Personal Finance should be a required course stated that: (1) Many consumers have a hard time managing money; (2) It is general knowledge necessary to everyday living; (3) It is more practical than other general studies courses; and (4) You need the course to survive. The following statements indicate the importance students placed upon the Personal Finance course:

Helped me out and I knew nothing before I took it. It was on the list and I made a lucky choice. It prepares you for life in a confusing world.

Good for the younger people--I'm going to insist my son and daughter take it.

Based upon student responses to Questions 6, 7, and 8, students who complete Personal Finance regard it as a valuable course.

Student over-all evaluation of Personal Finance appeared to be excellent.

Teaching Methodology

Question 9.

How would you compare the teachers in Personal Finance to other general study course teachers? Better, Equal, or Poorer?

Question 10.

Do you think you could have studied the material and passed the tests without the aid of an instructor as in the Individual Paced Program of learning?

Questions 9 and 10 were concerned with the teaching methodology of Personal Finance at CMSU. Question 9 asked students to compare their Personal Finance teachers with other general studies teachers. Personal Finance is also offered to CMSU students over the radio. Two students were removed from the tabulation of Question 9 because they had completed the radio course and did not have an instructor. This left 38 students responding to the question. Thirteen students felt that their Personal Finance teachers were better than other general studies course teachers. Another 19 students felt that the Personal Finance teachers were equal to other general studies course teachers. The remaining six students felt the Personal Finance teachers were poorer than other general studies teachers. It appeared that CMSU Personal Finance instructors were considered to be equal to or better than other instructors in the general studies area in most cases.

Question 10 solicited student opinion on an "Individual Paced" method of learning for the Personal Finance course. Students were asked if they could have acquired the necessary knowledge to complete the final exam in Personal Finance using this program of learning.

Question 10 solicited student opinion on an "Individual Paced" method of learning for the Personal Finance course. Students were asked if they could have acquired the necessary knowledge to complete the final exam in Personal Finance using this program of learning. None of the students seemed familiar with individually paced programs, and the learning process had to be explained to them. Students were told that in this type program, pupils are given objectives and goals for the specific knowledge to be acquired and then allowed to work at their own pace. Students would not attend formal classes every day, but work with the learning resources provided for them.

Student opinion was split on the idea of using an Individual Paced program for the learning of personal finance. Nineteen students stated, "yes", they could have learned the material and passed the course without the aid of an instructor. Twenty-one students thought they needed an instructor.

Because of the divergence of opinion, the personal data from the Student Identification Questionnaire were examined in detail. The following facts were revealed: (1) Nine of the 40 students interviewed were business majors, and only two said they could learn the material without the aid of an instructor; (2) Twelve of the 40 students telephoned were over age 25, but only five said they could learn the material without the aid of an instructor; (3) Fifteen of the 40 students indicated they had a good background in money management before enrolling in Personal Finance, yet only six of the 15 said they did not need an instructor; and (4) Nine of the 19 students who said "yes" had a below average (23.95) score on the achievement test.

who took the Personal Finance course on radio were divergent in their opinion about an Individual Paced method of instruction. One stated that he could have studied the material and passed the tests without the aid of an instructor at the junior or senior level. The other answered "no" and further added, "I needed to take the course with a teacher to get more out of it." Based upon the preceeding data concerning Question 10, it can be theorized that an Individual Paced program of instruction would not be beneficial to the students in Personal Finance.

Summary

Chapter IV presented the analyzation and results of the data collected from the achievement test and telephone interviews. The t test statistic was used to test nine of the hypotheses and the remaining five hypotheses were tested using the chi-square statistic. Telephone interview data was summarized through the use of descriptive statistics.

CHAPTER V

SUMMARY, FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The purpose of this study was to analyze and compare results of a test measuring money management knowledges of Central Missouri State University seniors. Implications of the findings were presented to academic advisors and Department of Accounting and Finance professors for advising students and improving the Personal Finance course.

General objectives of the study were as follows:

1. To determine whether significant differences in money management knowledges existed between seniors who completed the Family Living course and seniors who completed Personal Finance.
2. To determine whether significant differences existed between money management knowledges of transfer and non-transfer senior students.
3. To determine whether there were significant differences in money management knowledges of senior students with majors in business or economics who had completed the Personal Finance course and senior business and economics majors who had not completed the Personal Finance course.
4. To determine whether money management knowledges of senior

teacher-education students differed significantly when they had completed Personal Finance.

5. To determine whether significant differences existed between money management knowledges of married and single senior students.
6. To determine whether significant differences existed between money management knowledges of male and female senior students.
7. To determine whether significant differences existed between money management knowledges of senior students 25 years and older and senior students 24 years and younger.

The study involved the following steps:

1. Permission was granted by CMSU to conduct the study.
2. Reviews of related literature revealed a College Achievement Test in Personal Finance by Ogden. This test was specifically designed to measure a student's knowledges, applications, and understandings of personal finance.
3. A Student Identification Questionnaire was prepared to collect precise data about seniors.
4. Questions on Ogden's College Achievement Test in Personal Finance were updated to reflect changes in factual data. Then the test was administered as a pilot study to a group of 210 seniors during fall term Senior Exams.
5. The College Achievement Test in Personal Finance was shortened from 60 questions to 55 questions because of a time limit in administering Senior Exams. An item analysis was used to select the 55 questions. Content validity was verified by four Personal Finance instructors at CMSU. The achievement test was

then administered to a sample of 513 seniors who took their Senior Exams in the 1977 spring testing session.

6. Data collected were used to test the hypotheses utilizing the t test and chi-square statistics. The hypotheses were tested at the alpha level .05.
7. A Personal Finance course telephone interview guide was prepared to collect data for evaluating the course. The sample of seniors to be interviewed was determined by using a table of random numbers. Interview data were collected by telephoning 40 seniors who had completed Personal Finance.
8. Data collected from the telephone interviews were analyzed and presented using descriptive statistics.

Findings

In the following sections the findings from testing fourteen hypotheses with the selected statistic are represented. Results of the sample of 40 telephone interviews with seniors who had completed Personal Finance are also presented.

Hypothesis 1

For testing Hypothesis 1, money management knowledges of an experimental group of seniors who had completed Personal Finance and a control group of seniors who had not completed Personal Finance were compared utilizing the t test statistic. The experimental group scored significantly higher at the .05 level of confidence on the achievement test. In fact, results were significant at the .01 level of confidence.

