

EMPIRICAL SUPPORT
FOR THE FOOD BUDGET MANAGEMENT STRATEGIES
IN THE CONSUMER EDUCATION CURRICULUM

By

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TABLE OF CONTENTS

	<u>Page</u>
ACKNOWLEDGEMENTS	iii
ABSTRACT	viii
CHAPTER	
I. INTRODUCTION.	1
Statement of the Problem.	2
Nature of the Study	2
Research Tasks	2
Hypotheses	5
Need for the Study.	5
Background of the Study	8
The Consumer Education Curriculum.	8
Life Management Skills	9
Consumer Information and Teaching Aids	10
Pricewatching Efficiency	11
Significance of the Study	12
Assumptions Underlying the Study.	14
Source Selection	14
Panel of Experts	15
Gathering Consumer Data.	15
Definition of Terms	16
Delimitations and Limitations	18
Organization of the Remainder of This Study	21
II. REVIEW OF THE LITERATURE AND COMPILATION OF FOOD BUDGET MANAGEMENT STRATEGIES.	23
Consumer Education.	23
The Consumer Education Curriculum.	25
Curriculum Materials	26
Wise Shopping Strategies.	28
Federally Recommended Strategies	28
State Home Economics Extension Service Recommendations	28
Florida-Approved Textbooks	29
Strategy Compilation	31
Planning Strategies.	31
In-store Strategies.	39
Life Style/Preference Strategies	48
Food Shopper Surveying.	53
Weekly Food Dollars Spent	55
Summary	59

III.	METHODS AND PROCEDURES.	60
	Research Design	60
	Panel Review.	62
	The Phase 1 Survey.	64
	Phase 2 Instrumentation	66
	Collecting Demographic Data.	67
	How the Strategy Usage was Determined.	68
	Telephone Survey Methodology	69
	Conducting the Telephone Interviews.	78
	Data Analysis	80
	Index of Pricewatching Efficiency.	80
	Phi Analysis of Categorical Variables.	81
	Phase 3: The Follow-Up Interview.	82
	Methodology.	83
	Topics Covered	83
	Summary of Methodology.	85
IV.	RESEARCH FINDINGS	87
	Results of Phase 1.	88
	Results from Phase 2 Interviews	90
	Crosstabulation of the Data	96
	Dichotomization of the Variables	97
	Phase 2 Statistical Analysis	98
	Decile Representation of the Respondents	99
	Correlations	99
	Strategy Recommendations Examined.	100
	Demographic Characterization	113
	Phase 3 In-Home Interviews.	115
	Narratives of Eight Households	116
	Phase 3 Contributions to this Study.	123
	Summary of the Data Analysis.	124
V.	DISCUSSION	126
	Findings and Ex Post Facto Analysis.	126
	Strategy Use Data Findings.	127
	Demographic Findings.	130
	Interactions.	131
	Relating Strategy Use to Alternate Ranking Methods	131
	Contrast with Burgoyne Data	136
	Retrospective on the Phase 1 Process.	139
	Phase 3 Reconsidered.	140
	Limitations.	141
	Interpretation of Data.	141
	Internal Consistency.	144
	General Considerations.	145
	Data Analysis	146
	Suggestions for Further Study	147
	Implications for Textbook Writers	148

APPENDICES

A.	FLORIDA-APPROVED TEXTBOOKS CONTAINING FOOD BUDGET MANAGEMENT RECOMMENDATIONS.	150
B.	SELECTED RECENT TEXTBOOKS CONTAINING FOOD BUDGET MANAGEMENT RECOMMENDATIONS BUT NOT APPROVED FOR USE IN FLORIDA 1985-86	157
C.	A COMPILATION AND CONDENSATION OF FOOD BUDGET MANAGEMENT STRATEGIES RECOMMENDED IN SELECTED CONTEMPORARY SOURCES.	160
D.	POLL INSTRUMENT FOR USE WITH LOCAL PANEL OF CONSUMER EDUCATORS	178
E.	TELEPHONE QUESTIONNAIRE INSTRUMENT FOR USE WITH FOOD SHOPPERS FOR GATHERING DEMOGRAPHIC DATA.	183
F.	TELEPHONE QUESTIONNAIRE INSTRUMENT FOR USE WITH FOOD SHOPPERS FOR GATHERING STRATEGY USE DATA	187
G.	"I P E CALCULATOR" MICROCOMPUTER PROGRAM	192
	REFERENCES	199
	BIOGRAPHICAL SKETCH.	206

Abstract of Dissertation Presented to the Graduate School
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Consumer education textbooks offer food budget management suggestions, usually presented as recommended strategies and tips. The items on these lists seldom have more than face validity. The purpose of this study was to determine which of the various food purchasing strategies recommended in textbooks are used significantly more by price-efficient shoppers than by shoppers defined as non-price-efficient.

Food budget management recommendations were extracted from curriculum materials and submitted to a panel of consumer educators for validation, a process that pared the recommendations to 53 items. Questionnaires for use with food shoppers were then developed.

Data on food expenditures and the demographics of household makeup were compiled in 106 telephone interviews. A representative group of 47 shoppers was administered a second questionnaire to determine use of the recommended strategies.

Contrasting individual shoppers' expenditures with United States Department of Agriculture (USDA) regional averages for like households provided a measure of relative price-efficiency in food buying. Frequency crosstabulations of shoppers scoring high and low on this measure with a dichotomized representation of strategy usage provided phi correlations, indicating relative strategy importance.

Eight respondents were selected for 2-week follow-ups, during which documented logs of food expenditures were reviewed. This qualitative assessment was designed to check respondent's recall of food expenditures and the accuracy of self-assignment into one of three USDA-defined food budget levels.

Nine specific consumer practices were supported: (a) comparing unit prices, (b) stocking ahead when prices are low, (c) analyzing recipe costs, (d) being one's own butcher, (e) trying new recipes, (f) making shopping lists, (g) considering time and fuel costs of shopping trips, (h) avoidance of shopping when rushed, and (i) attentiveness to USDA grades. Another strategy, alertness during the checkout process, was shown to be significant when an ex post facto analysis was performed on component variables. The results of this study provide empirical support for specific strategies which significantly impact household food budgets and provide objective considerations for curriculum designers and consumer educators.

CHAPTER I
INTRODUCTION

Consumer education textbooks, when they include the topic of household food buying, contain a variety of resource management suggestions. These range from advice on home gardening, cooperative buying, and menu selection to strategies for supermarket shopping. Likewise, financial counselors and consumer economics writers frequently offer lists of "dos" and "don'ts" for "wise shopping."

Few empirical findings validate the food budget recommendations that form the basis of the school curriculum. In fact, the shopping experiences of the instructor, combined with suggestions from textbooks and the popular press, form the major content for instruction in buying food (Walker & Cude, 1983). Statements in these resources seldom have more than face validity. Engel, Kollat, and Blackwell (1973) called for "substituting objective criteria, where possible, for subjective considerations" in consumer education (p. 263). The need for curriculum validation for price efficiency is evident in current content that may be subjective and time worn. The purpose of this study

was to develop an empirical basis for determining which budget management/price efficiency strategies are appropriate to include in curriculum materials related to food.

Statement of the Problem

The problem was to develop an updated, concise list of strategies and tips, or food budget management "dos" and "don'ts" that is based on statistical testing and validated with a measure of price-efficient shopping. Data for the analyses were obtained from shoppers using different stores and shopping behavior. Pursuit of this problem depended upon devising (a) a justifiable interview technique for gathering shopper data, (b) a process for deciding which questions were appropriate to ask, and (c) a measure for determining price efficiency.

Nature of the Study

Research Tasks

Accomplishment of the purpose of this study involved the following research tasks:

1. Identifying and extracting food budget management "do and don't" strategies from textbooks and other contemporary resources.
2. Condensing the list by sorting and combining similar recommendations.
3. Asking a local panel of consumer educators to rate the usefulness of the recommended strategies from the printed sources; eliminating

recommendations not receiving consensus endorsement from the panel.

4. Using the strategy list that emerged from the panel review to write questions for an interview instrument. Most questions were designed to elicit responses concerning strategy use. Other questions were related to behaviors and demographics such as food expenditures and shopping frequency, household size, number of meals eaten away from home, and the sex and ages of persons in the household.
5. Developing a three-phase shopper interview scheme. The purpose was to obtain data on the expenditures and strategy use of food buyers. The phases were (a) mailout, (b) telephone interviews, and (c) home visits. Responses from the first phase were used to obtain a list of telephone interview respondents. The second phase, telephone interviews, was for collecting the necessary research data. The third phase was a personal interview during a home visit with eight selected respondents for observation of additional factors or behaviors that impact food shopping, and corroboration of the data gathered during the telephone interview.

6. Developing a method of quantifying the food shopping price efficiency of each interviewee by contrasting his or her reported expenditures with published United States Department of Agriculture (USDA) averages. This contrast formed a continuum through the average behavior to extremities representing price-efficient food buying behavior and non-price-efficient behavior.
7. Conducting interviews with food shoppers as described in step 5.
8. Tabulating, summarizing, and interpreting the telephone interview data. Correlations between strategy use or shopper characteristics and a measure of price-efficient shopping were tabulated and reported as phi statistics. Relationships retained in devising a condensed listing were those that satisfied requirements for significance by reducing the chance error to 5%.

The product of this study is a strategy listing that is more concise, more up-to-date, and potentially more effective than any single existing resource. The strategies uncovered during hypothesis testing and correlational analysis are proposed to consumer education curriculum planners as most likely to help young consumers develop wise food shopping habits.

Personal experience, research, and observation of the retail food scene fostered an hypothesis that some shoppers regularly employ sets of buying strategies to provision their households for significantly less money than other shoppers spend for similar provisioning. Do people who use certain budget management practices pay less for similar foods than people who do not use them? That was the main question to be answered by this study. Stated in a testable form, the research question was as follows: Of the various food purchasing strategies recommended in consumer education textbooks, which ones (if any) are used significantly more by price-efficient shoppers than by those shoppers defined as non-price-efficient?

Hypotheses

Data analysis consisted of a series of tests of the null hypotheses that efficient and inefficient food shoppers do not differ significantly as to their use of specific budget management strategies nor do they differ on specific demographic variables. The budget management strategies tested were those determined to be the ones most frequently taught in consumer education units on food budget management.

Need for the Study

Instruction on food and its use is part of the curriculum in consumer education and vocational home

economics, and is often included in economics, health, nutrition, and life management skills courses in high school and adult education programs. Many of these courses contain food buying units based on lists of recommended strategies. In addition, publications from the popular press, financial counselors, and agricultural extension service staffs--which disseminate lists of ways to manage the food budget--contain essentially the same material as the textbooks.

Despite the fact that many of the suggestions relate to obtaining the maximum value for food expenditure, most refer primarily to nutrition ("Include foods from each of the four food groups in each meal"), safety in food handling and storage ("Don't store opened cans in the refrigerator"), or aesthetic meal preparation ("Make your meals interesting by serving a variety of food shapes and textures").

Porter (1976) wrote that food is among the most important items that contribute to the cost of living and among the most expensive items in the budgets of low and low-middle income families. Whereas the typical American consumer buys big-ticket items such as furniture, automobiles, and appliances only occasionally, the same consumer purchases food once or twice every week. According to Porter, food is virtually the only major cash-and-carry item left in the

typical budget and thus is the one area where householders can "correct costly errors easily and start saving substantially from the day [they] determine to concentrate on so doing" (p. 163).

With this emphasis on the importance of food budget management comes a need to educate consumers concerning appropriate food consumption patterns. Much of what young people learn about food they learn at home (Sims, 1983) and the information these future consumers acquire may relate more to practices of the food industry in previous decades than to what the citizen of tomorrow will need to know. Inefficient practices of parents tend to be perpetuated. Therefore, schools become the most likely place for young consumers to receive information on contemporary price-efficient food buying.

Because of the continuing technological developments in food processing, marketing, and retailing, consumers should repeatedly determine the relationship between various shopping strategies and price-efficient food buying (Langrehr & Robinson, 1979). At the same time, the changing psychological forces in advertising and popular culture make rational consumer interpretations necessary (Leet & Driggers, 1983; Margolius, 1972; Swagler, 1979).

The near-universality of food buying, the frequency with which individuals purchase food, the dynamic nature of the marketplace, and the negative economic impact of

poor food buying decisions create a need for price efficiency in managing the household food budget. This study was an effort to develop a method for identifying relevant content for food budget management instruction in consumer education courses.

Background of the Study

Inferences about the curricular and instructional materials contained in the following paragraphs are based upon perusal of the contents of chapters on food topics in the textbooks listed in Appendices A and B. Also, curriculum guidelines such as the one by Metcalf (1984), the School Board of Alachua County's Course Descriptions (1985), and interviews with members of a local panel of consumer educators were drawn upon in determining the extent of consumer education on food topics. Despite the wide range of high school courses of study in which consumer education topics appear, there seems to be little specific and systematic coverage of how to participate most effectively in that economic activity most people engage in most frequently--food buying.

The Consumer Education Curriculum

Consumer educators generally share the goal of helping people develop economic competence. They have operated under the assumption that formal education through the schools is an effective way to achieve that goal (Remy, 1980). Many consumer education topics

appear in the K-12 curriculum. The rights and responsibilities of consumers, safety, nutrition, healthful living, decision making, resource management, and consumption mathematics and economics are covered in a general way in numerous courses during one's school career (Bannister, 1983).

Much early school mathematics relates to buying groceries. Children can be expected to comprehend everyday purchases such as food (including candy and beverages)--purchases they themselves are already making. At the secondary level, consumer education has been primarily a home economics or social studies (economics) offering, but consumer units have also been incorporated in the areas of health, business, and general mathematics. Consumer economics textbooks at the secondary level generally include units on capitalism, advertising, credit, insurance, investments, taxation, and the expenses of health care, food, and clothing. In other texts, the approach to food buying is through a household budget management perspective, or is included as an adjunct to nutrition instruction.

Life Management Skills

A widespread perception that many young people enter adulthood ill-equipped to be fully functioning citizens was evidenced by the Florida Legislature's mandate that Life Management Skills (LMS) be added to requirements for public high school graduation beginning

in 1986. The curriculum, according to the legislation, is to include consumer education, emotional development, drug education, and instruction on cancer detection (General Requirements for High School Graduation, Sec. 10, F.S. §232.246, 1984).

The legislative mandate for LMS is based on the need for consumer education. Florida's high school students will, with LMS, have one more opportunity to receive instruction in consumer education. Nonetheless, coverage of food buying in existing courses of study is scant. Teachers trained for teaching in health education and also those trained for vocational education (home economics) are teaching the LMS curriculum. Separate sets of curriculum objectives were prepared at the state level. Most schools are offering just one curriculum, with the decision as to health or home economics based primarily on the availability of teaching personnel. Neither curriculum adequately addresses the consumer's need for price efficiency skills in food budget management.

Consumer Information and Teaching Aids

Regardless of the course of study in high school, the contents of textbook chapters on food topics indicate a tendency to focus on nutrition, government labeling, and safety in cooking and storage (Appendices A and B). Presumably, curriculum objectives follow similar patterns. While wise food buying certainly

involves knowledge and application of these concepts, it should not be limited to these general areas (Swagler, 1979). Consumer help beyond instructional materials is already available from such sources as the Florida Citrus Commission, the American Lamb Council, Albertson's Supermarkets, and the American Egg Board. Each provides free guides to buying and preparing specific foods. Because of their own interests, however, these organizations provide little help for the budget management considerations of consumers. The material may be informative and attractively presented, but it is likely to reflect the bias of the sponsoring industry group (Harty, 1978).

Lists of recommendations from home economists for saving money are subject to changes in marketing technique and consumer educators are left primarily to their own devices (and biases) in teaching budget management concepts. Besides presenting the various wise food buying maxims, consumer educators should be able to make statements about the relative impact of specific strategies on household food budgets.

Pricewatching Efficiency

The USDA publishes regional average food cost data on home meals at different budget levels for people by gender and age groupings. A comparison of these USDA regional averages for the cost of feeding households in a geographic region with the specific individual

households of the study respondents contributed to the development of an indicator of price efficiency.

One step in the analysis of buying patterns of food shoppers in the current study was to analyze relative buying-for-price efficiency by comparing USDA data with information on the dollar outlay for a specific household. The index of pricewatching efficiency (IPE) controls for differences from one household to the next in food budget levels, meals not eaten at home, and the gender and age of household members. IPE is a gauge for measuring relative outlays for similar purchases. Like intelligence quotients or wind-chill factors, IPE eases comparison of diverse situations. As a single number, IPE may be useful for comparing composite food purchase efficiency among food buyers with diverse household makeup and menu preferences.

Significance of the Study

Timeliness. This study took place at a time when the Life Management Skills curriculum was evolving in Florida. Curriculum developers will have access to these food buying findings for possible inclusion in revisions of LMS and other consumer education courses. The revisions suggested are in the form of a concise listing of budget management strategies operationally related to price-efficient food shopping.

Overreliance on advertising. Contemporary food buyers tend to buy highly advertised convenience foods;

empty-calorie beverages and snacks; and foods containing health-endangering amounts of sodium, saturated fat, and sugar. No age or ethnic group has avoided these pitfalls of the marketplace (Peterkin & Hama, 1983). Even well-educated people who have bought food regularly over many years are likely to make irrational grocery selections (Bassler & Newell, 1982). The poor and the less well educated seem more likely to accept advertising claims as fact and are thus more frequently victimized in the marketplace (Cross, 1976). Nutrition education is the most important solution to the problems associated with dietary deficiencies and excesses. In many cases, food budget savings coincide with better nutritional choices because the most highly processed foods (those with high levels of added fats, preservatives, and sweeteners) tend also to be more costly and less nutritionally sound (Morgan, Johnson, & Burt, 1983).

Breadth of audience. Food buying represents the largest discretionary area in most household budgets (Porter, 1976). Considering frequency of disbursement and the fact that, for most people, the activity continues until death, food buying skills are of major importance to individuals. Additionally, with more than 22 million Americans participating in the USDA food stamp program, benefits accruing to individual participants from price-efficient shopping could become economic benefits to society as well (Leet & Driggers, 1983).

Changing marketplace. The dynamic nature of the marketplace can be illustrated by several examples. Textbooks frequently provide lengthy coverage on the USDA grading of beef, whereas most markets now sell only one grade (usually "choice") or ungraded beef. In packaging, technological advances in plastics and increases in transportation and labor costs have made "one-way" 2-liter bottles generally more cost-effective for use with carbonated beverages than the glass returnable bottles. Consumer education materials still report the deposit bottles (Biesdorf, Buris, & Swanson, 1980) as the most economical way of purchasing soda. An example of a psychological development would be the increased use of labeling (such as "light," "lite," "natural," or "economy size") that has no precise meaning yet widespread buyer appeal (Stayman & Hagerty, 1985). Teaching out-of-date concepts is a danger that can be reduced by continuous empirical examination of subject matter (Remy, 1979).

Assumptions Underlying the Study

Source Selection

The materials from which the currently recommended food budget management strategies were compiled in this study (textbooks and extension service materials, Appendix C) were assumed to be representative of similar recent sources.

Panel of Experts

The teachers and extension home economists comprising the local panel of consumer educators were assumed to represent aggregate teaching philosophies similar to those of other groups teaching at the secondary level where food buying skills may be part of the curriculum.

Gathering Consumer Data

It was assumed that all food is either purchased or obtained by one of the methods that could be probed in the interview. An objective throughout the study was to build checks and safeguards to provide reasonable assurance that the interview data were accurate and representative. One assumption was that the interview process provides data for a diverse range of shopping behaviors, and the data are appropriate for evaluating the impact of those strategies on price-efficient food shopping. Other general assumptions in this study are that interview respondents are able to recall approximate recent expenditures and report them accurately. Further, the ability of respondents to characterize their household food budgets accurately in one of three categories used by the USDA was important to the study. (The third shopper interview phase, the in-home interview, was incorporated in the research design for the purpose of testing the accuracy of this assumption).

Each household member was assumed to eat 21 meals per week. House guests for meals were assumed to offset meals eaten in other people's homes by members of the subject household. Seldom-purchased condiments were assumed to be consumed at a nearly constant rate, with replenishment costs spread evenly throughout the year.

Definition of Terms

Consumer education is the development within the individual of the skills, concepts, and understandings required for everyday living--skills that help individuals, within the framework of their own values, to participate fully and effectively in the marketplace (Thorelli & Thorelli, (1977)).

Curriculum refers to the set of courses offered within an academic institution, or within a specific academic program, or across an entire department. In this study it specifically refers to topics of coverage within consumer education courses.

Food budget level is one of three USDA categories of expenditure for food for home consumption used in this study--a consideration of both quantity and quality. The budget level is independent of nutritional value. The low level implies limited portions of foods which can be purchased at relatively low prices; moderate implies a consideration of cost, but a wider selection, larger quantities, but avoidance of luxury items; while liberal implies unrestricted quantities,

little consideration of cost, and a tendency toward menus with a flair.

Life Management Skills is a half-credit requirement for high school graduation in Florida beginning in 1986. Components of the curriculum include consumer decision making, consumer rights and responsibilities, positive emotional development, nutrition, cancer detection, cardiopulmonary resuscitation, and drug education.

Pricewatching efficiency is a general term indicating the expenditure of fewer dollars than would be predicted, using a contrast of actual outlays with published regional averages for purchases of the same array of consumer goods. Efficient food shoppers were operationally defined as those people who spend less for food than the USDA would predict. The USDA predictions are based on periodic surveys in different regions of the country and at different food budget levels, and the estimates take sex and age of household members into account. Conversely, non-price-efficient shoppers were defined as those people who spend more than USDA predictions. The 20% of the interviewed shoppers who spent closest to the USDA estimates were not labeled as either price-efficient or non-price-efficient. An index of pricewatching efficiency (IPE) was calculated for a respondent by comparing the reported weekly amount spent for food with the predicted amount. As a measure of major interest in this study, a positive IPE is an

indication the respondent spent less than would be predicted using appropriate regional estimates as reported by the Agricultural Research Service of the USDA.

Delimitations and Limitations

The analysis was delimited to the following conditions:

1. Interview respondents were drawn wholly from the community of Gainesville, Florida. Gainesville data may be atypical of most North American metropolitan areas because the proportion of workers in the public sector is large. The University of Florida (U.F.), U.F. Medical Center and Shands Hospital, Santa Fe Community College, Veterans Administration Medical Center, Sunland Training Center, Florida Department of Agriculture Division of Plant Industry, and other governmental offices are housed in Gainesville. The population is younger and better educated than the general population of the country. The community has a more rapid growth rate and also enjoys a lower unemployment rate than prevails in most southeastern communities.
2. Only cable television subscribers were contacted in the mailout because a local cable franchise provided an up-to-date mailing list

and facility for return postage. The computer-generated mailing list included only subscribers signed on the system six continuous months or more. Households receiving cable services may be underrepresentative of the population as a whole, especially with regard to the poor and those living in the rural fringe areas of Gainesville.

3. Only those people who responded to the postcard and provided a telephone number (indicating a willingness to participate further in the study) were contacted for the telephone interview.
4. Telephone interviews were conducted so that initial contact took place between the hours of 11:00 a.m. and 8:30 p.m. Persons not interviewed may have had different demographic characteristics or exhibit different shopping preferences and behaviors from those who answered their telephones during that time period.
5. Food budget management strategies used in the data analysis were those compiled from contemporary printed materials, posed to a local panel of consumer educators, and endorsed by their consensus. The panel members were asked to suggest still other strategies

but those new strategies were not subjected to the same scrutiny. Rather, the newly-added strategies form a list of suggestions for future empirical evaluation.

The following limitations to external validity are recognized:

1. Respondents may not be representative of the total population because of the delimitations imposed.
2. Obtaining generalizable information in consumer interviews is difficult because the internal validity of self-reports, particularly of expenditures, cannot be controlled. Each step has threats to statistical validity. For instance, respondents pressed to recall recent purchases may struggle to remember specifics. This difficulty may sometimes be combined with a resentment of the invasion of privacy. Consequently, the respondent may guess wildly or draw a complete blank. Attempts by researchers to build accurate after-the-fact profiles of purchase behavior are thus confounded by respondents' (a) reluctance or inability to recall, and (b) deliberate deception (Lansing & Blood, 1964; Madow, 1967).

3. Strategies presented to panelists were not, in any of the sources, represented as being of equal potential importance.
4. The order in which strategies were presented to panelists or to telephone subjects may have had an influence on responses.

Organization of the Remainder of This Study

Chapter II contains a review of the literature, including supportive interpretations relating to the compiled strategies that were examined in the study. Chapter III contains an explanation of the research methodology, including the research design, respondent selection process, data collecting procedures, instrumentation, and data analysis. The results of validation by the local panel of consumer educators was incorporated as part of the development of instrumentation.

Chapter IV is a presentation of statistical and descriptive results and analyses. The final chapter (V) contains a summary, author's conclusions, and comments as to the generalizability of the findings.

Appendices A and B include a supplemental listing of high school text materials, with commentary regarding the content of food buying information presented in each. The compilation and condensation from 15 representative contemporary sources is summarized in Appendix C. The three instruments used in the study are reproduced as Appendices D, E, and F. A microcomputer

program (written in Applesoft® BASIC) is illustrated and listed in Appendix G. The program will enable researchers or other interested individuals to calculate and interpret indices of pricewatching efficiency (IPEs).

CHAPTER II
REVIEW OF THE LITERATURE
AND
COMPILATION OF FOOD BUDGET MANAGEMENT STRATEGIES

Two main arenas of inquiry are examined in this chapter. One is consumer education, and specifically the curriculum content of instructional units on food budget management. The other is the experiential realm of food budget management--the practices of food buyers and the gathering of data from them.

This chapter will open with a review of the high school consumer education course offerings that may contain units relating to food buying-for-price within individual household budgets. There will be a review of high school curricula relating to food and food budget management, and also commentary on selected teaching materials currently approved for use in Florida.

The budget management strategies recommended by contemporary household resource management writers, especially the writers of high school textbooks, were a core concern in this study. Strategies drawn from the textbooks became separate data variables presented to the local panel of practitioners, and were ultimately used in the correlation study with food shoppers. The strategies recommended by the writers and reported in

this chapter will be accompanied by interpretations from the literature pertaining to each strategy.

This study included food shopper interviews aimed at determining the strategies used by individual shoppers. The interviews incorporated inquiries about use or non-use of specific shopping behaviors, along with data making up the shopper's household food expenditure pattern. The aim was to uncover significant correlations between these indicators and a measure of food budget management efficiency. To aid in the design of the interviews, some of the types of data previous researchers have thought relevant to food shopper interviews were also examined.

This chapter is concluded with a discussion of average weekly expenditures. These USDA estimates were later contrasted with actual reported expenditures for the individual shoppers in the study, providing a measure of shopping efficiency that took into account such demographics as expenditures for food, household size, and food budget level.

Consumer Education

Consumer education (or consumption science, or consumer affairs) has yet to gain recognition as a separate academic discipline. Instead, it involves cross-disciplinary consideration of economics, psychology, sociology, anthropology, marketing, health, communications, and research methods. The nature of this study seems to fit what Rader (1980) proposed as the discipline of consumption science; a

knowledge base for consumer education. As Rader perceived consumption science, it would

have principles, laws and generalizations drawn from anthropology, economics, psychology, sociology, and perhaps some other newly emerging disciplines. Consumer education may continue to be oriented to decision-making, valuing, inquiry, and action concerns, drawing from consumption science for its knowledge base. (p. 5)

The Consumer Education Curriculum

Consumer education topics already appear throughout the K-12 curriculum. The rights and responsibilities of consumers, safety, nutrition, healthful living, decision-making, resource management, and consumption mathematics and economics are covered in a general way in numerous courses in one's school career. Instruction in nutrition, as well as meal preparation, safety in food handling, and proper storage of leftovers is central to the home economics curriculum. The material is also covered in some business, social studies, life management skills, science, health, and physical education courses.

In spite of the multitude of consumer education course offerings, systematic inclusion of specific material on food budget management is absent. This is because the major subject heading of systematized money management, in a typical unit on family/household planning, includes examples ranging through automobiles, major appliances, health care, clothing, insurance, restaurant meals, and supermarket food. In most cases, the coverage is built on the concepts of income, budgeting, credit and borrowing, advertising, and

consumer shopping and buying techniques. The courses where consumer affairs are the subject do not, however, necessarily include food topics (a range of contemporary consumer texts is annotated as to food buying content in Appendices A and B).

Curriculum Materials

The amount of influence textbooks have on what is covered in class varies considerably from one classroom to the next. To some extent textbooks both form and reflect the curriculum, even when they are regarded as supplemental instructional aids. Although the practice is criticized on a range of theoretical grounds, textbooks (and their associated workbooks and teacher's guides) form the course outline, the framework, the basis for testing, and the view of the discipline for the curriculum in between 75% and 90% of classrooms (McNeil, 1985).

The texts approved for use in Florida are of particular interest in this study. Florida Department of Education 1985-86 authorized texts with content related to buying food are listed, by subject area, in Table 1. The nature of that food-buying content is discussed for texts keyed "A," in Appendix A. Other contemporary textbooks which include coverage of food-related consumer education topics are listed in Appendix B.

The consumer education materials in schools are not readily distinguishable from materials from cooperative extension services, producer-employed home economists, and

Table 1
Middle School and High School Consumer Education
Textbooks Included in "Catalog of State [of Florida]
Adopted Instructional Materials 1985-86"

<u>Course</u>	<u>Grades</u>	<u>Key</u>	<u>Author(s), Date</u>
Business Education	10-12	A	Jelley & Herrmann, 1978
Health	9-12	A	Tsumura et al., 1984
Home Economics:	10-12	X	Oppenheim, 1977
Consumer Education	10-12	A	Maedke et al., 1979
"	9-12	A	Levy et al., 1976
"	10-12	A	Linder & Seltzer, 1977
"	10-12	X	Warmke et al., 1977
Exploration of the	7-9	A	Kowtaluk, 1980
Occupation of	7-9	A	Cronan & Atwood, 1976
Homemaking	7-9	N	Riker & Riker, 1977
"	7-9	A	Dunn & Peeler, 1981
Fundamentals of	9-12	X	Oppenheim, 1981
Homemaking	9-12	A	Craig, 1982
"	9-12	X	Kelly & Eubanks, 1981
"	10-12	N	McGinley, 1980
"	9-12	N	Parnell, 1981
"	9-12	A	Foster et al., 1982
"	9-12	A	Chamberlain et al., 1982
Mathematics:	9-12	N	Keedy et al., 1980
General	9-12	N	Stein, 1978
Mathematics	9-12	N	Clarkson et al., 1980
"	9-12	N	Olivo & Olivo, 1975
"	9-12	X	Bradford, 1975
"	9-12	N	Haines, 1979
"	9-12	X	Jacobs, 1970
"	9-12	N	Thompson, 1977
"	9-12	A	Goe, 1979
"	9-12	A	Kravitz et al., 1980
"	9-12	N	Shaw et al., 1979
"	9-12	N	Wells et al., 1980
"	9-12	N	Lewis, 1980
"	9-12	N	Price et al., 1978
"	9-12	N	Bolster et al., 1981
"	9-12	N	Bolster & Woodburn, 1981
"	9-12	X	Bragg et al., 1979
Social Studies:	7-10	A	Clawson, 1980
Consumer Education	7-10	A	Plunkett, 1979
"	9-12	A	Miller, 1978
"	10-12	A	Warmke & Wyllie, 1983
Economics	9-12	A	Hodgetts & Smart, 1982
"	10-12	X	Brown & Warner, 1982
"	11-12	X	Gordon & Dawson, 1980
"	10-12	X	Smith et al., 1981
"	10-12	X	Brown & Wolf, 1979
"	10-12	X	Wolken & Glocker, 1982

Key: A Reviewed in Appendix A
N Not available for review
X Contains no material on food buying

consumer advocacy organizations. All of these sources publish materials offering "helpful hints" for economical food buying. The wire services and popular magazines give wide circulation to many of the releases from these groups, as well as to parallel material they produce themselves.

Wise Shopping Strategies

The listing of "wise shopping strategies" from which this study was developed is a composite drawn primarily from Florida-approved textbooks. It also includes a USDA source and an extension home economics booklet from the State of New York.

Federally Recommended Strategies

The USDA's Human Nutrition Information Service gives wide distribution to Your Money's Worth in Foods, which has been revised many times through the years. The 1982 revision, by Peterkin and Junker, offers 27 specific shopping practice recommendations to "advise families on how to use their food money wisely" (p. ii). The strategies are listed in Appendix C.

State Home Economics Extension Service Recommendations

Harrison (1977) prepared a pamphlet for use in Florida similar in form to those used in many other states for home economics extension and 4-H activities. One of the most comprehensive listings of the type Harrison prepared for Florida is that by Biesdorf,

Burris, and Swanson (1980). They authored Cornell University's food shopping handbook for the home economics extension service in New York as part of a complete teaching kit, "Be a Better Shopper." This program includes 140 slides designed to help people "save 10-15 percent--probably more at the supermarket" (undated promotional flyer for the program). The recommendations, which cover some areas omitted by many of the other sources, are also enumerated in Appendix C.

Florida-Approved Textbooks

The public school textbooks that were listed in Table 1 (Florida Department of Education, 1985) are approved for specific courses as shown. Florida's current textbook approval cycle ends in 1986, so it is likely some of the newer texts listed in Appendix B will be more widely used in Florida classrooms, as will revised editions of currently-approved texts (conversation with Ella Mae Huber, Textbook Coordinator, School Board of Alachua County, January, 1986).

Eighteen of the texts were selected for annotation in Appendix A based on availability and presence of food buying content. For example, Dunn and Peeler (1981), in their junior high text, offer eight shopping suggestions related to saving money. Another text written for the middle school audience by Cronan and Atwood (1976) emphasizes quality/value tradeoffs. Cronan and Atwood offer only five specific recommendations.

The fifth edition of Teen Guide (Chamberlain, Budinger, & Jones, 1982) devotes a chapter to shopping for food, after having given 11 short chapters to resource management and 9 more to nutrition and meal preparation. Later chapters cover eating out, safety in the kitchen, specific food types, and government food programs. The food buying strategies offered by Craig (1982) are arranged within several different chapters in a fundamentals of homemaking text, Thresholds to Adult Living.

Discovering Nutrition, by Helen Kowtaluk (1980) contains a concise chapter on buying food. In it are listed 14 money-saving strategies. Food buying tips are prescribed in Consumer Mathematics, by Goe (1979). Some of the suggestions are inferred by the narrative mathematical problems, others are section topics.

Maedke, Lowe, Boardman, and Malouf (1979) mentioned various strategies in the narrative of their Consumer Education text, rather than separating them into a list of recommended shopping practices. In all, 17 were mentioned. Jelley and Herrmann, in their revised (1978) consumer economics text, The American Consumer: Issues and Decisions, cite 11 recommendations. The Consumer in the Marketplace (Levy, Feldman, & Sasserath, 1976) contains recommendations for 12 price-efficient practices for food buyers. Plunkett (1979) offers nearly two dozen tips, which are combined and presented

as "eleven ways to stretch your food dollar" in The Consumer in America.