Hypothesis 2

For testing Hypothesis 2 a subgroup of seniors who had completed the Family Living course was formed from the control group. Money management knowledges of the subgroup of Family Living seniors were compared with the experimental group. Based upon the chi-square statistic, the experimental group scored significantly higher at the .05 level of confidence than the subgroup of Family Living seniors. Results were also significant at the .01 level of confidence.

Hypothesis 3

Subgroups of transfer and non-transfer seniors were formed from the experimental group to test Hypothesis 3. Based upon the results of the t test statistic, there was no significant difference at the .05 level of confidence in the money management knowledges of the two subgroups.

Hypothesis 4

Subgroups of transfer and non-transfer seniors were formed from the control group to test Hypothesis 4. Based upon the results of the t test statistic, there was no significant difference at the .05 level of confidence in the money management knowledges of the two subgroups.

Hypothesis 5

For testing Hypothesis 5 a subgroup of business and economics majors was formed from the control group. Money management knowledges of business and economics majors from the control group were compared with non-business and economics seniors from the experimental group. Based upon the chi-square statistic, there was no significant difference

between the scores of the two groups on the achievement test.

Hypothesis 6

For testing Hypothesis 6 a subgroup of business and economics majors was formed within both the experimental and control groups. A comparison of the money management knowledges of the two groups was completed utilizing the t test statistic. Business and economics majors did not score significantly higher at the .05 level of confidence on the achievement test when they had completed the Personal Finance course.

Hypothesis 7

For testing Hypothesis 7 a subgroup of teacher-education seniors was formed within both the experimental and control groups. A comparison of the money management knowledges of the two subgroups was completed utilizing the chi-square statistic. Future teachers in the experimental group scored significantly higher at the .05 level of confidence on the achievement test than teacher-education majors in the control group. Results were also significant at the .01 level of confidence.

Hypothesis 8

For testing Hypothesis 8 a subgroup of business education and home economics-education majors was formed from the control group. Money management knowledges of the subgroup of business-education and home economics-education teachers was compared to the experimental group. Based upon the t test statistic, the experimental group scored significantly higher at the .10 level of confidence, but not at the .05 level of confidence on the achievement test.

Hypothesis 9

Subgroups of married and single seniors were formed from the experimental group to test Hypothesis 9. Based upon the results of the chi-square statistic, the married subgroup scored significantly higher at the .05 level of confidence than the single subgroup on the achievement test. Results were also significant at the .01 level of confidence.

Hypothesis 10

Subgroups of married and single seniors were formed from the control group to test Hypothesis 10. Based upon the results of the t test statistic, the married subgroup scored significantly higher at the .05 level of confidence than the single subgroup on the achievement test. Results were also significant at the .01 level of confidence.

Hypothesis 11

Subgroups of male and female seniors were formed from the experimental group to test Hypothesis 11. Based upon the results of the t test statistic, there was no significant difference at the .05 level of confidence in the money management knowledges of the two subgroups.

Hypothesis 12

Subgroups of male and female seniors were formed from the control group to test Hypothesis 12. Based upon the results of the chi-square statistic, there was no significant difference at the .05 level of confidence in the money management knowledges of the two subgroups. However, the results were significant at the .10 level of confidence.

Hypothesis 13

Subgroups of seniors age 25 and older and age 24 and younger were formed from the experimental group to test Hypothesis 13. Based upon the t test statistic, the age 25 and older subgroup scored significantly higher at the .05 level of confidence on the achievement test. Results were also significant at the .01 level of confidence.

Hypothesis 14

Subgroups of seniors age 25 and older and age 24 and younger were formed from the control group to test Hypothesis 14. Based upon the chi-square statistic, the age 25 and older subgroup scored significantly higher at the .05 level of confidence on the achievement test. In fact, results were significant at the .01 level of confidence.

Telephone Interviews

The telephone interviews revealed that the majority of students did not believe they had a good background in money management before taking Personal Finance. After completing the course, students indicated they had learned enough about money management to manage their personal finances. Topics of greatest interest to the student were those topics providing immediate usefulness. Students were satisfied with the amount of coverage of personal finance topics except that several students stated too much time was spent on the investment area. An over-all evaluation of Personal Finance by the students indicated the course was important and valuable. All 40 students interviewed rated Personal Finance as important or more important than other general studies courses.

Thirty-eight students would recommend Personal Finance to a friend and sixty-five percent would require all students to complete Personal Finance. Personal Finance teachers were rated as equal to or better than other general studies teachers. Student opinion was equally divided on an Individual Paced method of instruction for the Personal Finance course. Further analysis of student responses indicated no particular need for the Individual Paced method of instruction.

Conclusions

The following conclusions concerning money management knowledges of seniors at CMSU appear to be justified by the findings of the current research study. Findings and conclusions were based upon a sample of test scores of a shortened Ogden's College Achievement Test in Personal Finance and a sample of telephone interviews conducted with seniors who had completed Personal Finance.

1. Formal education received in the Personal Finance course represents a valuable contribution toward the goal of developing effective citizens who can function in our society. Students can and do learn how to manage their personal finances from experience as evidenced by the results of married students and those students age 25 and older. However, results of the telephone interviews indicate that students prefer to formally learn about money management. Other studies reviewed also found formal education in personal finance to be a valuable learning experience and preferable to learning through trial and error in our business society.

2. Many additional students should be advised to include Personal Finance as part of their college curriculum. Students should be advised to take the course early in their academic careers because of the immediate practical usefulness of the course. It can be theorized that non-degree citizens would find the content of the course useful in managing their personal finances. Personal Finance should be made available to Missouri citizens as a part of continuing education. It could be offered in the CMSU weekend college program to enable Missouri residents to take advantage of formal training in money management.
3. Students who complete the CMSU Family Living course should be advised to consider taking Personal Finance. Although there may be some duplication of the subject matter, the two courses are distinctly different.
4. Business and economics majors acquire money management knowledges from exposure to financial content as presented in business and economics courses. Business and economics majors would probably receive more value from a course other than Personal Finance. Advisors should not recommend Personal Finance to those business and economics majors who are juniors and seniors. However, freshman and sophomore business and economics majors could find the course useful in solving their financial problems.
5. Research reveals a need for primary and secondary teachers to be better prepared to teach money management and consumer education concepts. Inadequate money management knowledges of

CMSU seniors in the teacher education program indicates that future teachers should be advised to complete Personal Finance. Business and home economics teaching majors should be required to complete Personal Finance.