The Hodgetts and Smart (1982) economics text, Essentials of Economics and Free Enterprise, includes a chapter on marketing and another on consumer buying. Seven budget management strategies are covered.

Strategy Compilation

A list of food buying strategies was compiled from the sources cited above. Because the strategies suggested in the consumer education textbooks and pamphlets are central to the present study, each of them is presented and discussed on the following pages. Research pertaining to food budget management is cited in the context of the strategy to which it applies.

The specific strategy recommendations of each cited source are listed in Appendix C. For purposes of simplifying the presentation, the 61 strategies which emerged as a compilation (and are presented in the latter part of Appendix C) have been classified into three groups, (a) planning, (b) in-store, and (c) life style/preference. To facilitate later reference, each strategy has been assigned a respective identifying number with the prefix P, IS, or L.

Planning Strategies

Approximately one-fourth of the recommendations from the compilation can be classified as planning

strategies. They are primarily concerned with home preparation for the shopping trip.

Plan menus a week at a time (P1). This time period is meant to coincide with the shopping frequency. With the weekly interval, the newspaper listing of specials can be used to best advantage. One of the considerations is the idea espoused by some writers (for example, Kimbrell & Kern, 1984; Linder & Selzer, 1977) that trips more frequent than weekly are inefficient from a time and fuel standpoint. By planning the menus carefully, creative use of leftovers can also be planned. Preparation time can be efficiently used by bulk-packing individual and casserole portions ahead and freezing them (Heisler & Hook, 1984).

Always make a shopping list (P2). This maxim was mentioned in 10 of the 13 sources reviewed. After listing all the needs for an entire week and checking them off against pantry inventory, food buyers maximize their potential for avoiding impulse buying by making detailed shopping lists. Also, the practice helps avoid mid-week or unplanned "pickup" trips (Oumlil, 1983). This exercise is especially useful for young food buyers who have yet to establish buying/preparation/storage patterns (Ward, Wackman, & Wartella, 1977). Goe (1979) is one of the authors who points out the value in retaining flexibility when using lists (to allow purchase of unexpected bargains found on shopping trips).

Organize your shopping list (P3). This works best when the store layout is familiar, but can be useful in unfamiliar stores as well. Arranging the needed items by product groupings can help in prioritizing restricted funds and it saves time in the supermarket aisles (Biesdorf et al., 1980).

Read ads for at least two competing food stores before you shop (P4). Promoted "loss leaders" often represent savings of 30% or more (unpublished survey of three Gainesville, Florida supermarkets, March, 1985). An awareness of those specials, as well as favored products available in one or the other of the stores being considered, can be useful in deciding which store to shop in if only one is to be used. Brown and Oxenfeldt (1972) examined different criteria in determining that people who "lock in" to a single store for all their grocery needs spend an average of 8% more for their food.

Plan menus around seasonable produce (P5). In addition to aesthetic and nutritional reasons, fresh produce is nearly always cheaper (in season) than produce that has been canned, dried, or frozen. Produce that has been in cold storage generally costs more than fresh-picked. The exception would be for hothouse crops or the very first pick of the season crops, which may have been transported great distances. Also, cold-storage produce is more likely to have been treated

with preservatives, fungicides, or coloring agents (Bassler & Newell, 1982).

Plan menus around meat and fish specials (P6). This recommendation arises from a recognition that the most expensive item in the meal is generally the meat (Margolius, 1972). Having a cookbook available as the newspaper ads are being checked can aid in providing inexpensive variations as well as occasional luxury cuts (Chamberlain et al., 1982). Variations between regular and special prices frequently are in the range of \$2 per pound (unpublished survey of three Gainesville, Florida supermarkets, June, 1984 and March and November, 1985).

Try new recipes and menus (P7). Hundreds of cookbooks are available, with many featuring exotic recipes that contain expensive ingredients. However, other cookbooks feature preparation variations for common foods. Homemakers are advised by Bowers, Zell, Horowitz, Figliulo, Shade, Ryan, and Shames (1984) to (a) make recipe selections in consideration of other strategies, such as seasonal availability of produce (P5) and featured specials (P6); and (b) avoid short-cycle repetitions. As new methods of packaging and preparing foods are developed, a continuing array of different menus becomes available (Peterkin & Hama, 1983).

Consider value of time and fuel (P8). Oumlil (1983) conducted a mail survey in Arkansas and found clear

evidence ($p < .02$) that the majority of his 465 respondents "are exhibiting adaptive shopping behavior of various types" (p. 63). He stated that making shopping a travel-related activity ($p < .005$) was the most widely practiced adaptive behavior in the period of stagnant or reducing real income for the 5-year period prior to his study. Oumlil found combination and reduction in number of shopping trips greatest among unskilled male heads of household, but also with the other groups he defined. Leet and Driggers (1983) recommend careful at-home planning to minimize shopping time and the number of shopping trips. There seems to be a tendency for shoppers to use the notion of time or fuel savings as a rationalization for shopping in nearby expensive stores or using overpriced convenience foods (Hornik, 1984). Hornik suggests that instead of separate trips to the store, shoppers arrange to combine errands with travel to or from the workplace.

Be open to new brands and products (P9). Bowers et al. (1984) recommend taking advantage of promotional efforts by manufacturers for their new products--introductory prices, bonus packaging, and coupons. Sometimes established brands other than the ones usually purchased are available at promotional prices. These promotional alternates offer an opportunity for retrial at minimal risk. Being open to new products appears to parallel the recommendations to explore new recipes (P7) and promotional packaging (IS14).

Join a food cooperative or buying club (P10).

Using this strategy allows purchase at or near wholesale prices. The potential savings are generally proportional to the quantity purchased or the amount of time spent working for the operation. Some cooperatives operate at the micro level (within a neighborhood or church group, for example) and operate child care or central purchasing facilities. Others operate health care centers or chains of retail stores, allowing members discounts or rebates. Traditionally, the affluent and well-educated have established and operated successful food cooperatives in places like Berkeley, Palo Alto, Cambridge, and Ann Arbor (Sommer, Becker, Hohn, & Warholic, 1983). These institutions have been in the forefront of such broad consumer movements as the press on manufacturers for improved packaging, standard package sizes, and full disclosure of product ingredients (Margolius, 1972). Groups seeking to operate cooperatives for student, low-income, or elderly groups have been recipients of grants for the purpose of establishing "co-ops," but these efforts frequently are short-lived (Sommer et al., 1983).

Avoid "convenience" stores (P11). Prices in neighborhood extended-hour stores are generally 10-20% higher, and there is a limited selection of brands and package sizes (Levy et al., 1976). In addition, convenience store shoppers increase their chances of

being bystanders during violent crimes due to the many armed robberies of convenience stores. [In 1985, 18% of all armed robberies in Florida took place in convenience stores. Whereas only slightly more than half of all robberies were committed with a weapon, those that took place in convenience stores involved a weapon in 84% of the incidents (Florida Department of Law Enforcement, 1986).]

Avoid buying non-foods in groceries (P12). This recommendation needs many qualifiers because such things as pet food, toilet paper, and cleaning products generally are cheaper in food stores than in general merchandise stores (unpublished survey of three Gainesville, Florida supermarkets and three discount general merchandise stores in June, 1984 and November, 1985). On the other hand, health and beauty aids, stationery, hardware, and housewares are usually priced at full markup in supermarkets. The relationship between food and non-food budget management is considered in the present study because it is not readily evident how the purchase of non-foods can impact on the food budget.

Clip and organize coupons (P13). Winter and DeGeorge (1980) found the majority of all segments of the population identified themselves as regular coupon clippers but the use of coupons is positively correlated with both age and income. Estimates of aggregate coupon

redemption indicate Americans "save" about 5% of total food expenditures through manufacturer's and retailer's coupons (Gallo, Hamm, & Zellner, 1982). Uhl (1982) argues the savings are illusionary to consumers as a class because "they discriminate against low income and minority consumers as well as shoppers with high time costs" (p. 162). Coupon advocates suggest planning to redeem them on items normally purchased instead of buying products primarily on the basis of the reduced price (Bowers et al., 1984). Henderson (1984) illustrated the advantage of using coupons in conjunction with promotionally priced products or those offering bonus content.

Save high value coupons for "double coupon redemption promotions" (P14). For example, consumers who stock ahead on laundry detergent (for which coupons valued at 50 cents to \$1 are common) by buying an assortment of brands in small-to-medium sized packages generally find it pays to seek out double redemption promotions--even if the store's prices are otherwise slightly higher (Bowers et al., 1984).

Save trading stamps, redeem them for food where appropriate (P15). Stamps generally represent a 1.5 to 2% rebate. Contrary to widespread perceptions, stores giving stamps pay for them from their advertising budgets rather than directly passing on the cost to the consumer (Antil, 1985; Carsky & McCabe, 1983). Many

stamp-giving stores now provide for stamp redemption on "stamp price specials" within the store. Florida's Publix Markets, for example, promote use of stamp price redemption cards wherein stamps awarded with \$30 of past purchases can be used for a 50 cent credit on specified promotional items. This type of redemption saves the consumer having to wait in line at stamp redemption stores for the traditional household or gift items (upon which a fixed sales tax is assessed). In-store redemption thus directly impacts the food budget.

In-Store Strategies

The next 30 strategies are primarily carried out in the store when shopping for food.

Shop in at least two competing stores (IS1). It is not necessary to go to two stores on each market day--the recommendation is to alternate among several stores and stay alert to the promotions in each, or use one main market where prices are low but buy fresh meats and produce in a second store (Hodgetts & Smart, 1982).

Buy only items on your shopping list (IS2). This would appear to correlate positively with several other strategies since (by definition) it reduces impulse buying and stimulates better list-making. Some possible outgrowths from dedicated list-making are reduced storage problems and weight control.

Shop alone (IS3). Shopping alone makes it less likely the food buyer will stray from the organized

list. At the same time, the shopper is more likely to get the shopping done in a minimum amount of time (Bowers et al., 1984).

Shop when store is not busy (IS4). The aisles are less congested and the checkout lines are probably shorter even though fewer checkers may be operating during the off-peak hours. The chances of finding a full selection of merchandise in a fresh display are greater in the early part of midweek days (Bowers et al., 1984).

Pay with cash (IS5). Charging or paying with check slows the checkout process (conversation with Kermit Couch, Pic 'n Save #28 manager, November, 1985). Check writing can detract from shopper vigilance during the checkout process (Plunkett, 1979). Cash management expenses (interest, fees) associated with credit logically result in fewer dollars being available for the food budget.

Compare unit prices (IS6). This is one of the most basic of recommendations and one of the maxims of price efficiency. There is a danger, though, in considering unit cost only. It is important to consider ingredients, amount of dilution, storing qualities, and aesthetics as well. In a study of time and money costs in the supermarket, Walker & Cude, (1983) questioned the savings of seven strategies in light of the time required for their implementation. The overall efficiency varied according to the store used and the

value placed on the shopping time, but the unit price strategy at a wage rate of \$8 per hour was determined to carry a break-even time of 1 hour, 14 minutes. In other words, the strategy was cost-effective for persons assigning \$8 value to an hour of their time only if observing the strategy of comparing unit prices added less than that amount of time to the shopping trip.

Figure unit cost after coupons (IS7). When coupons are good on any size package, refiguring unit cost after crediting the value of the coupon often shows the smaller size to have the lower unit cost (Bowers et al., 1984, Cude & Walker, 1984).

Use store brands and generics (IS8). This and a related recommendation to explore various grades of foods for different recipe purposes were mentioned in seven of the sources reviewed. However, Carsky and McCabe (1983) determined the use of coupons reduced the price of national brand items to below that of their private label counterparts. Their research method was to calculate the price differential and ask whether or not the published 1980 average coupon value exceeded that differential. In 10 out of 14 instances, it did. The researchers concluded coupons were not responsible for higher prices, as had been charged by Uhl (1982) and others. Walker and Cude (1983) considered hourly wage rates of \$3.35, \$8.00, and \$13.00 and determined the "buy generic" strategy was more cost-effective in

conjunction with the value of shopper's time than the strategies related to unit pricing, buying largest sizes, buying sale items, and buying largest sizes of favored brands.

Buy large sizes for economy (IS9). This was probably a good rule for many years, but it cannot substitute for figuring unit cost. Product marketers frequently consider large sizes as a form of convenience packaging (coffee, tuna fish) and actually charge more than they do for the more popular, albeit smaller sizes. In the Walker and Cude (1983) study described above, the break-even time of the \$8.00-per-hour-earner using this strategy was found to be 57 minutes.

Watch the checker tally your order (IS10). There are both careless and dishonest checkers, but the most frequent danger of complacency at the checkout probably originates in the shopper's price misperceptions from improperly read signs or inattention to price increases since the previous purchase (Plunkett, 1979). Problems also can arise from improperly programmed software in stores with electronic scanners (Heisler & Hook, 1984).

Figure cost per serving on meats (IS11). The unit price can be very deceptive due to fat and bones (Peterkin & Junker, 1982). This strategy is recognized in eight of the sources reviewed and is distinct from unit pricing because of the need to consider the difference between purchase weight and net serving weight (Porter, 1976).

Buy meats in primal cuts (IS12). If consumers have the freezer space, they can cut steaks, chops, and roasts and wrap them for many meals (Goe, 1979).

Stock ahead when prices are low (IS13). This assumes adequate storage space and applies to seasonable goods and promotional merchandise.

Be alert to promotional packaging--bonus content, cents off, and rebates (IS14). Most merchants do not change the unit price bin ticket, so it is necessary for the shopper to refigure the unit price for these promotional packagings to make accurate price comparisons. Sometimes the regular and promotional packs are in the same display. If the store uses Universal Product Code (UPC) scanners, the shelf pricing of the regular pack will not reflect the bonus cents-off and the shopper must select the package with the special marking in order to benefit from the promotion (Maedke, Lowe, Boardman, & Malouf, 1979).

Learn how to interpret dating (IS15). This may be more of a nutrition strategy than a budget management recommendation, but dairy and bakery products nearing the end of their intended shelf life (or "freshness marketing period") should be reduced in price. If the customer asks for a discount on older merchandise, it is frequently given (Cross, 1976).

Learn how to interpret USDA grades (IS16). Nearly all texts and extension service pamphlets annotated in

Appendices A and B mentioned interpreting grades. Even the presentation by Antell and Harris (1980), which makes but three food budget recommendations, includes this as one. The recommendation dates from the days stores sold different grades (according to government standards) of eggs, meat, canned vegetables, and dairy products. In today's food buying arena, homemakers would appear to be better served by knowing how to interpret nutrition labeling and cost per serving (IS17 and IS11). This is because most stores do not offer more than one grade of any particular product (conversation with Alachua County, Florida Extension Home Economist Virginia Sundeen, September, 1985).

Read nutritional labels for content (IS17). The ingredients are listed according to descending volume, serving size, nutrient analysis, and distributor's identification and can be useful to the consumer (Johnson & Russo, 1984). However, consumers are reminded by Bowers et al. (1984) to remember that the caloric and Recommended Daily Allowance (RDA) tabulations shown on the Food and Drug Administration-approved food product labels permit a 20% tolerance.

Avoid impulse buying (IS18). The value of this recommendation depends upon the shopper's resistance level for marketing techniques. Generally, unplanned purchases are unnecessary purchases and lead to

expenditures providing less value than sought-after merchandise (Biesdorf, et al., 1980).

Don't shop when hungry (IS19). Hungry shoppers are likely to be more susceptible to the lure of bakery and delicatessen aromas, appetizing packaging, and promotional displays of expensive ready-to-eat foods (Maedke et al., 1979). Porter (1976) reported savings as high as 17% among shoppers doing their marketing after meals.

Don't shop when tired (IS20). Because of the increased likelihood of letting one's guard down when tired, some of the other recommendations such as figuring unit price and reading nutritional labels may be forgotten (Bowers et al., 1984).

Don't shop when hurried (IS21). For the same reasons as the previous recommendation, food shoppers are cautioned to allow reasonable time for the task. Rushed shoppers may overvalue their time at the expense of health, safety, and economy (Bowers et al., 1984).

Don't buy more than you will use in a short time period (IS22). Employment of this strategy would appear to presuppose thievery or an early death, but it may result from inadequate refrigeration or storage facilities. The suggestion seems to be diametrically opposed to the idea of planning creative use of leftovers (L5), stocking ahead on specials (IS13), and buying the most economical packaging (IS6, IS9). This

practice is often followed by people who live alone (Zeithaml & Fuerst, 1983).

Buy small quantities of perishables (IS23). While this is similar to the previous recommendation, it implies an emphasis on the expense of waste. Many dairy and produce items lose nutrients as they age (Bassler & Newell, 1982). Bacteria multiply, causing changes in aroma, taste, texture, or safety (Sommer, Stumpf, & Bennett, 1982).

Check day-old bakeries, close-out counters, roadside produce stands, etc. (IS24). Volume purchases can make special trips worthwhile. However, consumers are cautioned to be wary of concluding that roadside stands have fresher produce or lower prices; make comparisons frequently (Sommer, Wing, & Aitkens, 1980). Some stores discontinue and reduce merchandise only because they need the shelf space for another line of merchandise; markdowns do not necessarily reflect defects or outdatedness (Bowers et al., 1984).

If you use soft drinks, buy them in deposit bottles and then return those bottles for refunds promptly (IS25). Prompt return of bottles reduces clutter, major clean-out trips, the chance of breakage, and tied-up cash (Kimbrell & Kern, 1984). Selecting soda in cans or throwaway bottles can double the expenditure, making the convenience tradeoff an expensive one. Technological advances, though, make it necessary for the shopper to

check unit prices. For instance, the 2-liter plastic bottles are now being produced as promotional price-leaders. Some stores have discontinued deposit bottles altogether because of the handling costs and sanitary considerations (conversation with Gary Johnson, manager of Warehouse Groceries, Ocala, Florida, June, 1985).

If your store uses UPC scanners, use a marker to copy shelf price on to your selection (IS26). The earliest warehouse stores advertised "do your own price marking and we'll pass on the savings" (observed in Pic 'n Pay, West Allis, Wisconsin, 1976). It was a gimmick because the checkers never read the customer's mark anyhow--the price was electronically scanned by a holographic device at the checkout. The reason for this suggestion (and a related one by Cronan & Atwood, 1976, to mark shelf price directly on the shopping list) may be to promote consumer awareness of shelf prices and encourage watching the checkout process rather than placing a blind trust on the accuracy of software supporting UPC bar code scanning.

Ask for rain-checks on specials (IS27). Even when not planning the purchase, shoppers noticing an outage on an advertised item and asking for rain-checks can thereby lock in the lower price for up to six weeks, depending upon the stores' rain-check policy (Linder & Selzer, 1977).

Ask for refunds on defective goods or return them for exchange (IS28). This has potential impact on the food budget because unreturned items would probably be otherwise discarded or left unused (McConnell, 1978).

Look for in-store specials (IS29). Some individual stores within chains have temporary overstocks they cannot advertise other than with an in-store promotion. This is because formal advertising requires advanced planning, usually through a large central office (Engel & Blackwell, 1982).

Dented cans and split packages can be bargains, but do not buy them if there is evidence of tampering or leakage (IS30). When using this strategy, food buyers are cautioned to consider if the food inside could be damaged before selecting any damaged package. A dent in a coffee tin probably cannot harm the merchandise, but seepage of acidic fruit juices or canned vegetables could represent a serious health hazard (Peterkin & Hama, 1983).

Life Style/Preference Strategies

The types of foods purchased often reflect traditional preferences or the life styles of household members. These preferences are accompanied by varying attitudes and behaviors relating to food budget management. The following list contains the strategies determined to fall into this category.

Use hot cereals; they're cheaper (L1). Boxed, ready-to-eat breakfast cereals comprise one of the highest markup lines in the supermarket, partially because competing manufacturers traditionally operate on a strategy of competition for display space, not price (Bowers et al., 1984). Generally, the less processing done by the manufacturer, the lower the price. Therefore, sweeteners, vitamin fortification, and dried fruit (if desired) should be added at home. Uncooked cereals are more compact, making them easier to ship and display, and less costly per serving (Porter, 1976).

Buy juice concentrates; add your own water (L2). The trucking expense is only part of the reason for the higher costs of full-strength drinks. Store handling, display space, and shrinkage from leaks are all decreased with concentrates, which are probably the best bargain in the frozen food section. A similar statement can be made for powdered milk as opposed to fresh whole milk or dry or condensed soup as opposed to full-strength soup (Kimbrell & Kern, 1984).

Buy meat substitutes or cheaper cuts (L3). Harrison (1977) recommends that "homemakers experiment with vegetable protein entrees." Meats with "bone in" may be considerably less expensive per edible portion than boneless cuts, even after considering the waste. This is because a labor step has been skipped--the deboning operation (Bowers et al., 1984). Tougher

(cheaper) cuts can be tenderized with pounding or marinating, or by moist cooking methods (Chamberlain, Budinger, & Jones, 1982).

Buy whole chickens; cut them for frying or baking yourself (L4). Some markets feature "mixed fryer parts," presented in a package containing extra backs and giblets--an effort to maintain promotional pricing. The whole bird sells for slightly less per pound but the value is greater than the price spread due to the standard ratio of breasts, thighs, and drumsticks--usually favored by chicken eaters. This principle extends to the practice of promoting breast or leg quarters for lower net prices than trays filled with solid packs of smaller parts (Heisler & Hook, 1984).

Plan ahead to use leftovers creatively. Avoid waste (L5). If people in households that waste 20% of their food could cut the waste in half, the savings would equal two free meals a week (Porter, 1976).

Store perishable foods promptly and appropriately (L6). Nutrient loss and bacterial proliferation are fostered by improper storage methods (Kimbrell & Kern, 1984).

Review cash register tape when unpacking (L7). This supplements watching the checker. Did the bagger load everything? Were the prices in line with expectations? Perhaps an item dropped behind the

automobile seat as the purchaser's car rounded the corner on the way home (Porter, 1976).

Keep price records (L8). The "Be a Better Shopper" program (Biesdorf et al., 1980) is centered on record keeping as a way to gain insight into where food dollars are spent. The practice would appear to be a simple way for young food buyers to acquaint themselves with the effectiveness of their budget management strategies. Keeping records may help them avoid frivolous purchases on subsequent buying trips.

Avoid foods high in sugars, fats, or salt (L9). This may seem to be a nutritional recommendation rather than a budget management strategy, but grocery costs are accelerated by the purchase of "empty calorie" items such as many of the highly advertised foods (Campbell, 1984).

Analyze recipe costs (L10). This strategy parallels the keeping of price records (L8). However, many recipes require non-standard packagings, especially of seldom-purchased condiments (Kowtaluk, 1980). Analysis of both recipe costs and weekly grocery expenditures can provide insights into what to buy and how to serve it (Kimbrell & Kern, 1984).

Be your own butcher; cut steaks and stew meat from large roasts (L11). This recommendation is similar to those concerning whole chickens (L4) and primal cuts (IS12); the roast can be considered a sub-primal cut,

and unsectioned poultry makes a familiar roast. Ways to save through dividing and storing these larger cuts of meat have been popularized by Merle Ellis, a California butcher who writes a syndicated column appearing in the food section in hundreds of newspapers.

Can or freeze fresh fruits and vegetables (L12).

This is a strategy rarely used by urbanites, yet freezing can be extremely simple--blueberries and mushrooms, for example, do not even need washing (Sommer, Wing, & Aitkens, 1980). Storage space, the value of time, and expense of supplies are important considerations, and need to be factored in when analyzing the costs of preserving fresh produce (Campbell, 1984).

Eat out less frequently (L13). Even at the "family restaurants," consumers pay about triple the price of home preparation costs (Porter, 1976). Meals at work or on automobile trips offer the opportunity for "creative brown bagging." Preparing these meals at home not only saves money, it allows custom portion and ingredient control (Chamberlain, Budinger, & Jones, 1982). The household budget should be considered globally as well as the component management accounts of food and entertainment. Either way, eating in restaurants less often warrants consideration as a budgeting recommendation.

Stay slim (L14). Overweight people eat more food. On the other hand, misguided dieters need to be aware of the expensive "plans" sold to help them cut their food intake (Bowers, et al., 1984). Many dieters spend more for food too, as they seek out "light" products (Ellington, Addinall, Cooper, Hamilton, & Taggart, 1984).

Serve smaller portions (L15). This is a logical strategy to aid in the previous recommendation, staying slim. People observing this suggestion will be able to extend each food item purchased to a greater number of meals.

Serve water with meals (L16). Most Americans like a beverage with their meals and water is the best one, both nutritionally and economically (Kowtaluk, 1980). Milk or fruit juice can be served in addition to water, but sweetened beverages and those with caffeine should be avoided (Wilson & Clark, 1984). Requesting water instead of ordering a menu beverage with restaurant meals generally can result in saving 14-22% of the meal's cost (unpublished survey of four "fast food" and four full-service family-priced restaurants in Gainesville, Florida, April, 1985).

Food Shopper Surveying

The portion of the literature review that addresses the actual practices of food shoppers served to direct the development of a shopper interview instrument for this study. Rationale for the demographic and

preference variables was related to previous studies. The first concern was to obtain respondents who are regular food buyers, and try and determine if they also play a role in their respective household budget management. Axiom (1977) reported 34.9% of adult respondents are individually responsible for food shopping, and another 23.1% share the responsibility with another person in their household. As to who makes the item and brand selection, the respective responses shifted to 36.7% and 21.4%. The implication of this is that, with only 58% of adults buying food regularly, this study would benefit from a procedure that unobtrusively screens out the 42% who do not.

Another marketing research firm, Burgoyne, Inc., conducts telephone interviews for The National Study of Supermarket Shoppers. Demographic characteristics for 1980 (gender, age, race, income, family size, and educational level) are presented for the "South Atlantic Region" from various Burgoyne tables and are condensed here in Tables 2 and 3. Much of this same data was compiled from the shopper interviews in this study, and a comparison of 1986 Gainesville data with the Burgoyne figures may be of use in assessing the representativeness of the sample in the current study. The columns do not total 100% because of refused or "don't know" responses.

Table 2
Dollars Spent in Supermarkets

Weekly Amount	All super-markets	Primary store	Family Size		Age	
			1-3	4 up	14-54	55 up
through \$30	25.5	34.9	35.6	5.7	19.9	40.6
\$31 - \$50	34.0	35.4	37.9	26.5	33.0	36.8
\$51 - \$70	19.4	14.9	15.2	27.3	22.3	11.6
\$71 or more	19.2	11.8	9.0	39.1	23.6	7.3

(Percent of 2430 respondents)
 Source: Burgoyne, Inc., 1980

Table 3
Frequency and Methods of Comparison Employed by Shoppers
Comparing Prices Between Supermarkets

Method	Never	Less than once a week	Weekly or more often
Total	20.0	47.0	33.0

Of the 80% comparing prices, respondents use these methods:

checking newspaper ads	78.4
checking handbills, circulars	57.8
making store visits, checking shelf prices	66.1
conversing with other consumers about prices	43.6

(Percent of 2430 respondents)
 Source: Burgoyne, Inc., 1980

Weekly Food Dollars Spent

Another concern in this study was that of household food budget level. Effective food budget management strategies may differ by food budget level, so some means was needed for grouping the study's respondents by food budget level. The Agricultural Research Service of the United States Department of Agriculture (USDA) uses

such a categorization in preparing and reporting quarterly in Family Economics Review the average cost of food consumed at home. The USDA presents the figures for a marketbasket from specific cities as well as for four general regions of the United States at three budget levels--low, moderate, and liberal. (A fourth level, "thrifty," was added in 1984 in conjunction with food stamp allotments. Thrifty food budget plans allow for expenditures about 80% of those allowed for low-cost plans.)

For the appropriate household size and food budget management level, the USDA averages served as the predicted expenditures for the shoppers in the study. Average expenditure data were used in referencing reported household expenditures, providing a measure of efficiency of food budget management.

Table 4 shows the October, 1983, average food expenditures at those three budget levels for people in the "Southern Region" in families of four persons. (More recently, the USDA has presented the data in a more complicated format by increasing the number of age categories. The older figures were retained for this study to simplify the calculations that underlie IPE.) Table 5 suggests adjustments for households of other than four members. Economies of larger purchase quantities and attendant higher costs of buying small amounts justify these adjustments by the USDA (Ritzman, 1983).

Table 4
Weekly Average Food Expenditure,
United States Southern Region

Age	Budget Level		
	Low	Moderate	Liberal
7mo through 11	\$ 13.64	\$ 16.93	\$ 20.23
12 through 54			
males	21.70	27.20	32.60
females	17.60	21.80	25.90
55 and over			
males	19.00	23.50	28.10
females	15.70	19.30	22.90

Note: Adjust for household size as
per factor from Table 5.
(Compiled by the Bureau of Labor
Statistics, presented in Ritzman,
1983)

Table 5
USDA Suggested Adjustment for Family Size

Household size	Adjustment percentage
1	+ 20
2	+ 10
3	+ 5
5 or 6	- 5
7 up	- 10

(quoted in footnote by Ritzman, 1983)

Morgan, Johnson, and Burt (1983) examined the stability of the adjustment factors for different sized households over time. Using data from a 1977-78 nationwide survey of food consumption in low income households, they calculated adjustments by four different methods. One was the reported dollar expenditure

adjusted for meals not eaten at home. Two others considered nutrient requirements and retail costs of achieving them, and one was a combined measure. Their conclusion was a reluctance to recommend changes in the adjustments shown in Table 5 even though some of the economies for large families were reported as much as 66.1% lower than the recommended adjustment. The premium paid by households smaller than four was not as dramatically different from the recommended adjustments.

The "Southern Region" considered in the USDA compilation extends from Alexandria, Virginia to New Orleans, Louisiana, with the only Florida cities in the survey being Miami and Orlando. An Associated Press release of February, 1986 showed a 35-item market basket comparison ranged 13.1% around a 17-city average in Florida (Hamilton, 1986).

During the period from October of 1983 to the fall of 1985, the Consumer Price Index (published by the Bureau of Labor Statistics and reported in the quarterly Family Economics Review) increased only 5.7% for food (calculated from data presented by Ingwersen & Hama, 1985). Americans spent 17% of their income on food in 1985. A decrease of 5% in 20 years and 2% in the most recent 10 reflects an improvement in living standards, according to Kimbrell and Kern (1984). The 36th Annual Consumer Expenditure Study (1983) conducted by Supermarket Business found that 32% of the total food

budget is spent for food consumed away from home. The same study noted a shift in household size among supermarket customers. Singles and two-person households accounted for more than 40% (7% increase from 1970) and large families account for 20% (down 10%) of supermarket purchases in mid-1983.

Summary

Two main arenas of inquiry were explored in this chapter. First was a review of the high school consumer education course offerings that relate to food buying-for-price within individual household food budgets. A list of 61 strategies, compiled from selected contemporary sources (primarily Florida-approved high school textbooks) was presented in sub-sections covering planning, in-store, and life style/preference strategies. Identifying numbers (with prefixes "P," "IS," and "L" respectively) were designated for each strategy for use in subsequent portions of the study.

The experiential domain of food budget management was reviewed in conjunction with a review of the literature concerning the various budget management strategies. Included was an overview of attempts to gather information about the experiences of food shoppers and their households. Sections covering the literature on importance of food budget management and household expenditures for food were included.

CHAPTER III
METHODS AND PROCEDURES

Research Design

This study was designed to develop an empirical basis for determining which budget management/price efficiency strategies are appropriate to include in curriculum materials related to food. It is essentially a correlation analysis of the relationship between food shopping efficiency (or inefficiency) of individual shoppers and certain of their characteristics, self-reported grocery shopping practices, and expenditure patterns. The shopping practices of interest in this study were those that relate to use or non-use of the "wise shopping 'dos' and 'don'ts'" recommended in consumer education. Inferences about the differences among shoppers and the influence of those differences relative to high school curricula for food buying are presented in the Chapter V, after the data are presented in Chapter IV.

The two arenas of inquiry are the curriculum and shopper behavior. The curriculum content in the form of a list of "dos and don'ts" from contemporary textbooks--as condensed and described in the previous chapter--obtains its validation from a panel of local

consumer educators. The second arena of inquiry, shopper behavior, was established through analysis of data collected in shopper interviews. Strategy use interview questions were directly related to the specific strategies reviewed by the panel. Shoppers' use or non-use of each strategy was crosstabulated with a measure of price efficiency, also calculated from shopper interview responses. In doing this, certain additional variables reflective of expenditure and household makeup demographic traits were correlated with the measure of price efficiency. This is consistent with the purpose of the study--to develop an empirical basis for determining which budget management strategies are appropriate to include in curriculum materials related to food--because strategy use will vary among demographic subgroups. Although specific testing of these interactions requires sufficient sample size for developing 3-way contingency tables and is beyond the scope of this study, the information gathered here may suggest the course of future interaction investigation. Finally, statistical testing of a series of null hypotheses provides an empirical basis for assessing which recommended strategies are indeed price efficient; which seem not to be; and which, if any, are related to inefficient budget management.

A follow-up home visit with selected respondents was made for the purpose of corroborating the accuracy

of responses estimated in the telephone interview. Since the data generated from home visits was from a small number of respondents, the findings of this portion of the study were analyzed in a qualitative manner and reported in Chapter IV in narrative form. This chapter is a presentation of the panel review process, the methodology and instrumentation of the data gathering phases, and the statistical analysis techniques.

Panel Review

In preparatory work for this study, the 61 strategies described previously were submitted to a local panel of 15 consumer educators (3 extension home economists, 5 high school home economics teachers, a middle school home economics teacher, a consumer mathematics teacher, a business education teacher, and 4 Life Management Skills teachers). A 7-point evaluation scale was provided, along with instructions to "assess each strategy for possible inclusion in a teaching module on food buying from a resource management perspective" (see Appendix D).

The ratings of the panel were compiled to show the most favored strategies as well as some that should be dropped from further consideration. The ranking was calculated for the 15 panelists and also for three subgroups: (a) the 3 extension home economists, (b) the 5 high school home economics teachers, and (c) the 7

others. The criterion for retention set by the researcher was an average rating by the home economists (subgroups a and b) of at least 5.0. The differentiation of subgroups resulted from an interpretation of Ned Flander's (1971) observation that academic preparation and operating environment influence teacher's classroom content. Teachers in group "c," trained primarily in physical education or business or mathematics, thus bring to the panel valid though probably less-informed opinions about content for instructional units on food budget management.

Eleven strategies received an overall rating below 5.0 from the entire panel but only eight fared that poorly with the home economists and high school home economics teachers. The 53 strategies kept on the list were incorporated into the telephone interview questionnaire. The highest and lowest-rated strategies, and the panel's average rating of each, are listed in Table 6. Ratings for all strategies are listed later (in Tables 7, 8, and 9), along with the methods of determining individual shoppers' use of the strategies investigated.

Some panelists used the spaces provided at the end of the Appendix D instrument to recommend additional strategies. This process yielded eight recommendations, none of which was added to the master list because the

suggested additions paralleled closely those on the original list.