6. Female students should be advised to complete Personal Finance.

It may be hypothesized that females are hesitant about taking a business course such as Personal Finance if they have no previous background in this area. Female students need to be advised about the usefulness of Personal Finance.

7. Topical content as presented in the Personal Finance course is

acceptable. Instructors can provide a valuable service to students when they determine student interests and needs and allow ample time during the term to cover these topics.

Instructors should develop and utilize case problems and initiate discussion related to relevant topics. According to students surveyed, the most useful topics are: Insurance, budgeting, banking, and credit and borrowing. Instructors should not over-emphasize the area of investments. Instructors need to be prepared to teach income taxes including how to complete the basic schedules and forms. Textbooks that emphasize topics of immediate usefulness should be selected and used in teaching Personal Finance.

8. Most CMSU students have not been exposed to an individually paced method of instruction. Although many students preferred the traditional classroom method of instruction, CMSU students need some exposure to other instructional methods. Students should be informed about the availability of a CMSU radio class.

in Personal Finance. Furthermore, Personal Finance instructors need to consider preparing additional learning materials (for example, study guides and review tests) to supplement the radio course.

Recommendations for Additional Study

Possible studies for further research suggested by this investigation are as follows:

1. A study to determine whether the possession of personal financial knowledge actually results in competent and successful money managers.
2. A study similar in nature to the present study, but carried out at other colleges and universities in several different states.
3. A study to construct another achievement test in personal finance to measure the knowledges, understandings, and applications of the content deemed important in personal finance in higher education.
4. A follow-up study of CMSU graduates to determine student opinion on the value and need for the Personal Finance course.
5. A comparison study between graduates who completed the Personal Finance course and graduates who did not complete the course to determine whether formal education in money management decreases the number of divorces.

BIBLIOGRAPHY

- Beattie, A. Donald. "Relationships Between High School Pupils' Information and Attitudes Toward Personal Finance." (Unpub. Ph.D. dissertation, University of Minnesota, 1962.)
- Bennington, Richard R. "Understandings of Pre-Service Teachers of Family Financial Aspects of Consumer Education." (Unpub. Ed.D. dissertation, University of Georgia, 1974.)
- Bernardi, Ray D. "The Collegiate Course in Personal Finance: Measurement of Learning Accomplished by Selected College Students." (Unpub. Ed.D. dissertation, University of Oklahoma, 1970.)
- Borg, Walter R. and Meredith D. Gall. Educational Research--An Introduction. New York: David McKay Company, Inc., 1971.
- Central Missouri State University Catalog 1976-1977. Warrensburg, Missouri: Central Missouri State University, June, 1976.
- Clark, Charles and Lawrence Schkade. Statistical Analysis for Administrative Decisions. Cincinnati: Southwestern Publishing Co., 1974.
- Cohen, Jerome B. and Arthur W. Hanson. Personal Finance. Homewood, Illinois: Richard D. Irwin, Inc., 1958.
- Cohen, Jerome B. and Arthur W. Hanson. Personal Finance, Principles and Case Problems. Homewood, Illinois: Richard D. Irwin, Inc., 1964.
- Coleman, Larry D. "Consumer Education Needed in Business Teachers Programs." Business Education Forum, Vol. 26, No. 3 (Washington, D. C., N.E.A.), p. 33.
- Gagné, Robert M. and Leslie J. Briggs. Principles of Instructional Design. New York: Holt, Rinehart and Winston, Inc., 1974.
- Good, Carter V., Ed. Dictionary of Education. 3rd Ed. New York: McGraw-Hill Book Company, 1973.
- Gustafson, Jessie C. "A Critical Study of the Content of and Implications for a Junior College Course in Personal Finance." (Unpub. Ed.D. dissertation, University of California, 1952.)

- Hamburg, Morris. Basic Statistics: A Modern Approach. New York: Harcourt Brace Jovanovich, 1974.
- Harap, Henry and Ray G. Price. "A Survey of Recent Developments in Consumer Education." Journal of Educational Research, XXXVIII (December, 1944).
- "Is Your Marriage a Fighting Affair?" Changing Times, Vol. 25 (February, 1971), p. 26.
- Jelley, Herbert M. "A Measurement and Interpretation of Money Management Understandings of Twelfth-Grade Students." (Unpub. Ed.D. dissertation, University of Cincinnati Teachers College, 1958.)
- Johnson, B. Lamar. General Education in Action. Washington, D. C.: American Council on Education, 1952.
- Kell, Venetta B. "An Instrument for the Evaluation of Understandings in Family Finance." (Unpub. Ed.D. dissertation, University of Oklahoma, 1961.)
- Litro, R. F. "Relation of Students' Social Position to Consumer Attitudes and Understandings." Delta Pi Epsilon Journal, Vol. 12, 2nd Quarter (1970), pp. 1-5.
- Marshall, Alpheus. "Nine Hundred Twenty Courses in Consumption Economics." The Educational Record, XXII (January, 1941), pp. 27-38.
- Ogden, Russell L. "The Construction and Standardization of an Achievement Test Designed to Measure Personal Financial Knowledges, Understandings, and Applications Possessed by Selected College Students." (Unpub. Ed.D. dissertation, Colorado State College, 1964.)
- Remmers, H. H., N. L. Gage, and J. Francis Rummel. A Practical Introduction to Measurement and Evaluation. New York: Harper and Row, 1965.
- Smith, Kathleen F. "Consumer Finance Attitudes and Achievement of College Students." (Unpub. Ed.D. dissertation, Boston University School of Education, 1973.)
- Syllabus for the Course 1820--Accounting and Finance. Warrensburg, Missouri: Central Missouri State University, April, 1974.
- Taylor, Richard B. "Money Management Practices and Attitudes of Married Students." (Unpub. Ed.D. dissertation, University of Oklahoma, 1968.)
- Troelstrup, Arch W. "Consumer Problems--A Basic Course." Business Education Forum, Vol. 8, No. 6 (March, 1953).

U. S. Department of Health, Education, and Welfare. Social Security Information for Young Families. Washington: U. S. Government Printing Office, January, 1977.

U. S. Department of Labor. Handbook of Labor Statistics 1975. Bulletin 1865. Washington: Bureau of Labor Statistics, 1975.

APPENDIXES

APPENDIX A

**STUDENT IDENTIFICATION QUESTIONNAIRE AND COLLEGE
ACHIEVEMENT TEST IN PERSONAL FINANCE**

STUDENT IDENTIFICATION QUESTIONNAIRE

Education involves a continual process of re-evaluating and changing programs of learning so that student needs are satisfied. The results of the following inventory of personal finance items are to be used by the Department of Accounting and Finance in evaluating the course Personal Finance.