Table 6
Highest- and Lowest-Rated Strategies According to a Panel
of Consumer Educators (Scale 1-7)

<u>Strategy</u>	<u>Mean Rating</u>
P2 Always make a shopping list	6.87
IS18 Avoid impulse buying	6.73
L6 Store perishables appropriately	6.60
P1 Plan menus a week at a time	6.53
IS15 Learn to interpret dating	6.53
IS28 Return defective merchandise for refund	6.53
L5 Use leftovers creatively; avoid waste	6.47
: : : : :	
: : : : :	
L16 Drink water with meals	4.93
P3 Use meat substitutes; cheaper cuts	4.93
L15 Serve smaller portions	4.87 D
IS25 Buy soft drinks in deposit bottles	4.83
IS12 Buy meats in primal cuts	4.79 D
IS9 Buy large size for economy	4.73 D
P10 Join food cooperative or buying club	4.53 D
IS5 Pay with cash	4.53 D
IS26 Copy shelf price with marker at UPC stores	4.53 D
L8 Keep price records	4.53 D
L1 Use hot cereals, they're cheaper	4.47 D

D - Dropped from the subsequent investigation.

The Phase 1 Survey

Food shoppers were contacted in three phases, the first of which made use of postcards mailed to 3000 people. The purpose of this phase was to obtain telephone numbers of food buyers willing to participate in the second phase (telephone) interviews.

The study sample was the total number of Alachua County, Florida householders subscribing to Cox Cable/University City Television, Inc. services ($N = 36,776$, according to a personal conversation with Paul

Bowers of Cox, May 1986). Three thousand mailing labels for Cox Cable subscribers having had the cable service 6 months or longer were randomly generated by computer. These labels were purchased and affixed to foldover post-cards containing an explanatory request and a brief questionnaire. The six solicited responses included two media exposure items, three "check all that apply" boxes on consumer choice, and the request for a telephone number. Four of the solicited responses served as foils. The two qualifying criteria were that respondents indicate (a) they make or share in making the major food purchase decisions in their households, and (b) a willingness to participate in the phase 2 study by supplying a telephone number.

Standard demographic questions were omitted from this questionnaire in an effort to make it as non-threatening as possible. Anonymity of subjects was assured since the researcher did not have direct access to the mailing list of Cox Cable Service. Completion and return of the survey form was at the respondent's option, as was provision of the telephone number.

The intent during phase 1 was to retain researcher anonymity. Referral was made only to "a University of Florida researcher" without indicating academic department or credentials. The specific research purpose was not revealed in the hope that respondents would be more likely to reply if they felt their

participation would have an impact on cable programming. That is an area of concern unrelated to food shopping behavior, and was thus likely to produce a less-biased cross section of interviewees.

Cards were mailed under the Cox Cable bulk mailing permit and returned "postage paid by addressee" to the Cox office in Gainesville. This expense was borne by the interviewer.

With little precedent for the prediction, a 10% return within 10 business days was "about the highest you can expect" (conversation with Dr. K. Kent, University of Florida College of Journalism and Mass Communication, October, 1984). Under this optimal scenario, and if half of the replies met the criteria for phase 2, approximately 150 phase 2 telephone interview candidates would have been obtained.

The Phase 2 Instrumentation

Separate instruments were used for the two data gathering activities in the phase 2 telephone interviews: "demographic" and "strategy use." The "demographic" questionnaire was for gathering data which could be used in setting up IPE as an indicator of relative household food buying efficiency. The much longer, and therefore time intensive, questionnaire concerning strategy use was completed for about one out of three "demographic" responses. Representation of high and low IPE performance was sought in selecting the

respondents who provided information on strategy use. The "strategy use" phase participants are described in greater detail with the presentation of data in Chapter IV.

Collecting Demographic Data

The first interview instrument (Appendix E) included questions for obtaining data on household demographics and food expenditures. Respondents were asked to classify their respective household food budget level as low, moderate, or liberal. (In case the respondent had difficulty making a distinction among the three levels, the researcher was prepared to read definitions or otherwise give help by way of inquiring about the food served at a recent meal, and whether such a meal was typical).

A series of questionnaire items was directed toward gathering the remaining information needed for the IPE calculation. Variables were established for reporting (a) respondent's age and sex, (b) the age and sex of others in the household, (c) total household size, (d) frequency of major food shopping trips, (e) amount spent during the major food buying trip, (f) amount spent for "pick-ups" between major food buying trips, (g) the value of coupons redeemed, (h) amount spent in "convenience" stores, (i) value of purchases of non-foods in food stores, and (j) number and cost of meals eaten away from home each week. Other demographic

data collected related to household income and respondent's occupation, education, and number of years experience as food buyer. A set of opening questions dealing with media use was also included in the interview. Those items served to tie the phase 1 responses, which had been mailed back to Cox Cable Company, to the food budget management and demographic content needed for this study.

How the Strategy Usage was Determined

The 53 strategies retained after the expert panel review process was completed were used as the basis for writing questions for the second telephone interview instrument. For convenience, the questions were categorized under the general headings of planning (P), in-store (IS), and preference/life style (L). Some strategy questions reflected major orientations of individuals to their environment while others were simple tips applicable to buying specific foods. The interview sought responses for usual practices rather than knowledge of consumerism.

These questions produced three types of data, (a) dichotomous, (b) categorical, and (c) continuous. A, B, and C designations in the tables refer respectively to these three data types. The dichotomous variables were simple "yes" or "no" responses to inquiries about use of a specific strategy.

Categorical data are encodings from open-ended verbal responses, recoded after analysis of frequency counts into a dichotomous variable using the "PROC RECODE" in SAS (Ray, 1982). Most of the continuous data are 0-9 encodings representative of rounded percentage estimates or 1-9 Likert preference responses, a practice supported by Tull and Hawkins (1976) in marketing research.

Tables 7, 8, and 9 are arranged to present the identifying number of each strategy, a shortened strategy name, the panel's ranking of importance (obtained from ordering the averaged assigned ratings for the original 61 strategies which were presented in Appendix C), and keyed notation for the category of the decision basis upon which the researcher recoded the interviewee's response for determination of strategy use or non-use.

The recordings of these continuous variables to the yes/no dichotomy did not necessarily involve a split at the midpoint (5). Upon analysis of the response frequency distribution, the researcher elected to dichotomize at some other point in the 1-9 range (Babbie, 1983) and report that cutoff point, and the rationale for selecting it, in Chapter IV.

Telephone Survey Methodology

Telephone survey techniques developed by market research groups generally involve paid interviewers and random digit dialing (or one of the variations discussed

Table 7
Planning Strategies

<u>Number,</u> <u>Panel</u> <u>Rank</u>	<u>Shortened</u> <u>Name</u>	<u>Instrumentation/Encoding Key</u>
(P1) 6.5	Plan menus a week at a time	From the questionnaire item, "When did or will you decide what you will serve at the main meal the next time your family/household will eat together?" a dichotomous variable was later formed using the SAS RECODE procedure (Note B).
(P2) 1.5	Always make a shopping list	"Do you know before you enter the supermarket the specific items you will be buying?" (A)
(P3) 15	Organize your shopping list	"Do you arrange your shopping lists according to where the merchandise is displayed within the store?" (A)
(P4) 19.5	Read ads for more than one food store	"Do you regularly read food store advertisements for more than one store?" (A)
(P5) 22.5	Plan menus around seasonable produce	"How closely do you adhere to planning meals around seasonable produce?" (C)
(P6) 38	Plan menus around meat and fish specials	"How closely do you adhere to planning meals around meat and fish specials?" (C)
(P7) 48	Try new recipes and menus	Code 0 ("No") if respondent did not try a new recipe for a meat or vegetable dish within the past two weeks. (A)
(P8) 22.5	Consider time and fuel value when food shopping.	"How closely do you adhere to considering the time and fuel costs when purchasing food?" (C)

Table 7 (continued)

<u>Number, Panel Rank</u>	<u>Shortened Name</u>	<u>Instrumentation/Encoding Key</u>
(P9) 37	Be open to new brands and products	Consider "yes" if last purchase of a new food product or brand was tried less than two weeks prior. (A)
(P10) 58.5	Join cooperative or buying club	(Dropped)
(P11) 32.5	Avoid "convenience" stores	Code "yes" if less than a minimal amount was spent in convenience stores during the past 2 weeks.
(P12) 46.5	Avoid buying non-foods in food stores.	Code "yes" if the ratio of non-foods to total food store purchases is less than --%.
(P13) 46.5	Clip and organize cents-off coupons	Considered "yes" if coupon redemption ratio exceeds --% during the reported shopping period.
(P14) 34	Save high value coupons for promotions	Code "yes" if respondent rated the variable for seeking double coupon promotions highly, and coupon redemption exceeds --% of total food store purchases.
(P15) 39.5	Save trading stamps, redeem for food where appropriate	This is split into two questions. Note A applies to both. The questions are (P15A) "Do you save S&H or other trading stamps?" and (P15B) "Do you redeem your stamps for Cash Saver Discounts?"

-
- A Dichotomous variable, "yes" = 1, "no" = 0.
 B Specific categorical responses; recode 0/1.
 C Respondents asked to rate "from 1 to 10," researcher later recoded 0/1 based on frequency distribution of those ratings.

Table 8
In-Store Strategies

<u>Number, Panel Rank</u>	<u>Shortened Name</u>	<u>Instrumentation/Encoding Key</u>
(IS1) 45	Shop in at least two competing food stores	"What percentage of your food dollars do you normally spend in your major food store?" (Subtract 10 and divide by 10 to record as 1 digit (C)
(IS2) 15	Buy only those items on your shopping list	"How closely do you adhere to buying only those items on your shopping list?" (C)
(IS3) 49	Shop alone	"In the past six months, have you usually done your food shopping by yourself?" (A)
(IS4) 35.5	Shop when store is not busy	"Has either of your two most recent food shopping trips been accomplished at a time when the store was busy?" (A)
(IS5) 58.5	Pay with cash	(Dropped)
(IS6) 1.5	Compare unit prices	"How closely do you adhere to comparing unit prices?" (C)
(IS7) 22.5	Figure unit costs after coupons	"Do you usually refigure unit price based on coupons you redeem?" (A)
(IS8) 19.5	Use store brands and generic labels	"Do you usually seek out generic labeled brands when you shop?" (A)
(IS9) 56	Buy largest sizes	(Dropped)
(IS10) 12	Watch the checker tally your order	"Do you usually watch the checker tally your order?" A "yes" will be recorded if the respondent indicates the register window, the checker, or the flow of merchandise to the bagging area is watched. (A)
(IS11) 32.5	Figure cost per serving of meats	"Do you figure the cost per serving in addition to the unit price?" (A)

Table 8 (continued)

<u>Number,</u> <u>Panel</u> <u>Rank</u>	<u>Shortened</u> <u>Name</u>	<u>Instrumentation/Encoding Key</u>
(IS12) 55	Buy meats in primal cuts	(Dropped)
(IS13) 18	Stock ahead when prices are low	"How closely do you adhere to stocking ahead when prices are low?" (C)
(IS14) 12	Be alert to promotional packaging	Transformation of the cost per serving and package selection categorical responses (Notes B and C)
(IS15) 6.5	Learn how to interpret open dating	"How important is open dating (the date on the package) to your purchase selection?" (C)
(IS16) 26	Learn how to interpret USDA grading	"How important is USDA grading to your purchase selection?" (C)
(IS17) 6.5	Read nutri- tional labels	"On a scale of 1-10, how important is nutrition to your food purchase selection?" (C)
(IS18) 3	Avoid im- pulse buying	"How closely do you adhere to avoiding impulse buying?" (C)
Coding key for IS19, IS20, and IS21: "Did you accomplish your most recent food shopping trip while especially tired, hungry, or rushed?"		
		T H R T-H H-R T-R
	Tired (T)	1 4 5 4 7 5
	Hungry (H)	4 2 6 4 6 8
	Rushed (R)	5 6 3 9 6 5
(IS19) 12	Don't shop when you're hungry	"Yes" if response from the above grid is 2, 4, 6, or 8; "No" = 0
(IS20) 26	Don't shop when you're tired	"Yes" if response from the above grid is 1, 4, 5, or 7; "No" = 0
(IS21) 26	Don't shop when you're rushed	"Yes" if response from the above grid is 3, 5, 6, or 9; "No" = 0

Table 8 (continued)

<u>Number, Panel Rank</u>	<u>Shortened Name</u>	<u>Instrumentation/Encoding Key</u>
(IS22) 50	Buy for short time periods	"Does anyone in your household do anything to acknowledge the practice of buying only for short time periods for the purpose of managing the food budget?" (A)
(IS23) 28	Buy small quantities of perishables	"How closely do you adhere to buying perishables in small quantities?" (C)
(IS24) 35.5	Check day-old bakeries, etc.	"Has anyone in your household done anything to acknowledge the practice of buying day-old products from bakeries, close-out counters, produce stands in the past month?" (A)
(IS25) 54	Buy soft drinks in returnable bottles	"In the past month, has anybody in your household done anything to acknowledge that buying soft drinks in returnable deposit bottles can be an effective way to save money on food?" (A)
(IS26) 58.5	Use a marker to copy prices in UPC stores	(Dropped)
(IS27) 30	Get rain-checks for out-of-stock items	"In the past six months, have you asked for a rain check when an advertised item was not in stock?" (A)
(IS28) 6.5	Return defective merchandise	"In the past six months, have you returned any defective food items for refund or exchange?" (A)
(IS29) 9.5	Look for in-store specials	"Do you systematically look for in-store specials?" (A)

Table 8 (continued)

<u>Number,</u> <u>Panel</u> <u>Rank</u>	<u>Shortened</u> <u>Name</u>	<u>Instrumentation/Encoding Key</u>
(IS30) 15	Check for specials on dented cans, crushed boxes, etc.	"In the past six months, have you sought out damaged packs or discontinued merchandise that may have been featured at a reduced price? (A)

- A Dichotomous variable, "yes" = 1, "no" = 0.
 B Specific categorical responses; recode 0/1.
 C Respondents asked to rate "from 1 to 10,"
 researcher later recoded 0/1 based on
 frequency distribution of those ratings.

Table 9
Life Style Variables ("Adopt Economy Attitudes and Behaviors")

<u>Number,</u> <u>Panel</u> <u>Rank</u>	<u>Shortened</u> <u>Name</u>	<u>Instrumentation/Encoding Key</u>
(L1) 61	Use hot cereals	(Dropped)
(L2) 46.5	Buy juice concentrates, add your own water	"Which type of fruit juice do you most often serve?" (B)
(L3) 52.5	Buy meat substitutes and cheaper cuts	"In the past month has anybody in your household done anything to acknowledge that using meat substitutes or cheaper cuts can be an effective way to save money on food?" (A)
(L4) 22.5	Buy whole chickens	"Which type of chicken do you most often serve?" (B)
(L5) 9.5	Avoid waste, use leftovers creatively	"In the past month has anybody in your household done anything to acknowledge that avoiding waste by using leftovers creatively can be an effective way to save money on food?" (A)
(L6) 4	Avoid food spoilage	"In the past month, have you had to throw away any food because it spoiled before you could use it?" (A)
(L7) 30	Review register tapes	"For your most recent major food purchase, did you check off your register tape after you got home with your food order?" (A)
(L8) 58.5	Keep price records	(Dropped)
(L9) 17	Avoid fats, salt, sugar	"In the past month has anybody in your household done anything to acknowledge that avoiding foods high in sugars, fats, and salt can be an effective way to save money on food?" (A)

Table 9 (continued)

<u>Number, Panel Rank</u>	<u>Shortened Name</u>	<u>Instrumentation/Encoding Key</u>
(L10) 42	Analyze recipe costs	"How closely do you adhere to analyzing recipe costs?" (C)
(L11) 44	Be your own butcher	"Do you frequently buy primal cuts or large roasts and cut your own portions for more than one meal at a time?" (A)
(L12) 42	Put up seasonable produce	"In the past six months, have you frozen or canned any fresh fruit or vegetables?" (A)
(L13) 42	Eat out less fre- quently	"In the past month has anybody in your household done anything to acknowledge that eating out less frequently can be an effective way to save money on food?" (A)
(L14) 39.5	Stay slim	"In the past month has anybody in your household done anything to acknowledge that weight control can be an effective way to save money on food?" (A)
(L15) 51	Serve smaller portions	(Dropped)
(L16) 52.5	Drink water with meals	Do you usually serve water with meals?" (A)

- A Dichotomous variable, "yes" = 1, "no" = 0.
 B Specific categorical responses; recode 0/1.
 C Respondents asked to rate "from 1 to 10,"
 researcher later recoded 0/1 based on
 frequency distribution of those ratings.

by Dillman, 1978). Large blocks of demographic data are usually best placed near the end because questions about age and income especially tend to offend many respondents (Groves & Kahn, 1979). Interview length can be longer if subject matter is of interest. However, increased interview length increases likelihood of disruption and therefore the chance for incomplete survey data. Completion of a pilot survey similar to the "strategy use" portion of the telephone interview in this study in April and May, 1984, required 18 to 25 minutes. Such lengths would be unacceptable for non-prearranged personal or mail surveys, but are well within limits accepted by commercial marketing research groups. For example, Illinois Bell has had success with interviews extending to 35 minutes; 30-minute interviews are common at Data Group Incorporated; and Blankenship had success with a 45-minute telephone survey with women on home hair grooming (all cited by Blankenship, 1977).

Conducting the Telephone Interviews

The researcher personally conducted the telephone interviews, completing the "demographic" portion on the first call if possible. After greeting and identification, the interviewer attempted to determine who in the household completed the reply card for phase 1, and asked to speak to that person. Groves and Kahn (1979) pointed to research showing promising increases in response rate when the acquaintance procedure is

lengthened. The use of phase 1 as a pre-survey and the conversational manner of inquiry, rather than a rote track so familiar in telephone solicitation contacts, probably reduced aborted interviews.

At the opening of the interview, the respondent was given an opportunity to reschedule the interview if the first call time was inappropriate. Initial calls were made on weekdays between 10:30 and 11:45 AM, 1:30 and 5:00, or 6:30 and 8:45 PM. All calls were made as soon as possible after receipt of the card.

Data recorded on the response sheets was supplemented with notes as to opening and closing times of the interview. When, in the course of the interview, the response lay outside the pre-established objective choices, the exact response given was recorded and categorized later. Any relevant statements about food shopping that the respondent volunteered were also noted. If the respondent's name or the name of the favored supermarket surfaced during the conversation, the information was recorded in the margins of the response sheet along with appropriate comments made during the interview.

The "strategy use" portion of the interview necessitated contact with the same individual who had provided the demographic data. For this reason, notations from the first interview were read before the second call was made.

Data Analysis

Data analysis was performed at the Northeast Florida Regional Data Center (NERDC) with the statistical package SAS (Ray, 1982). The first analysis consisted of cross-tabulations tested with the chi-square procedure. The crosstabulations allowed testing of a series of null hypotheses. Those null hypotheses were that efficient and inefficient food shoppers do not differ significantly in their use of 53 specific budget management strategies.

Index of Pricewatching Efficiency

Response data for estimated food expenditures and nine demographic variables were used to calculate two estimates, predicted weekly food dollars spent and reported weekly food dollars spent. The estimates in turn were used in calculating an Index of Pricewatching Efficiency (IPE) for each respondent. IPE was calculated according to the formula

$$\text{IPE} = \frac{P - S}{P}$$

where

IPE = index of pricewatching efficiency, and

P = predicted amount spent weekly for household food according to USDA southeastern data, adjusted for meals not eaten at home, and

S = reported food dollar outlay for the household, adjusted to a weekly amount.

In this study, both P and S include consideration of the household budget level as well as the age and gender of

individual members of the household. These differences between households are controlled by using IPE for expenditure comparisons rather than pure dollar amounts.

Positive performance on IPE reflects the use of a set of food buying strategies which are price-effective for that particular food budget manager in the sense they reflect the expenditure of fewer dollars than would be predicted using USDA figures. (Conversely, a negative IPE is reflective of greater food expenditures than the USDA would predict.) Data for calculating each respondent's IPE were obtained as part of the telephone interview reproduced in Appendix E.

To facilitate the calculation of IPE by researchers wishing to replicate this study, a microcomputer program, written in Applesoft® BASIC, is included as Appendix G. It can be used to both calculate and receive interpretation of an individual's IPE.

Phi Analysis of Categorical Variables

The IPEs of the individual respondents were divided into deciles numbered 0 to 9. The upper four deciles (40% of respondents) comprised the "high-IPE" group, and the lower four deciles were designated "low-IPE." Deciles 4 and 5, containing the 20% of respondents who buy most closely according to USDA averages, were omitted from this portion of the analysis.

Those respondents who performed in the upper 40% and received the "high-IPE" designation and those in the

"low-IPE" group were crosstabulated on one dimension of a 2 x 2 grid with the "users" and "non-users" of each strategy and characteristic on the other. The results of some 70 to 80 crosstabulation procedures were compiled into several summary tables and are presented with the discussion of findings in the next chapter.

Crosstabulations of the two categories of IPE performance with variables representing interview response data allowed identification of food buying strategies which correlated with price efficiency. The selected level of significance was .95. The two IPE performance groups' interaction with the variables was subjected to phi analysis (Babbie, 1983) within the SAS program, a process that can be thought of as sequential testing of null hypotheses that the groups representing two levels of each variable do not interact with IPE.

The crosstabulations are presented in SAS with standard statistics such as chi-square and probabilities as well as phi correlations. For dichotomous variables, significant interaction is interpreted with alpha set at .05. A positive correlation was considered reflective of price-efficient shopping.

Phase 3: The Follow-Up Interview

A follow-up personal interview of selected telephone respondents was the qualitative assessment portion of the research design. The purpose, as stated earlier, was to provide a check on the accuracy of respondent's

self-assignment of food budget level and recall of recent food expenditures.

Methodology

The data gathered in the qualitative phase of this study were used for the purpose of corroborating the weekly estimate of food dollars spent, as calculated from the various phase 2 questionnaire responses. The frequency tabulations of phase 2 data were examined so that six or eight shoppers representative of different food budgets, income levels, age, and household size could be selected for this follow-up. Each was asked to save all food receipts (supermarkets, convenience stores, bakeries, and restaurants), and make itemized log entries, for a period of 2 weeks. A \$10 payment was offered for the opportunity to review those tapes or logs in a personal interview appointment at the end of the 2-week period. The tape data were scrutinized for such cost components as non-foods purchased and coupons redeemed.

Topics Covered

The phase 3 interview included questions about family members who were present and expenditures that may not have been recorded (such as snack foods and vending machine purchases). Weekly expenditures were assumed to equal half the 2-week tape total. A comparison of this average with the predicted and reported expenditures

calculated from phase 2 responses was for the purpose of corroborating the level of validity of self-reports of expenditures in general.

The interview format allowed consideration of factors not previously discussed. Some of these were (a) food cooperative membership, (b) the bartering of food for services, (c) home production of food, (d) food received as gifts, (e) the bounty of hunting or fishing, (f) consumption of limited-availability foods such as Yurika and Herbalife, (g) temporary extenuating circumstances such as household member away from home or extra guests, (h) an atypical number of restaurant meals during the study period, and (i) special diet needs of individuals in the household. Any of these factors would impact on the food dollars spent and partially explain differences between the log entries and the previously calculated weekly amounts.

Finally, the follow-up interview included an inquiry about the specific menu served at the previous evening's meal (or, alternatively, another recent meal at which all household members were present). The purpose of this was to seek out differing consumption patterns among the household members that would tend to decrease the economies of scale adjusted for by the USDA. Also, a cursory review of menu information served to corroborate the reported food budget level.

Each respondent's IPE was recalculated based upon the documented expenditures and reported as part of the narrative presented on each phase 3 respondent in the next chapter. It was assumed that wide unexplained disparity between recall for the phone interview and documentation for phase 3 could suggest procedural revisions.

Summary of Methodology

This study addresses the following question: Of the various food purchasing strategies recommended in consumer education textbooks, which ones are used significantly more by price-efficient shoppers than by those defined as non-price-efficient? The methodology described in this chapter was constructed on the eight research tasks outlined in the first chapter. The first three tasks had to do with compiling and validating the consumer education curriculum content related to food budget management. The remaining five tasks concerned data collecting from food shoppers, and the analysis of the combined data.

The research tasks and the procedures outlined in this chapter generated data used in developing an empirical basis for determining which contemporary consumer education food buying strategies are price-efficient and therefore appropriate to include in curriculum materials related to food. The empirical basis, in summary, consists of correlating a dichotomized

measure of shoppers' use of each "do" and "don't" food buying recommendation with their categorization according to "high efficiency" or "low efficiency" groups as determined by a measure of wise shopping called pricewatching efficiency.

CHAPTER IV
RESEARCH FINDINGS

The study involved (a) identification and extraction of food budget management strategies from textbooks and other contemporary sources, (b) evaluation of the combined list of strategies by a local panel of consumer educators, and (c) interviews with food shoppers to ascertain their use of the strategies as well as data on their food expenses. The product of the research is a pared list of food budget management strategies--the ones empirically correlated with efficient household food buying.

This chapter presents material from the interviews with shoppers, obtained in three data-gathering phases. The first and third phases can be considered set-up and follow-up of the shopper interviews (phase 2) which provided the input for computing the index of price-watching efficiency (IPE) and for determining shopper's use or non-use of specific food budget management strategies. The set-up of interviews was accomplished unobtrusively, through the mail-back cards of phase 1. Follow-up with eight of the phase 2 respondents involved in-home interviews during which the researcher reviewed receipts and expenditure logs. The documented

expenditures were later compared with reported expenditures that had been based on recall during the telephone interview.

In addition to presenting the data on effectiveness of the various strategies, this chapter contains a summary of the demographic information about the respondent food shoppers. Selected demographic variables were, like strategy usage, crosstabulated with high and low-IPE group membership for the purpose of determining phi correlation statistics.

Results of Phase 1

The researcher purchased 3000 random computer-generated address labels from Cox Cable/University City Television Cable Company in Gainesville, Florida. Each label represented a household that had subscribed to the cable service for six months or more. The labels were affixed to foldover postcards and mailed under the Cox Cable bulk postal permit. In the six weeks following the mailing, return postage was paid for 270 responses (a return rate of 9.0%).

The reply card questionnaire was designed for soliciting volunteers for the telephone interview portion of the study. The address side of the card was labeled, "Please read the other side of this card and return post-paid portion promptly. This is not an advertisement or sales gimmick." Below that appeared the legend, "Important Survey Reply Card Attached 'Television Use and

Shopping Practices'." The message on the obverse side read,

DEAR COX CABLE SUBSCRIBER,

A UNIVERSITY OF FLORIDA RESEARCHER IS STUDYING TELEVISION USE AND SHOPPING PRACTICES IN GAINESVILLE. SUBSCRIBERS TO COX CABLE SERVICES ARE INVITED TO PARTICIPATE BY COMPLETING THE QUESTIONNAIRE ON THE ATTACHED TEAR-OFF POST CARD.

PLEASE SEPARATE AND RETURN THE POSTPAID CARD AFTER YOU HAVE MARKED YOUR REPLIES. ALSO, WRITE IN YOUR TELEPHONE NUMBER IF YOU WOULD BE WILLING TO BE INTERVIEWED BY TELEPHONE DURING THE SECOND PHASE OF THIS STUDY. WE APPRECIATE YOUR PARTICIPATION.

MEDIA AND SHOPPING PROJECT
COX / UNIVERSITY CITY
TELEVISION CABLE COMPANY

Four response items comprised the reply portion of the card. The first two had to do with the use of cable facilities. The third inquired, "Who usually does the major portion of decision-making in your household about . . . (CHECK ALL THAT APPLY) . . . what TV programs are watched, . . . which food stores are selected, and . . . what food items are purchased? To the right were three columns labeled "You," "Your Spouse," and "Another Member of Household." The final item stated, "If you would be willing to participate in Phase Two of this study, please give your telephone number: _____."

No telephone number was indicated on 158 of the returned postcards. The 112 card respondents who gave a telephone number (all 112 indicated they participate in

selecting food stores or purchasing food items) were scheduled for contact in phase 2.

Results from Phase 2 Interviews

Returns from phase 1 provided 112 telephone numbers. In a 5-week period, 107 interviews were conducted. One respondent's data set was eliminated because the interviewee was unable or unwilling to give any dollar estimates for food expenditures. Three telephones had been disconnected before the person who had supplied the number on the postal card could be reached, and two other numbers yielded no response after multiple telephone contact attempts prior to the end of the interview period.

An overview of the types of households represented by the interviewees is presented on the following pages, consisting of selected narratives composed from the researcher's marginal notes recorded during the interviews. They are included for the purposes of highlighting the variety of households in the study, and relating some of the specific situations that make up the statistics of the study. Eight additional narratives, for households selected for interview follow-up, appear in the discussion of phase 3 near the end of this chapter.

References to the IPE are included in each narration. These include a parenthetical notation of approximate decile (0 through 9) to assist interpretation. The higher the decile number, the more price

efficient the shopper. Composite data and statistical testing results follow the selected respondent profiles.

Household 58 - This respondent, a 35-year old school administrator, provided data resulting in an IPE of $-.05$ (decile 4) at the moderate budget level. He was the only person interviewed who acknowledged current membership in a food buying cooperative (Orange Blossom Warehouse). He reported expenditures of about \$100 monthly for dietary supplements, vitamins, and "specialty personal items" which he bought directly from a Shaklee distributor. (The cost of Shaklee products was not added to any of the food dollar categories. Bulk grains purchased from the cooperative cost about \$25 quarterly, so \$2 per week was added to the variable for "dollars spent in food stores between major food buying trips.")

This man shops for his wife and 10-year-old son in Food 4 Less, Norman's Country, and several bakeries. Until about two years ago, "nearly everything" was purchased at Mother Earth (a "natural foods" store which features produce, grains, and cheeses).

Household 62 - Both the 34-year-old food buyer and her 41-year-old husband are law professors. The household income was reported to be \$100,000. They have no children, and often share in gourmet meal preparation and entertaining. Their IPE of -4.3 (decile 0) was the 5th lowest of 106 completed interviews. Even when

refigured at the liberal budget level, it was -3.3 (also decile 0).

They frequently do the marketing together, and neither reported being a careful shopper. The husband likes to clip coupons and seek out specials, but he is "reckless with quality and healthfulness." The wife "cares nothing of price, but I feel I do a good job of selecting fresh and nutritious food." Their budget level steps up from "moderate" for the food purchases for home consumption to "liberal" for the 15 meals each week that are eaten in restaurants.

Household 68 - This man lives with his two teen-aged sons. He is an agricultural engineer at the University of Florida. He carefully budgets supermarket expenditures at \$400 monthly, and shops every two weeks. He stated that he operates on a liberal budget for home meals. He "always carries his lunches to work in a bag, and so do the boys." The household IPE was calculated to be .28 (decile 7).

Household 83 - This 42-year-old respondent lives with a 22-year-old daughter and four of her five other children. A 24-year-old son is in the service. The two youngest (5 and 8) receive free breakfasts at school as part of a federal assistance program, and all four school children receive free lunches. The household income of about \$13,000 comes from the respondent's job as clerk at Shands Hospital and the oldest daughter's part-time store

clerking. Groceries cost about \$215 every two weeks, of which \$50 is paid by the daughter. Although family members eat a total of 41 meals away from home each week, the cash outlay averages only \$48. Fresh vegetables from the home gardens of friends are received during the harvest season, but the researcher was unable to ascertain the retail value of this free food, or the extent to which bartering may be involved (if at all).

The family lives in the northeast quadrant of Gainesville, where access to supermarkets is not as good as on the west side. The shopping is done in three different Winn-Dixie stores, with occasional trips to Norman's Country. That pattern has been followed for "at least six years."

This respondent's IPE at the moderate budget level computed to $-.19$ (decile 3), a figure which would have been lower had there not been such a low outlay for meals away from home. Nonetheless, she claimed to be sensitive to low price offerings, and stated she would like to learn ways to cut her grocery bill. She exchanges recipes with friends and co-workers and has focused on meals her children like that include low-priced ingredients. She classifies her food budget as moderate, both at home and in restaurants.

Household 88 - This person is the mother of a 7-week-old son and a 4-year-old daughter. Her husband, at 27, is four years older than she is. She is on

maternity leave from a secretarial job in an academic office in the agricultural college. Her consumer information sources were more varied than all but 2 of 106 respondents, and she stated she uses all those mentioned on the questionnaire. She does not subscribe to the local newspaper, but buys it on Thursday primarily for the coupons in the food section.

At the moderate budget level, this household's IPE was .27 (decile 7). The respondent's choices among unfamiliar grocery items were guided primarily by nutritional concerns. For example, she "won't buy anything if sugar is the first-listed ingredient."

This woman enjoys shopping as an activity when she can do it alone, but "with kids along, it's hell." She participates in promotions if they involve stamps, coupons, or lower prices in the form of 2-for-1 offers. On the other hand, she reacts negatively to games, sweepstakes, serial housewares offers, and especially to market-basket comparisons which show the featured store to have lower prices than selected competition. (The management of Food 4 Less, for example, selects a weekly marketbasket of items then shows register tapes for the same purchase at both its store and at a selected competitor. "Naturally this demonstrates a difference detrimental to the competitor that the competing store's management could probably demonstrate the opposite way were it empowered with selecting the list of items in the list of items in the marketbasket.")

Household 101 - This woman teaches Life Management Skills and other home economics related courses at the Agri-Business Center, a vocational high school. The course includes a unit on buying food.

She and her husband are "in the launching pad stage" with the last child recently having left home. The household food buying is thus taking "a vastly different form" from what she has known for 25 years. Their actual "pickup" expenditures are usually about \$5 weekly. However, an adjustment was made in recording the variable for "dollars spent for food between major shopping trips" to \$17, to cover freezer purchases (made several times a year) and home garden production. Frozen orange juice concentrate is purchased by the case, wholesale. Beef is purchased a quarter carcass at a time, pork by the entire hog. The IPE was .11 (decile 5).

Household 102 - This woman, 32, is a vocational rehabilitation counselor for the state. She is black. Married with children aged 6 and 13, she frequently prepares meals ahead (on the weekends) and freezes them. Nonetheless, she says is unable to keep from serving "lots of LeMenu meals" (LeMenu is a luxury line of frozen dinners) because "there seem to be lots of nights when my husband and I are too tired to fix anything for dinner more complicated than plopping a frozen dinner in the microwave." She redeems about \$8 in coupons each week, about half of them for frozen meals. Based on a moderate food budget, her IPE was .07 (decile 5).

Household 106 - This single female student works part-time as an associate engineer. Her IPE was calculated at -.05 (decile 4). She lives with three other students, but each buys groceries separately and they rarely share. She plans each shopping trip (every fourth day) according to advertised specials, since she "lives about the same distance from all of the stores." She doesn't usually take coupons with her except once a month or so when she goes to Albertson's for cleaning supplies (on which she can double the redemption of her largest-value coupons) and meats "because Albertson's has good prices on large packages of meat. The price of the meat is enough to qualify to double-redeem 6 or 9 coupons." (Albertson restricts the number of coupons eligible for doubling to 3 per \$10 purchase.) She repackages the meat into portions, most of which she immediately places in the freezer for future meals. When she eats out, it is usually "just a salad at Rax." She claims to use all the media sources listed on the survey.