Because the results of the exam will affect future students, your cooperation is appreciated.

NAME (last name first) _____

TELEPHONE NUMBER _____

SOCIAL SECURITY NUMBER _____

AGE _____

SEX _____

MAJOR _____

MINOR _____

GRADE POINT AVERAGE _____

Answer the following questions (yes) or (no).

Circle your answer.

- Yes No 1. I have completed the course Personal Finance (A. & F. 1820).
- Yes No 2. I am currently enrolled in Personal Finance.
- Yes No 3. I am enrolled in the Teacher Education Program.
- Yes No 4. I am a transfer student (transferred 30 or more hours into CMSU).
- Yes No 5. I have had the course Home Economics 1010--Family Living.
- Yes No 6. I am single.

COLLEGE ACHIEVEMENT TEST IN PERSONAL FINANCE

DIRECTIONS: Please answer the question by blackening the appropriate space on the IBM Answer Sheet. Be sure to put your name on the IBM Answer Sheet. In answering each multiple choice question, select the best answer out of the four answers provided. Attempt to answer all questions. If you think you know (in cases where you have doubt), answer the question with an "Intellectual Guess."

1. When money is borrowed at a commercial bank, often the promissory note given as security will be discounted by the bank. Discounting a note implies that:
 - A. depositors with a good credit rating may borrow money from the bank at a lower rate than the customary 6%.
 - B. the bank takes the interest out in advance, and gives the customer the balance of the note, after this interest is subtracted from the face.
 - C. the bank will charge less--give the customer a discount--if the note is paid in full prior to the maturity date of the note.
 - D. notes for one year or more receive a discount rate because of the longer time involved.

2. When buying life insurance, a person under 60 years of age should probably consider the fact that he may be unable to pay a premium because of a permanent disability. Which of the following provide for an automatic payment of premium under this circumstance?
 - A. Family maintenance insurance
 - B. Automatic premium loan clause
 - C. Waiver of premium clause
 - D. Life income option

3. The person designated in a "will" to carry out the specific and general provisions of the will is referred to as:
 - A. the guardian of the estate
 - B. the executor of the estate
 - C. the administrator of the estate
 - D. the trustee of the estate

4. Which insurance policy will cover injury to a neighbor's child, even though the child was playing on your property while you were not at home?
 - A. Personal property floater
 - B. Personal liability policy
 - C. General medical insurance
 - D. Transient liability policy

5. George Smith wishes to buy a refrigerator at a list price of \$400, 5% cash discount. Which of the following situations would be most economically feasible for George?
 - A. Obtain a bank loan at 6% for six months.
 - B. Buy the refrigerator at list price on open account for one month, with carrying charges of 1 1/2% per month for the next five months.
 - C. Deposit \$50 for a down payment, and assume the balance at 1% per month on the unpaid balance for six months.
 - D. Discount a note at the bank at 6% for six months.

6. Probably the greatest problem to a 40-year-old individual, planning for retirement at age 65, is:
 - A. the knowledge that his children will not or cannot take care of him at retirement.
 - B. the knowledge that most fixed investment plans (pensions) dwindle with inflation.
 - C. the knowledge that Social Security, accompanied by company pension plans, is insufficient.
 - D. the knowledge that the lifespan increases with each generation.

7. Which of the following services is not offered by savings banks?
 - A. Insuring of depositors' accounts
 - B. Offering of demand deposit service
 - C. Renting of safe-deposit boxes
 - D. Cashing of personal bank checks

8. In some situations another business or individual will not accept a personal check as payment for an amount due and payable. A negotiable instrument, verified as valid by the bank and drawn against a depositor's own checking account is called a:
 - A. registered check
 - B. cashier's check
 - C. certified check
 - D. bank money order

9. If a person's budgetary allotment for automobile insurance were limited, he would be wise to spend the greatest amount of his money on:
 - A. bodily injury coverage
 - B. comprehensive coverage
 - C. property damage coverage
 - D. uninsured motorist coverage

10. For a young married man, which of the following types of life insurance would provide the greatest amount of protection for the lowest premium?

- A. Limited payment life policy
 - B. Term insurance policy
 - C. Ordinary life policy
 - D. Endowment policy
11. If a person wishes to leave property (or funds) to relatives or friends before or after his death, the way to pay the least amount of taxes is to:
- A. pass the property (or funds) as an inheritance by means of a will.
 - B. pass the property (or funds) as gifts while living.
 - C. pass the property (or funds) to specified heirs as a part of an individual's estates.
 - D. pass the property (or funds) to specified heirs as gifts after the death of the individual.
12. If a person endorses a check using the words "Without Recourse" followed by his name, he knows that:
- A. the bank has no recourse but to cash the check, providing funds are available to honor it.
 - B. the holder of the check endorsed in this way must present it directly to the bank without further endorsements.
 - C. the endorser of the check will refuse to pay for the check if it is found to be invalid.
 - D. the endorser is directing the next holder to cash the check as quickly as possible without further recourse.
13. In figuring exemptions on his income tax for the current year, William Johnson called the local district office of internal revenue to find which exemptions were allowable. Which one did the internal revenue agent approve as an exemption?
- A. His 18-year-old sister who attends college in a distant city and who receives one-third of her support from him.
 - B. His 19-year-old son, Bob, who works full time and who pays for his meals and room in Mr. Johnson's home.
 - C. His wife, who also works as a secretary for a local business but files a separate income tax return on which she claims herself as an exemption.
 - D. His 22-year-old son, William, Jr., who lives at home but attends the local college, and who earns \$2,000 a year, which he saves for medical school.
14. Several financial institutions are available to the prospective homeowner for obtaining a mortgage loan. Which of the following is a legitimate lending institution?
- A. Federal government through FHA
 - B. Savings and Loan Association
 - C. Veterans Administration
 - D. State government through FHA

15. Although budgeting patterns will and must vary for each family, general percentage guides prove beneficial for comparison purposes. Which of the following allocated percentages would provide to deviate from the national average the most?
- A. Food--25 to 35%
 - B. Medical and Personal Care--20 to 25%
 - C. Home Operation and Improvement--20 to 25%
 - D. Recreation and Recreational Equipment--5 to 10%
16. In obtaining a loan from any lending agency, which of the following factors should be considered first prior to the other considerations?
- A. Rate of interest quoted
 - B. Dollar cost of the loan
 - C. Type of security demanded
 - D. Repayment period required
17. Under the Social Security Act, the federal government directly operates and administers which one of the following programs?
- A. Unemployment Insurance Program.
 - B. Maternal and Child Health Services
 - C. Health Maintenance Organization
 - D. Old-Age Survivors and Disability Insurance Program
18. According to consumer statistics, you will borrow money at least once from one of the sources listed below. As an intelligent consumer, you should be aware of the rates charged by these lending sources. Which source and true annual interest rate listed below do not match properly?
- A. Commercial bank, personal loan department: 8-24%
 - B. Consumer finance companies: 24-60%
 - C. Pawnbrokers: 24-120%
 - D. Credit Unions: 6-12%
19. When interest rates rise, bond prices will normally:
- A. rise
 - B. stay about the same
 - C. fall
 - D. not be affected appreciably
20. What percent of the price now paid for commodities could be saved if consumer credit were eliminated?
- A. 0-5%
 - B. 5-15%
 - C. 15-20%
 - D. 20-25%

21. Group life insurance is now offered to many employees of businesses, both large and small, with companies paying various percentages of the annual premium. If an employee were paying 50% of a group policy, which of the following would be the most plausible action to consider before buying a group life insurance plan?
- A. To see if a regular insurance policy could be purchased at the same cost.
 - B. To check if the policy is convertible to a permanent type insurance.
 - C. To check if the policy is transferrable from one company to a different company.
 - D. To see if the premium increases with the age of the policyholder.
22. A mutual organization composed of persons having a common bond of occupation or association, and operated on the local level by and for its members, with its earnings coming from fellow members who borrow for relatively short periods of time from the savings of other members, is called a:
- A. savings and loan association.
 - B. credit union.
 - C. mutual investment company
 - D. cooperative.
23. If an individual is saving to provide for an emergency fund, which of the following criteria should be considered first in selecting a place to invest savings?
- A. Safety
 - B. Liquidity
 - C. Return
 - D. Purchasing power protection
24. The commission fee when buying common stock from a broker on the New York Stock Exchange is:
- A. fixed by the Securities Exchange Commission.
 - B. competitive with fixed minimums.
 - C. completely competitive.
 - D. fixed on 100 shares or less but the cost of more than 100 shares is competitive.
25. The basic purpose of an annuity contract is to provide:
- A. income to the prospective annuitant at a specified time.
 - B. income to the immediate family (wife and children) of the annuitant at a specified time.
 - C. income to the wife immediately upon the death of the annuitant, either lump-sum or installment option.

- D. a supplemental income to the family if the annuitant becomes disabled or accidentally dies.
26. When making a budget, you must decide which items to include and how much should be spent on each item. Which of the following is the best guide for doing this?
- A. The information which published budgets show.
 - B. The opinion of experts regarding people in your age group.
 - C. A record of your spending in the past.
 - D. The advice of your friends who have had experience in budgeting.
27. One advantage of home ownership (non-rental property) is the amount that may be deducted on the homeowner's income tax. Which of the following would be questioned as an allowable deduction?
- A. Interest paid on mortgage.
 - B. Local school taxes.
 - C. Uninsured loss or damage to the home.
 - D. Depreciation on the home.
28. A type of term life insurance with a gradual decrease in both the premiums and the amount of coverage set for a specified period of time, paid only upon the death of the insured individual, is called a:
- A. mortgage policy
 - B. family income policy
 - C. family maintenance policy
 - D. modified life policy
29. Which of the following statements would offer the strongest argument for renting?
- A. It is less expensive to rent in the short run than it is to buy.
 - B. Rentals are more fixed than mortgage payments.
 - C. Renters are not affected by changes in property taxes.
 - D. The prestige associated with home ownership no longer exists; therefore, "renting what you want" is more desirable.
30. The federal income tax law is based upon the ability to pay. This type of tax is called a:
- A. fair tax
 - B. proportional tax
 - C. sliding tax
 - D. progressive tax
31. The best way to change a "will" that has previously been made is to:

- A. prepare and attach a codicil.
 - B. destroy the old will and make a new one.
 - C. prepare and attach a letter of instructions to the old will.
 - D. destroy the old will and prepare an intestate will.
32. You purchase a small floral shop for \$20,000, carrying \$16,000 worth of fire insurance, with an 80% coinsurance clause. Which of the following amounts would be received from the insurance company if the shop were 90% destroyed by fire?
- A. \$12,800
 - B. \$14,400
 - C. \$16,000
 - D. \$18,000
33. Cost of loans varies according to the type of financial source from which funds are borrowed. Probably the least expensive place from which to borrow money is:
- A. a credit union.
 - B. a commercial bank.
 - C. a mutual savings bank.
 - D. an insurance policy with a cash value.
34. The chief disadvantage of buying high-grade bonds as a part of an investment program is:
- A. the fixed and limited return during depression periods.
 - B. the lack of any claim against the assets of the corporation.
 - C. the inability of a corporation to pay interest on bonds during depressive economic periods.
 - D. the questionable safety in comparison to common and preferred stocks.
35. Which of the following methods of transferring funds is most expensive?
- A. Telegraphic money order
 - B. Postal money order
 - C. An American Express money order
 - D. A bank money order
36. Assuming that during the past year Mike Young had carried the four insurance coverages listed below, which type of an insurance might he consider eliminating on his six-year-old Ford when he renews his insurance?
- A. Bodily injury coverage
 - B. Property damage coverage
 - C. Collision coverage
 - D. Medical payment coverage

37. Many consumer purchases are made on an installment basis. All of the following installment purchase situations correctly state a true annual rate of 9% except:
- A. when 9% interest rate is applied to the unpaid balance after each payment has been made.
 - B. where $3/4$ of 1% interest rate per month is charged on the unpaid balance.
 - C. where 9% is applied to the original purchase price for the entire installment term.
 - D. where \$3.15 total is paid on a purchase contract for \$120 calling for six monthly payments.
38. Mr. and Mrs. William Baldwin believe they have budgeted intelligently and have saved enough to cover hospital-surgical expenditures under \$300. They would like to cover those expenditures above this amount. The least expensive plan that will give them adequate protection under their circumstances would be a:
- A. Blue Cross policy.
 - B. Blue Shield policy.
 - C. Major medical policy.
 - D. Comprehensive medical policy.
39. The avoidance of estate and inheritance taxes may be accomplished by the establishment of a living trust. Which of the following statements is characteristic of a living trust?
- A. Amounts given to living trusts in one year are limited to a maximum of \$20,000.
 - B. The living trust is constructed in anticipation of the death of the individual.
 - C. Relatives of the individual cannot be recipients of the earnings or principal of the trust.
 - D. The individual has no claim upon the trust once he has established it.
40. As the income of a family increases, the proportional percentage of income spent for:
- A. food increases.
 - B. insurance decreases.
 - C. housing decreases.
 - D. savings increases.
41. If an investor is seeking a long-run return on a savings account, the dollar interest return probably would be the largest in a:
- A. mutual savings bank.
 - B. commercial bank time deposit.
 - C. savings and loan association.
 - D. Federal reserve bank.