Crosstabulation of the Data

Crosstabulations (also called "crossbreaks," "contingency tables," or simply "2 x 2 grids") are "numerical tabular presentations of data, usually in frequency or percentage form, in which variables are cross-partitioned in order to study the relationship between them" (Kerlinger, 1973, p. 159). In this study, one dimension of each table consists of membership in an

IPE performance group designated either "low-IPE" or "high-IPE."

Dichotomization of the Variables

As was noted in Tables 7, 8, and 9 in Chapter III, strategy use was coded in different ways depending upon the nature of the solicited response. Interview questions with "yes" or "no" answers (coded "A" in Chapter III tables) represented strategies P2, P3, P4, P7, P9, P15A, P15B, IS3, IS4, IS7, IS8, IS10, IS11, IS22, IS24, IS25, IS27, IS28, IS29, IS30, L3, L5, L6, L7, L9, L11, L12, L13, L14, and L16. Phi correlations were computed directly from the SAS encoding of the "yes" or "no" dichotomy.

Some of the interview items (keyed in the tables as "B") were posed as open-ended questions. For these items, four or five categorical options were created from the responses obtained. The frequency of each response was examined as the first step in data analysis. The recoding process for creating a dichotomous variable usually involved combinations of specific responses. The strategy usage items measured in this manner were P1, IS13, IS17, IS19, IS20, IS21, L2, and L4.

Strategies that were keyed "C" in Tables 7, 8, and 9 were recoded from responses offered on a 10-point scale representing percentage deciles or reactions to a preference variable on a Likert continuum. The point at which dichotomy was assigned was determined after an

examination of frequency counts, so that about half the responses would be represented by each of the two new options. The discussions that follow presentation of the findings in tabular form include an indication of the cutoff point selected for strategies P5, P6, P8, IS1, IS2, IS6, IS15, IS16, IS18, IS23, and L10.

Several of the variables used in calculating IPE formed the basis for dichotomous variables, recoded to indicate usage of related strategies. For instance, in determining whether or not a respondent bought nonfood items in food stores, the ratio of nonfood purchases to the total dollars spent on the major food buying trip plus dollars spent in food stores between major food buying trips was used. That ratio was then dichotomized using .20 as the lower limit distinguishing between users and non-users of the strategy (the data showed no respondents avoided buying nonfoods entirely). Strategy use variables for items P11, P12, P13, P14, and IS14 were determined in a similar manner.

Phase 2 Statistical Analysis

Respondents ($N = 106$) were interviewed regarding their expenditures, information sources, store preferences, and demographics. These data were used in calculating IPEs for each respondent. A sampling of these respondents ($N = 47$) was then re-contacted by telephone to obtain strategy use data. In an effort to assure a balanced representation in the report of strategy use,

data obtained from interviewees were divided and matched according to relative IPE scores.

Decile Representation of Respondents

Based on the original 106 food buyers, IPE deciles were designated so that 11 respondents fell in each of deciles 0, 3, 4, 5, 6, and 9; and 10 respondents fell into each of deciles 1, 2, 7, and 8. During the re-contact period, the researcher attempted to reach a representative number of respondents in each decile. The decile range showing the number of respondents interviewed initially and those re-contacted is shown in Table 10.

Table 10
Decile Representation of Respondents

Decile	<u>Low</u>			<u>Mid-Range</u>					<u>High</u>	
	0	1	2	3	4	5	6	7	8	9
"Demographics"	11	10	10	11	11	11	11	10	10	11
"Strategy Use"	4	6	3	5	5	4	6	3	6	5

After the 9 mid-range respondents (deciles 4 and 5) were deleted, 18 respondents remained in the low-IPE group and 20 in the high-IPE group.

Correlations

The two levels of IPE performance and the dichotomy representing strategy use or non-use as the two dimensions of the crosstabulation are summarized in

Table 11. The phi statistic shown represents the correlation between observance of the food budget management recommendation and membership in the high-IPE group. Nine of the 53 strategies were supported with significant phi correlations.

Strategy Recommendations Examined

A simplified analysis of the findings about strategy use was presented in Table 11. For most of the 0/1 ("no"/"yes") items, no further discussion is necessary; the complete findings are presented in Table 11. The comments that follow contain specific reference to the items where the researcher used alternative methods for determining dichotomization when data consisted of responses other than "no"/"yes."

P1. Questionnaire item: "When did you or will you decide what you will serve at the main meal the next time your family/household will eat together?" Only two respondents (both high-IPE) stated they plan meals and buy food according to detailed plans laid out for periods between their shopping trips. The prevailing practice reported in the interviews seems to be to establish a stock of preferred foods, then draw from that stock according to mealtime desires. In fact, 63.9% of respondents reported they do not decide upon menus until immediately prior to mealtime. The tabulated response therefore is one that reflects meal planning activity in a more general way than that which may be implied in the

Table 11
Correlation of Strategy Use and High-IPE Group Membership

<u>Strategy Number</u>	<u>Shortened Name</u>	<u>Low-IPE ($\bar{n} = 18$) % Reported Use</u>	<u>High-IPE ($\bar{n} = 20$) % Reported Use</u>	<u>phi</u>	<u>p</u>
P1	Plan menus a week at a time	29.4	42.1	.132	.429
P2	Always make a shopping list	38.9	75.0	.365	.024 *
P3	Organize your shopping list	23.5	30.0	.073	.659
P4	Read ads for more than one food store	50.0	60.0	.100	.536
P5	Plan menus around seasonable produce	55.6	45.0	-.105	.516
P6	Plan menus around meat and fish specials	44.4	60.0	.156	.338
P7	Try new recipes and menus	29.4	68.4	.389	.019 *
P8	Consider time and fuel value when food shopping	61.1	90.0	.339	.036 *
P9	Be open to new brands and products	58.8	68.4	.100	.549
P11	Avoid "convenience" stores	44.4	45.0	.006	.973
P12	Avoid buying non-foods in food stores	61.1	35.0	-.261	.107
P13	Clip and organize cents-off coupons	61.1	70.0	.096	.552
P14	Save high value coupons for promotions	27.8	20.0	-.091	.573
P15A	Save trading stamps	64.7	63.2	-.016	.923
P15B	Redeem stamps for food where appropriate	35.3	21.1	-.159	.341

Table 11 (continued)

Strategy Number	Shortened Name	Low-IPE	High-IPE	phi	p
		($\underline{n} = 18$) % Reported Use	($\underline{n} = 20$) % Reported Use		
IS1	Shop in at least two competing food stores	58.8	68.4	.100	.549
IS2	Buy only those items on your shopping list	50.0	50.0	.000	
IS3	Shop alone	70.6	57.9	-.132	.429
IS4	Shop when store is not busy	52.9	63.2	.103	.535
IS6	Compare unit prices	33.3	85.0	.528	.001 **
IS7	Figure unit costs after coupons	16.7	40.0	.257	.113
IS8	Use store brands and generic labels	22.2	40.0	.191	.239
IS10	Watch the checker tally your order	52.9	73.7	.216	.196
IS11	Figure cost per serving of meats	5.6	30.0	.315	.052
IS13	Stock ahead when prices are low	16.7	65.0	.489	.003 **
IS14	Be alert to promotional packaging	38.9	50.0	.112	.492
IS15	Learn how to interpret open dating	76.5	73.7	-.032	.847
IS16	Learn how to interpret USDA grading	41.2	73.7	.329	.048 *
IS17	Read nutri- tional labels	27.8	25.0	-.031	.846
IS18	Avoid impulse buying	44.4	55.0	.105	.516

Table 11 (continued)

Strategy Number	Shortened Name	Low-IPE ($n = 18$) % Reported Use	High-IPE ($n = 20$) % Reported Use	ϕ	p
IS19	Avoid shopping when hungry	77.8	80.0	.027	.867
IS20	Avoid shopping when tired	83.3	70.0	-.157	.334
IS21	Avoid shopping when rushed	61.1	90.0	.339	.036 *
IS22	Buy for short time periods	52.9	31.6	-.216	.194
IS23	Buy perishables in small quantities	72.2	60.0	-.129	.428
IS24	Check day-old bakeries, etc.	22.2	35.0	.141	.386
IS25	Buy soft drinks in returnable bottles	38.9	35.0	-.040	.804
IS27	Get rainchecks for out-of-stock items	17.7	21.1	.043	.797
IS28	Return defective merchandise	41.2	52.6	.115	.492
IS29	Look for in-store specials	23.5	47.4	.248	.137
IS30	Check for specials on dented cans, crushed boxes, etc.	35.3	47.4	.122	.463
L2	Buy juice concen- trates, add your own water	16.7	35.0	.208	.200
L3	Buy meat substitutes and cheaper cuts	27.8	45.0	.178	.272
L4	Buy whole chickens	16.7	25.0	.102	.529
L5	Avoid waste, use leftovers creatively	61.6	80.0	.208	.200

Table 11 (continued)

<u>Strategy Number</u>	<u>Shortened Name</u>	<u>Low-IPE (n = 18) % Reported Use</u>	<u>High-IPE (n = 20) % Reported Use</u>	<u>phi</u>	<u>p</u>
L6	Avoid food spoilage	35.3	31.6	-.039	.813
L7	Review cash register tapes	11.8	31.6	.238	.153
L9	Avoid fats, salt, sugar	38.9	65.0	.261	.107
L10	Analyze recipe costs	17.7	63.2	.461	.006 **
L11	Be your own butcher	16.7	55.0	.397	.014 *
L12	Can or freeze seasonable produce	23.5	36.8	.144	.387
L13	Eat out less frequently	50.0	60.0	.100	.536
L14	Stay slim	11.1	5.0	-.113	.485
L16	Serve water with meals	23.5	42.1	.197	.238

* $p < .05$ ** $p < .01$

textbook strategy statement. The phi value of .132 for this item reflects the correlation of the 42.1% of respondents with a "yes" reply to "Do you plan your meals before the day those meals will be served?"

P2. A significant finding ($p < .024$) showed 75.0% of high-IPE respondents "know before entering supermarkets the specific items" they will be buying (vs. 38.9% of low-IPE respondents). The wording of the interview questionnaire item allowed the affirmative response to reflect both the practices of people who use a written list and those operating with "mental lists."

P5. Persons who said they planned their meals around seasonable produce 50% of the time or more were considered to observe the strategy, but this activity was found to have a slight negative ($p < .516$) correlation with price-efficient food buying.

P6. To dichotomize among the respondents as to the buying meat and fish specials strategy, 30% observance was set as the distinction between use and non-use. Although the largest cell frequency in the crosstabulation was for high-IPE users, the relationship was not significant.

P7. Exactly half of all respondents said they had not tried a new recipe at home for a meat or vegetable dish within the past two weeks. Of high-IPE shoppers, 68.4% responded positively to this item. This correlation produced a phi value of .389, with probability of chi-square significance $< .019$.

P8. Interview respondents who indicated they consider time and fuel costs at least 70% of the time were encoded as "yes" for this strategy. The phi correlation of .339 obtained in this manner had a chi-square significance level of $p < .036$.

P9. More high-IPE food shoppers reported having tried new brands of familiar products (or unfamiliar products tried for the first time) in the most recent 2-week period (68.4%), but so did more low-IPE shoppers (58.8%). The phi correlation of .100, when interpreted with chi-square analysis, retains a probability of chance error of .549 (far above the preset level for allowing interpretation of significance).

P11. None of the respondents reported 2-week "convenience" store expenditures of more than \$9, and only six spent over \$2. Cell frequencies were too sparse before the decision to calculate phi by using \$1 instead of \$3 as the dichotomization criterion was made by the researcher. This meant any reported expenditures in this category were crosstabulated with no expenditures during the most recent 2 weeks. No relationship could be ascertained by either method, but the \$1 choice is the one reported in Table 11 (phi = .006).

P12. The results in this study seem to run contrary to the textbook recommendation of not buying non-food items in food stores (coded "yes" if the ratio of non-foods to total food store purchases is less than

20%). More high-IPE consumers (65.0%) than low-IPE respondents (38.9%) spent 20% or more of their food store expenditures on non-foods. The resulting phi correlation is $-.261$.

P13. The mean ratio of coupon redemption to total food store expenditures for all respondents in the study was $.061$ and the maximum was $.357$ (12.4% said they redeemed no coupons during the period starting with their most recent major shopping trip). Those who redeemed manufacturer's and retailer's coupons for more than 3% of their food expenditures were considered users of the strategy, but no significant finding developed.

P14. The method of determining which respondents used the strategy of saving high-value coupons for "double redemption days" was to create a variable combining redemption percentage (P13) and at least 80% preference for double coupons as a promotion. (The "reference" was evaluated from a series of 0-9 responses relating to various types of store promotions.) The reported observance of this strategy was 23.7%, with slightly more low-IPE than high-IPE observers (phi = $-.091$).

P15. The recommendation regarding trading stamps was split into two questions. The first of these questions, "Do you save S&H or other trading stamps?" was followed by "Do you redeem those trading stamps on Cash Saver Specials?" in the cases where the first

question was answered in the affirmative. Fewer than half the people saving stamps report using them on Cash Saver Specials. Whereas 63.9% of the respondents said they save trading stamps (nearly equal for the high and low-IPE groups), only 27.8% use them in the supermarkets as Cash Saver Specials. The phi correlations, neither of which is statistically significant, are .016 and .159 respectfully.

IS1. Respondents who were tabulated as users of the strategy of shopping in at least two competing food stores were those who indicated at least 90% observance. This was 63.9% of the people interviewed. Although the high-IPE group members show slightly higher usage than the low-IPE group, the phi correlation of .100 and a $p < .549$ indicated that the difference was not a significant one.

IS2. Half of the respondents said they stick to their shopping lists 70% of the time or more. The distribution was equally divided between the two IPE groups.

IS6. A correlation of .528 was calculated for high-IPE group membership and use of the strategy of comparing unit prices (when use was defined as attentiveness to unit pricing at least 60% of the time). This difference was significant at the .001 level.

IS11. Only 18.4% of all respondents acknowledge taking the time in stores to figure the cost per serving

in addition to the unit price of meats, but the correlation between the practice and good performance on the IPE is .315, which falls slightly short ($p < .052$) of the preset significance level.

IS13. Failure to stock ahead when prices are low was a characteristic of the shopping of 5 out of 6 of the low-IPE shoppers. The phi of .489 carries a chi-square $p < .003$.

IS14. One of the most complex calculations in the study was determining observance of the strategy of seeking promotional packaging. Four different variables were combined--those representing receptivity to new products, attentiveness to unit prices, refiguring unit prices after coupons, and analyzing recipe costs. If the sum of dichotomized responses for P9, IS6, IS7, and L10 was 3 or 4, then the strategy was assigned a "yes," and 44.7% of the respondents so qualified. Only five persons reported observing all four strategies. Despite the fact that four of the five scored in the high-IPE group, the differences for use of this strategy were not significant.

IS15. Three-quarters of the respondents said they are attentive to the expiration dates of dairy and bakery items at least 80% of the time. The phi correlation between high-IPE and use of the strategy was $-.032$.

IS16. When the dichotomization of the 0-9 response scale was set at 5 (because there were no "6" responses),

41.2% of the low-IPE respondents indicated with a 7, 8, or 9 that they are attentive to USDA grades. Significantly more (73.7%) of the high-IPE respondents, reflected by a .329 phi value, stated they employ this strategy.

IS17. Reading of nutritional labels was determined by the researcher from the answers to two questionnaire items. First, a 7, 8, or 9 response on the "relative importance of nutrition in food selection" was required for a "1" encoding. Next, the categorical response to "What is the main thing you look for in the merchandise display when deciding which of several similar products you will be buying?" was evaluated. If the response to the second question was "dietary information" or "ingredients list," then another "1" was scored. In order to be encoded with a "1" for IS17, however, the respondent had to provide a positive response to each of the sub-questions. Only 26% of all respondents met these criteria, with no significant difference (phi = -.031) between the high and low-IPE performance groups.

IS18. The 0-9 responses to this question were dichotomized to indicate impulse buying avoidance 90% of the time or more. A non-significant phi correlation of .105 exists for the data obtained.

IS19, IS20, and IS21. From a single interview question, the researcher determined whether the respondent's most recent food shopping trip was

while especially tired, hungry, or rushed (or combinations of the three). The only significant correlation tabulated was for "rushed." There was a slight negative phi value (-.157) for "hungry."

IS22. Two measures for determining whether the respondent observed the strategy of buying for short time periods were used. One was the interview questionnaire response, and the other was through analysis of the variable representing reported days between major shopping trips (seven or fewer days between trips was considered a "short time"). The two calculated correlations were -.216 and -.276 respectfully.

IS23. As was the case with the previous strategy, a negative correlation (this time somewhat weaker) was found between buying perishables in small quantities at least 90% of the time, and scoring well on the IPE. A phi value of -.129 reflects the correlation between the 72.2% of the low-IPE respondents who use the strategy and 60.0% use by price-efficient buyers.

L2. The categorical responses indicated most respondents do not buy fruit juice in the same packaging. Which form depends upon the (a) type of juice, (b) season of the year, and (c) occasion for which it will be served. Only 16.7% of the low-IPE respondents acknowledged buying concentrates most frequently, but the high-IPE group did so at a 35.0% rate--a correlation with a chi-square probability of .2.

L4. Only a quarter of the high-IPE shoppers reported buying whole chickens most frequently when they buy chicken. One-sixth of the people who are members of the low-IPE group reported buying chicken by the entire bird. The phi value of this relationship is .102 ($p < .529$).

L10. Analyzing recipe costs is a strategy observed by only 17.7% of the low-IPE food budget managers in this study, but by 63.2% of the high-IPE group. This was one of the strongest correlations found in the study, with a chi-square $p < .006$.