42. In deciding whether to buy "hospital-surgical" insurance or "loss of income" insurance, Professor Allan Craven decides to buy a "loss of income" policy. Which of the following would probably be the best buy for a salaried person such as Professor Craven?
- A. Immediate payments at the beginning of illness or disability.
 - B. Ten-day waiting period, full salary compensation.
 - C. Thirty-day waiting period, 75% regular salary compensation if immediately hospitalized.
 - D. Immediate payments, 75% regular salary compensation if immediately hospitalized.
43. Which of the following family expenditures is deductible when filing income taxes?
- A. Funeral expenses
 - B. Dues for social clubs
 - C. Automobile insurance premiums
 - D. Employment agency fees
44. Social Security provides all of the following benefits to the fully insured worker except:
- A. survivor's benefits.
 - B. disability income.
 - C. mortgage insurance.
 - D. burial insurance.
45. Money is borrowed from consumer finance companies for various reasons. Among those listed below, which ranks as the most popular reason for borrowing funds?
- A. Home furnishings and appliances
 - B. Travel and vacation expenses
 - C. Consolidation of overdue bills
 - D. Medical, dental, and hospital bills
46. If an individual is venturing into an investment program seeking the safest type of investment with a return of four to six percent with an opportunity for capital gains, he probably would be wise to invest in:
- A. a single proprietorship.
 - B. a partnership.
 - C. convertible preferred stock.
 - D. corporate bonds.
47. When purchasing merchandise on an installment basis, an individual consumer may sign a contract in which there is an acceleration clause. This clause gives:
- A. the seller the right to collect the unpaid balance of an account immediately upon nonpayment of one installment.

- B. the buyer the right to speed up his payments, paying off the debt prior to the final due date.
 - C. the seller the right to increase the carrying charge for the default on one payment.
 - D. the buyer the right to start with small payments and to make large payments toward the end of the paying period.
48. Four students, in reviewing for their final examination in Family Finance, disagreed on the definition of a "variable annuity." Which of the students best defined this type of annuity program?
- A. Al believed that the holder of an annuity upon reaching retirement age could designate the number of years for which he wished to receive payments from the annuity.
 - B. Dave argued that the income from the variable annuity might vary from month to month, with the holder of the annuity receiving more or less income depending upon the cost of living index.
 - C. Betty Lou felt that a variable annuity referred to the settlement option of the annuity, which permits the holder to designate any or all beneficiaries who will receive any remaining balance of the annuity upon his death.
 - D. Hugh believed "variable" referred to a provision in the annuity contract which permitted the holder of the contract to change the amount of payments after he had retired.
49. "Financial Responsibility" laws, in reference to automobile insurance, usually mean that you must:
- A. carry automobile insurance prior to obtaining your license plates.
 - B. post a bond to indicate that you are "financially responsible" prior to obtaining your license plates.
 - C. show that you are "financially responsible" by posting a bond after your first major accident.
 - D. submit a financial statement to the State Department of Motor Vehicles, prior to obtaining your car registration.
50. When buying a home, the prospective home owner is encouraged to buy "title insurance." This insurance states that:
- A. the mortgage, deed, abstract of title, and the note are acceptable by legal standards.
 - B. all pertinent records have been examined by an attorney, and, to the best of his knowledge, the buyer is receiving a valid title.
 - C. the homeowner will be defended against claims brought by unknown parties contesting his legal ownership.
 - D. a thorough investigation of previous home ownership has been made, and guaranteed.

51. Disability payments under the Old Age and Survivors Insurance program of the Social Security Act are correctly allotted in which of the following situations?
- A. You receive payments because you were previously an accountant and you lose your eyesight, thus disabling you from further activity as an accountant.
 - B. Although you have been a disabled worker, your benefits are immediately discontinued upon your return to work.
 - C. You receive payments although you are only partially disabled by an accident, since you cannot find a position because of your disability.
 - D. Although you were totally disabled in an unfortunate accident, you must wait six months prior to receiving any disability benefits.
52. James Night wishes to file his income tax form as the "head of a household." Under which of the following circumstances can he qualify?
- A. If his wife does not have a salary, and his mother furnishes less than half toward the cost of maintaining the home.
 - B. If his wife furnishes less than half of her support toward the maintenance of the home and their two children--ages 4 and 6.
 - C. If he is divorced from his wife but maintains a home for his two children--ages 4 and 6--and his mother, who pays \$600 each year into the budget.
 - D. If he is single but maintains a home for his mother who contributes slightly over half of their mutual budget each year.
53. Just prior to April 15, Bill Acorn is frantically preparing his income tax form. When he gets to reportable income, he finds he should report only one of the following incomes. On which of the following must Mr. Acorn pay income taxes?
- A. a cash gift from Uncle Charlie for \$5,000.
 - B. Interest earned on income savings bonds during the year for \$10.25.
 - C. Interest on municipal bonds for \$200.
 - D. Divident from General Motors' stock for \$45.
54. If a safe and relatively high guaranteed return on an original investment is desired, the best selection of a prospective investor would be:
- A. senior mortgage bonds.
 - B. junior mortgage bonds.
 - C. convertible bonds.
 - D. debenture bonds.
55. The Old Age Survivors Insurance program under the Social Security Act, provides which of the following benefits for survivors of a fully insured worker?

- A. The burial expenses of the deceased will be paid up to \$2,000 maximum.
- B. A monthly income will be paid to the widow for each child, regardless of the age of the child.
- C. A monthly income will be paid to the childless widow until age 65, at which time she can draw old-age insurance.
- D. A monthly income will be paid to a widow after she reaches 60 years of age.

APPENDIX B

ITEM ANALYSIS PERCENTAGE DATA

TABLE XXVI
ITEM ANALYSIS PERCENTAGE DATA

Item	A	B	C	D	Item		
					Omitted	Difficulty	Correlation
1	8	44*	38	7	3	44	36
2	15	22	39*	20	3	39	26
3	4	63*	19	14	0	63	22
4	15	60*	3	23	0	60	25
5	20*	9	50	17	4	20	21
6	1	64*	32	3	0	64	19
7	5	49*	17	29	0	49	8
8	7	27	50*	15	0	50	27
9	46*	30	13	11	1	46	21
10	16	51*	18	13	2	51	25
11	8	67*	15	10	0	67	26
12	8	30	37*	23	2	37	27
13	34	4	4	57*	1	57	32
14	31	52*	10	6	1	52	28
15	24	29*	21	23	2	29	9
16	39	36*	11	13	0	36	32
17	24	3	5	66*	2	66	23
18	21	50*	14	12	2	50	20
19	40	15	21*	21	2	21	27
20	12	35*	33	15	4	35	22
21	25	29*	26	17	3	29	14

* Indicates correct response.

TABLE XXVI (Continued)

Item	A	B	C	D	Item		
					Omitted	Difficulty	Correlation
22	7	64*	11	17	0	64	29
23	20	45*	28	7	0	45	31
24	37	19	18*	22	4	18	4
25	19*	13	26	34	7	19	30
26	4	11	83*	1	1	83	18
27	13	33	23	31*	1	31	22
28	12*	7	20	60	2	12	18
29	39*	5	48	7	0	39	27
30	7	42	10	39*	2	39	38
31	22	54*	13	7	3	54	14
32	20	31	27*	17	5	27	2
33	46	12	4	37*	1	37	25
34	27	19	26*	21	6	26	3
35	70*	9	13	5	3	70	24
36	5	28	61*	3	2	61	29
37	24	18	28*	22	8	28	13
38	20	10	36*	29	5	36	22
39	20	29	11	34*	6	34	16
40	32	17	13	36*	2	36	15
41	9	32	42*	12	5	42	20
42	22	46	22*	1	8	22	11
43	39	5	11	40*	5	40	33

* Indicates correct response.

TABLE XXVI (Concluded)

Item	A	B	C	D	Item		
					Omitted	Difficulty	Correlation
44	2	2	57*	34	4	57	29
45	42	8	30*	14	6	30	29
46	5	6	42*	37	10	42	28
47	20*	51	9	13	8	20	31
48	19	22*	21	22	16	22	9
49	37	10	22*	20	11	22	20
50	11	20	48*	10	11	48	22
51	26	15	28	15*	15	15	24
52	19	34	27*	5	14	27	27
53	39	13*	15	17	16	13	6
54	15*	5	33	23	22	15	12
55	12	12	29	25*	21	25	23

* Indicates correct response.

APPENDIX C

TELEPHONE INTERVIEW GUIDE

TELEPHONE INTERVIEW GUIDE

Hello, my name is Leslie Grow. I'm calling in behalf of the Department of Accounting and Finance at Central Missouri State University. I understand that you have completed the course Personal Finance? May I have a few minutes of your time to ask some questions about your views of the course? Please feel free to express your honest opinion as all information will be held strictly confidential.

1. Did you have a good background in money management before you enrolled in Personal Finance?

Yes No

If yes, was it from: High School _____
 Learned from Family Members _____
 Learned from Experience _____
 Family Living Course _____
 Learned from a Spouse _____
 Other _____

2. On a scale of A-B-C-D-F, do you believe that you learned enough from Personal Finance to manage your personal financial resources and solve your money management problems?

A B C D F

3. Have you applied any of the topics and specific units you learned in Personal Finance to your personal money management problems?

Yes No

Can you give a couple of examples: _____

4. Which topics from Personal Finance do you feel will benefit you the most in the future? Please select one or more from the following list:

- | | |
|-------------------------------|---------------------------------|
| _____ Banking | _____ Insurance--Auto, Health, |
| _____ Budgeting | _____ Home, Life |
| _____ Credit & Borrowing | _____ Investing--Stocks, Bonds, |
| _____ Estate Planning & Wills | _____ Annuities, Pensions, |
| _____ Home Buying or Rental | _____ Mutual Funds |
| _____ Income Taxes | _____ Occupations |
| _____ Inflation | _____ Social Security |

_____ Other

5. Was there any topic in Personal Finance that should have been stressed more or less? No

More _____

Less _____

6. General studies courses assist the student to function as a citizen in a free society. How would you compare Personal Finance in regards to other general studies courses?

More Important _____

Less Important _____

Of Equal Importance _____

7. Would you recommend the course to a friend?

Yes No

8. Do you think every college student should be required to take Personal Finance?

Yes No

Why or Why Not? _____

9. How would you compare the teachers in Personal Finance to other general study course teachers?

Better _____

Equal _____

Poorer _____

10. Do you think you could have studied the material and passed the tests without the aid of an instructor as in the Individual Paced Program of learning?

Yes

No

(Individual Paced Program--Where students meet with an advisor-instructor who introduces learning objectives and passes out learning materials for the student to cover at his own rate. Not to be confused with the Radio Program course.)

APPENDIX D

TABULATION OF TELEPHONE INTERVIEWS

TABULATION OF TELEPHONE INTERVIEWS

Question 1

Did you have a good background in money management before you enrolled in Personal Finance? If yes, was it from:

No = 25 (62 1/2%)

Yes = 15 (37 1/2%)

Experience	7
Family Members	2
Family and Experience	1
Family and High School	1
High School	1
Family Living Course	1
Accounting Courses	1
Previous College Degree in England	1

Question 2

On a scale of A-B-C-D-F, do you believe that you learned enough from Personal Finance to manage your personal financial resources and solve your money management problems?

A = 7 (17 1/2%)

B = 15 (37 1/2%)

C = 14 (35%) (2 Radio course students ranked C)

D = 2 (5%)

F = 2 (5%)

40

Question 3

Have you applied any of the topics and specific units you learned in Personal Finance to your personal money management problems? If yes, give a couple of examples.

No = 8 (20%)

Yes = 32 (80%)

Insurance	17
Life Insurance	
Automobile Insurance	

Budgeting	15
Banking	11
Checking Accounts	
Savings	
Credit and Borrowing	11
Loans	
Interest	
Investments	4
Social Security	2
Income Tax	1
Publications About Finance	1

Question 4

Which topics from Personal Finance do you feel will benefit you the most in the future?*

Insurance	26
Credit and Borrowing	23
Home Buying or Rental	18
Budgeting	16
Banking	15
Income Taxes	11
Estate Planning and Wills	8
Investments	8
Social Security	6
Inflation	5
Occupations	4
No Response	1

* Students were allowed to choose freely.

Question 5

Was there any topic in Personal Finance that should have been stressed more or less?

- 18 = No
- 1 = Pretty well covered.
- 4 = General coverage adequate.
- 1 = Don't remember as I took the course as a Freshman.
- 1 = Everything--didn't get anything from the course.

More

- 6 Income Tax
- 3 Home Buying
- 2 Stocks and Bonds

Less

- 2 Investments*
- 1 Social Security
- 1 Budgeting

MoreLess

2 Wills
 1 Inflation
 1 Credit and Borrowing
 1 Insurance
 1 Home Management
 1 Budgeting
 1 Everyday Living
 1 Banking
 1 In depth about Loans

* We had investments practically the whole term.

Question 6

General studies courses assist the student to function as a citizen in a free society. How would you compare Personal Finance in regards to other general studies courses?

33 (82 1/2%) More Important
 "Than English almost."
 "If there's a good instructor."
 7 (17 1/2%) Of Equal Importance
 0 Less Important

Question 7

Would you recommend the course to a friend?

38 (95%) Yes
 "Not a radio class."
 "If teacher good."
 "If not in business."
 2 (5%) No
 "Depends on instructor."

Question 8

Do you think every college student should be required to take Personal Finance? Why or why not?

Yes = 26 (65%)

"A person lives with finances constantly while other courses are used for short periods of time."

"This general knowledge is necessary to everyday living."

"When in high school, you're too young to know how to manage money, insurance, etc."

"Because everyone must deal with it sooner or later."

"It had lots of general overall knowledge that you need when you get out of college."

"Many people have a hard time managing money, and the class teaches basic techniques--a possible exception of business majors."

"Everybody will have to be on their own and needs knowledge to survive."

"You will run into all teachings included in this class in your future."

"Touches on everything all people have to use."

"Basic for everyday life, it's one of the basic things you need."

"Because you'd benefit in your money situations that everyone must participate in."

"It helped me out, and I knew nothing before I took it. It was on the list, and I made a lucky choice. It prepares you for life in a confusing world."

"People need to learn basic things of life. We have to survive. If we can't survive, we can't succeed."

"If you're going to survive, you need to know the things the course teaches."

"Too many people are unaware of financial resources to live in a monetary society."

"If they don't know this before college, no one should graduate from college without knowing the things Personal Finance teaches."

"It's something you use everyday in everyone's entire life. Personal Finance prepares you for everyday living."

"Gives a broad view of things you must know when you finish college."

"If the course was changed and taught differently."

"Affects your daily life more than a science or art course."

"If you are not a business major or minor, because others have no exposure to it."

"A person learns to manage money and everyone needs to know this."

"You learn practical aspects for daily living--more practical value than other general studies courses."

"Benefits the student in the future, and they will always need to use this knowledge."

"Good for the younger people. I'm going to insist my son and daughter take it."

No = 14 (35%)

"Not general studies courses. We have enough required courses with majors and minors."

"You could read books and get the knowledge for yourself."

"So much of Personal Finance is common sense and most college individuals should have developed the study habits, etc., to do this on their own."

"Some students already have a good money background."

"Not required, but it was interesting and practical."

"Some may already have a good background; but the advisors should certainly recommend it and let the student choose."

"Counselors should recommend it to students, but they need a choice."

"Just for the ones with no money background."

"Some people already know how to manage their money."

"The class was too large for me to get much out of. If they were going to make it a required course, they'd have the same large class size."

"Some people are just not able to handle money matters. Their talents lie in different directions."

"Needs to be an option. There are too many requirements already, and it might make students dislike the course as they dislike other required courses."

"Up to the individual to map out what knowledges he wishes to gain."

"Don't think it's that important."

Question 9

How would you compare the teachers in Personal Finance to other general study course teachers? (Better--Equal--Poorer)

13 (32 1/2%) = Better

"But my wife had a bad instructor when she took the course last summer."

"Instructor introduced a lot of outside material that was interesting and informative and not included in the text."

"My teacher was very good."

"Had a Ph.D."

"Dr. Perfett--I thought he was great and was sorry about his death."

19 (47 1/2%) = Equal

"I didn't get along with my teacher, but I know there are several really good ones I wish I had had instead."

"Dry but adequate."

"I had a teacher in his last term at CMSU and he stressed what he liked best."

"Needed to broaden the view toward general studies rather than a business class."

6 (15%) = Poorer

"Class was too large."

2 (5%) = Had the radio class and could not give a response about a teacher.

Question 10

Do you think you could have studied the material and passed the tests without the aid of an instructor as in the Individual Paced Program of learning?

No = 21 (52 1/2%)

"That stuff has to be explained. I wish I'd kept my notes so that I could refer back to them. I had the course as a freshman and have forgotten the things I want to know about now. I had very little use for the information as a freshman."

"Instructor introduced a lot of outside material."

"I took the course on the radio, and I needed to take the course with a teacher so I could have gotten more out of it."

"In a course of this nature, you would have to have an instructor."

Yes = 19 (47 1/2%)

"Because my major was in business."

"At the junior or senior level."

"Didn't get much from the class. I did most of it on my own from the book anyway."

"But wouldn't have done as well."

VITA

Leslie Charles Grow

Candidate for the Degree of

Doctor of Education

Thesis: A COMPARISON OF PERSONAL FINANCIAL KNOWLEDGES OF SENIOR STUDENTS AT CENTRAL MISSOURI STATE UNIVERSITY WITH IMPLICATIONS FOR CURRICULUM DEVELOPMENT

Major Field: Business Education

Biographical:

Personal Data: Born in Glendale, California, September 29, 1942, the son of Raymond and Modena Grow.

Education: Clarksdale High School, Clarksdale, Missouri, graduated in 1960; Northwest Missouri State University, Maryville, Missouri, Bachelor of Science in Education, 1964; Central Missouri State University, Warrensburg, Missouri, Master of Arts (in Business), 1969; attended the University of Oklahoma, Norman, Oklahoma, during the summer of 1970; Oklahoma State University, Stillwater, Oklahoma, Doctor of Education, 1977.

Professional Experience: High school business education teacher, Wentworth Military Academy High School, Lexington, Missouri, 1964-1967; Instructor of Accounting, Wentworth Military Academy Junior College, Lexington, Missouri, 1967-1970; Instructor of Accounting and Finance, Central Missouri State University, Warrensburg, Missouri, 1970-1977 (leave of absence, 1976).