L13. Two different methods were available for testing for respondent observance of the strategy of eating out less frequently or "brown bagging" when away from home. First, the interview question with a "no"/"yes" solicited response (reported in Table 11--phi = .1, $p < .536$), and also by dichotomizing the ratio of dollars spent in restaurants to total weekly food dollars spent. When the data were analyzed by the second method (with the ratio defined as 40% or more), the results went in the opposite direction. The high-IPE respondents who (as a group) had said they observed the strategy of eating out less as a way of saving money on food also reported (again, as a group) spending over 40% of their food dollars for away-from-home meals. The phi shifted from .100 in the first case to -.156 in the second.

Demographic Characterization

Respondents in this study were asked to give their age, sex, household income, and other demographic characteristics. These data were dichotomized in the manner of the strategy variables, and crosstabulated with the same two groups of shoppers. Results, with five significant relationships, are summarized in Table 12.

Note that teenagers and their parents are categorized together, reflective of the way the USDA categorized adults in the average food expenditure survey, where no distinction was made between people aged 12 through 54 except for their sex. Data (such as the other occupation classifications) were omitted from the table when cell counts of fewer than 5 occurred. Chi-square calculations with such low cell frequencies may not be valid (Kerlinger, 1973).

A significant finding ($p < .001$) related to full-time employment. Households with no full-time workers were much more likely to be in the low-IPE group whereas households with two or three incomes were much more likely to be members of the high-IPE group. The phi in this 2 x 4 table was .422 (Table 13).

Table 12
Correlation of Demographic Variables and High-IPE
Group Membership

Characteristic	Description	Low-IPE	High-IPE	phi	p
		(n = 43) % Households	(n = 44) % Households		
Sex	Female	67.4	63.6	-.040	.709
Age	30 and under	39.5	36.4	-.033	.761
Household income	\$36,000 or more	18.6	38.6	.221	.039 *
	\$14,000 or less	37.2	15.9	-.241	.024 *
Household size	One or two	83.7	47.7	-.379	.000 **
	Five or more	4.7	15.9	.185	.085
	Children under 12	11.6	38.6	.311	.004 **
Occupation	Professional	20.9	29.5	.099	.355
	Student	27.9	9.1	-.243	.024 *
	Retired	11.6	2.3	-.185	.085
Full-time	2 or more incomes in household	17.7	31.6	.161	.335
Experience	More than 10 years buying food	58.8	42.1	-.167	.317
Education	High School Graduate	88.2	79.0	-.124	.455
	Consumer courses	41.2	47.4	.062	.709
"Busy"	Number of full-time workers in household equals household size minus number of children under 12	27.8	45.0	.178	.272
Away from home	Number of meals not eaten at home exceeds 15% per week (all household members)	58.1	52.3	.059	.582

* p < .05

** p < .01

Table 13
Crosstabulation of Number of Fulltime Workers
in Household and IPE Group Membership
 (Rounded Percentages Total 100 Horizontally)

	0	1	2	3
High IPE Group	7	52	39	2
Low IPE Group	37	49	12	2
	22	51	25	2

Phase 3 In-Home Interviews

The narratives that follow are a summary of the follow-up interviews for the eight respondents who were asked to save sales receipts for food purchases and maintain a log of meals away from home for all household members for a 2-week period. Obtaining a cross-section of multi-member households was an objective in the selection of participants for this phase. Large families, a retired couple, a vegetarian couple, and a black household are represented, as are both low and moderate budget levels and a range of skills at food budget management as indicated by the index of pricewatching efficiency (IPE).

Following the in-home interviews, the IPE was refigured using the documentation obtained from records kept by the respondents, and adjusted for the 13-day interval of the review period. For example, if the

respondent made a major shopping trip each week, the variable representing dollars spent during the major food buying trip was doubled and the new IPE calculated on the basis of the variable for the interval between major trips, changed from 6 to 13.

Narratives of Eight Households

Household 1 - This young woman was interviewed at the auto supply store she and her husband own. They have an 8-month-old baby, but no other children. It was difficult to ascertain some of the food costs for the family since breakfast and lunch are not taken in the normal fashion. Instead, she and her husband are likely to snack on pastries and fruit they buy in large quantities "for the shop." At work, this food is shared with customers and employees. The money for these snacks is taken from the till rather than from personal funds.

Table 14
Comparison of Phase 2 and Phase 3 Data, Household 1

<u>Variable</u>	<u>Phase 2</u>	<u>Phase 3</u>
Dollars spent - Major food buying trip	70	113
Dollars spent between major trips	15	88
Credits from coupons (dollars)	4	0
Dollars spent for non-foods in foodstores	28	109
Number of meals not eaten at home (household)	9	16
Dollars spent for food away from home	60	71
IPE (decile)	.07 (5)	-1.3 (1)

The respondent reported a recent supper meal as being linguini and clam sauce. The sauce was made by combining one can of Progresso Italian clam sauce and one can of minced clams. The fresh zucchini squash served with this

meal was given to them by a customer, but that type of largeness occurs infrequently. The meal also included bread, beer, and iced tea. The baby had a half-jar of a mixed vegetables, a half-jar of strained fruit, and a bottle of baby formula from canned mix.

Six or seven times a year the husband goes saltwater fishing. Usually, each catch will make about four meals.

Household 6 - The respondent's husband is commander of the Air Force Reserve Officer's Training Corps detachment at the University of Florida. She is a beauty consultant for Mary Kay cosmetics who stays home with boys aged 12 and 15, and girls aged 15 months and 6 years.

Table 15
Comparison of Phase 2 and Phase 3 Data, Household 6

<u>Variable</u>	<u>Phase 2</u>	<u>Phase 3</u>
Interval between major shopping trips (days)	6	13
Dollars spent - Major food buying trip	165	62
Dollars spent between major trips	25	77
Credits from coupons (dollars)	5	6
Dollars spent for non-foods in foodstores	55	40
Number of meals not eaten at home (household)	1	8
Dollars spent for food away from home	15	32
IPE (decile)	.71 (9)	.62 (9)

It was difficult to distinguish between restaurant and at-home meals in this family because pizza or buckets of chicken from take-out restaurants form the basis of many at-home meals. Salad and beverages are from the refrigerator, making a composite take-out and in-home meal. A recent meal centered on a 15-piece bucket from Kentucky Fried Chicken. Homemade biscuits and gravy, a medley of

frozen vegetables prepared at home, milk, and iced tea completed the meal.

Hamburger is about the only meat prepared at home. Frozen breaded fish is popular. Everybody eats the same menu. Vegetables are mostly canned or frozen, except for salad ingredients.

Kash n' Karry is the primary store shopped, with sodas and "a few other items" coming from Pic 'n Save and the nearby Lil' Champ. Although she has commissary privileges, the drive to the nearest one in Jacksonville "isn't worth the \$30 or so I'd save."

Household 10 - An elderly father who receives his week-day lunches free from Meals-on-Wheels lives with this young black couple. The old man nevertheless works full-time, providing the household a third income.

Table 16
Comparison of Phase 2 and Phase 3 Data, Household 10

<u>Variable</u>	<u>Phase 2</u>	<u>Phase 3</u>
Dollars spent - Major food buying trip	77	102
Dollars spent between major trips	6	84
Credits from coupons (dollars)	3	0
Dollars spent for non-foods in foodstores	6	33
Number of meals not eaten at home (household)	3	7
Dollars spent for food away from home	15	3
IPE (decile)	-.07 (4)	1.49 (9)

The nonfood purchases had been vastly underestimated in the phase 2 interview. They included rat poison, Tampax, cigarettes, and batteries (all costing over \$3 each). The 2-week food purchase trips included 12 different trips to the nearby Publix, 2 to Norman's Country, and 6 others.

The respondent works 10 miles north of Gainesville, and uses the delicatessen at Hitchcock's Foodway as a lunch source. Home food preparation of a typical meal was reported as liver and onions, mashed potatoes, green beans, Kool-Aid, and banana pudding. Most of those ingredients were prepared "from scratch," except the beans, which were from the frozen food case. During the review period a watermelon was purchased from a truck vendor in the neighborhood.

Household 17 - This 42-year-old man and his 36-year-old wife were co-respondents in a follow-up interview. Both are vegetarians who avoid fish and eggs. The budget level is moderate. They have known each other since both were members of a now-failed local food cooperative. They now shop mostly in Winn-Dixie and at an oriental specialities food store. They buy bottled water, which is delivered to their home in large jugs at an expense of about \$4.50 per week in the summer. A typical meal is a barley stew made with fresh, frozen, and canned vegetables and a refrigerated meat substitute called soysage.

The 2-week follow-up study period included the Independence Day holiday with 2 days off work. No travel or entertaining was done except for visits from boys aged 13 and 17, which are routine occurrences. Each boy eats one meal with this couple per week.

Table 17
Comparison of Phase 2 and Phase 3 Data, Household 17

<u>Variable</u>	<u>Phase 2</u>	<u>Phase 3</u>
Dollars spent - Major food buying trip	63	79
Dollars spent between major trips	10	20
Credits from coupons (dollars)	0	0
Dollars spent for non-foods in foodstores	10	14
Number of meals not eaten at home (household)	13	8
Dollars spent for food away from home	40	13
IPE (decile)	-1.32 (1)	-.08 (3)

Household 18 - Respondent is aged 45 and her husband, a self-employed locksmith, is 54. Two boys, aged 19 and 15, live at home. The respondent is a custom tailor who works in her home to supplement the family income.

Table 18
Comparison of Phase 2 and Phase 3 Data, Household 18

<u>Variable</u>	<u>Phase 2</u>	<u>Phase 3</u>
Dollars spent - Major food buying trip	70	90
Dollars spent between major trips	25	173
Credits from coupons (dollars)	1	0
Dollars spent for non-foods in foodstores	35	102
Number of meals not eaten at home (household)	9	8
Dollars spent for food away from home	17	28
IPE (decile)	.23 (7)	.35 (7)

Husband and wife each consumed more than three cartons of cigarettes during the 2-week monitored period. The cigarets cost \$58, accounting for about 57% of the nonfood grocery outlay.

During the review period a teen-aged niece visited, so the IPE was refigured using 5 household members instead of the usual 4. The budget level was also changed, from low to moderate, reflecting the types of purchases listed on the tapes (baked goods, avocados, delicatessen salads).

The "typical meal" combined roast beef sandwiches with a crab-macaroni salad. The crab was purchased frozen; the beef was roasted at home. The beverage for this meal was soda. The total cost for feeding five at this meal was about \$9.30. Another meal, for a birthday party at home, consisted of pizza from Pizza Hut, soda, and a homemade birthday cake. The food for 5 cost \$28.

Household 19 - This retired couple lives frugally although they "have ample retirement income." They would not accept the \$10 offered by the researcher for the interview. During the harvest season, they freeze local produce. A year's supply of blueberries from a nearby farm (\$21) was purchased during the review period. The freezer is also used to advantage through the preparation of large meat loaves, casseroles, and desserts. Part is eaten the day of preparation, but the major portion is sealed in plastic and frozen. These "planned leftovers" and the microwave appliance transform the kitchen into "a place better than any fast food joint."

A "typical meal," from the evening prior to the interview, contained 3 things from the freezer: meatloaf, turnip greens, and macaroni and cheese. These were supplemented with sliced fresh tomatoes (from a neighbor's garden), celery, carrot sticks, cottage cheese, iced tea, and freshly-homemade blueberry pie (4 pies were baked the previous morning--2 were frozen and the other was a gift to the woman who had provided the tomatoes).

Table 19
Comparison of Phase 2 and Phase 3 Data, Household 19

<u>Variable</u>	<u>Phase 2</u>	<u>Phase 3</u>
Dollars spent - Major food buying trip	30	19
Dollars spent between major trips	35	65
Credits from coupons (dollars)	8	1
Dollars spent for non-foods in foodstores	8	24
Number of meals not eaten at home (household)	3	7
Dollars spent for food away from home	5	4
IPE (decile)	-.62 (1)	.24 (7)

Household 42 - The young mother of three who was respondent for the household was to leave the day following the interview for a kidney transplant at the Mayo Clinic. The meals-away- from-home variable is distorted for the review period because the children were home rather than eating school lunches.

"Last night's meal" consisted of sloppy joes, tossed salad, frozen french fries, iced tea, and lemonade. The cost for five people was "about \$4."

Table 20
Comparison of Phase 2 and Phase 3 Data, Household 42

<u>Variable</u>	<u>Phase 2</u>	<u>Phase 3</u>
Dollars spent - Major food buying trip	83	136
Dollars spent between major trips	20	77
Credits from coupons (dollars)	3	0
Dollars spent for non-foods in foodstores	26	65
Number of meals not eaten at home (household)	11	0
Dollars spent for food away from home	20	0
IPE (decile)	.21 (6)	.27 (7)

Household 49 - The father in this family of six is an accountant, and the budget is detailed. Since the time he

was first paid on a monthly basis, the major food shopping has been done monthly.

The homemaker respondent, aged 32, dislikes shopping and meal preparation. A 14-year-old daughter assists with both chores to a large degree. The meal for the evening of the phase 3 interview had been round steak and gravy on rice, frozen green beans, fresh corn on the cob, tossed salad, iced tea, and Kool-Aid. Everyone eats the same thing, and there is no bread, snacking, or dessert.

Table 21
Comparison of Phase 2 and Phase 3 Data, Household 49

<u>Variable</u>	<u>Phase 2</u>	<u>Phase 3</u>
Dollars spent - Major food buying trip	280	204
Dollars spent between major trips	100	198
Credits from coupons (dollars)	15	5
Dollars spent for non-foods in foodstores	50	65
Number of meals not eaten at home (household)	11	10
Dollars spent for food away from home	30	14
IPE (decile)	.40 (8)	.36 (7)

The restaurant expense for the 2-week review period was for several dozen doughnuts, a pizza meal for the family--eaten in Pizza Hut, and two trips by family groups of four to Rax for the salad bar.

Phase 3 Contributions to this Study

The eight follow-up interviews demonstrated mixed reliability of respondent recall of food expenditures. While four of the IPE recalculations were close to the original IPEs (differing by -.09, .12, .06, and -.04, respectively), the others were not (-1.37, 1.56, -1.24, and

.86, respectively). The researcher's comparison of food budget level self-classifications and a phase 3 budget level assessment based on reported family menus affirmed seven cases of apparently correct estimations. In the one case that could not be affirmed (household 18), the normal family eating pattern (and resulting food budget level) could not be ascertained due to the presence of a house guest during the follow-up period. The upgrade (from self estimated "low" budget level to researcher's assessment of "moderate") may have been only temporary, or it may reflect more accurately that household's everyday pattern.

The food budgets of the eight respective households could not be determined to have been appreciably impacted by bartering, receipt or donation of food gifts, or wildlife killings. Among the phase 3 interviewees, no expenditures had been made during the 2-week period from military post exchanges, individual dealers in lines such as Yurika or Herbalife, food buying clubs, or cooperatives.

Summary of the Data Analysis

The data tables and narratives of this chapter, together, present evidence of support for some of the 53 food budget management strategies appearing in consumer education textbooks and endorsed by a local panel of consumer educators. Empirical support for nine of the strategies was obtained. Those strategies were (a) compare unit prices, (b) stock ahead when prices are low, (c) analyze recipe costs, (d) be your own butcher, (e) try new

recipes, (f) make a shopping list, (g) consider time and fuel value when food shopping, (h) don't shop when rushed, and (i) learn to interpret USDA grading.

Thirteen of the strategies correlated negatively with membership in the high-IPE group, but none of the 13 attained the .05 significance level. However, significant negative correlations were found in six of the demographic areas considered. Households with one or two members composed 5/6 of the low-IPE group and only 2/5 of the high-IPE group. The high-IPE group included more of the households with children under 12, two incomes, and household income over \$36,000 per year. The low-IPE group had significantly more respondents who classified their occupation as "student" and household income as under \$14,000. The respondents of both groups tended to be female, over 30, high school graduates, and have less than 10 years food buying experience. About half the respondents were members of households with incomes between \$14,000 and \$36,000 per year (with a quarter below and a quarter above).

Fewer than half the respondents could remember having had public school instruction on food budget management. No significant correlation between having had such instruction and membership in the price-efficient group could be discerned with these data.

CHAPTER V

DISCUSSION

The research question in this study was as follows: Of the various food budget management strategies recommended in consumer education textbooks, which ones (if any) are used significantly more by price-efficient shoppers than by those shoppers defined as non-price-efficient? This study involved gathering information from food shoppers about their expenditures and the food budget management strategies used; and submitting those data to the analytic procedures outlined and reported in Chapters III and IV respectively. Conclusions and discussion of the results and apparent limitations in interpreting the data are the topic of this chapter. A retrospective consideration of the design and methodology is included. The chapter concludes with implications and suggestions for further study.

Findings and Ex Post Facto Analysis

Household food budget managers who spend less money than the USDA averages (see Ritzman, 1983) use different buying strategies than those who spend above-average amounts. The below and above average groups were operationally defined in this study through calculation of individual indexes of pricewatching efficiency (IPE). The high and low-IPE groups were contrasted as to their use of 53 food budget management strategies that had been compiled

from contemporary classroom resources (primarily Florida-approved textbooks). The list of strategies was validated by submitting a larger list to a panel of consumer educators. Eight of 61 strategies were eliminated in this manner.

The high-IPE group was found to observe 29 of the strategies 50% of the time or more, whereas the low-IPE group observed only 19 of the strategies 50% of the time or more. The difference in observance between low and high-IPE groups (using chi-square procedures) was significant with 9 of the strategies.

Strategy Use Data Findings

Nine strategies were found to be significantly correlated with membership in a group of price-efficient food budget managers as defined by IPE performance. Comparing unit prices (IS6, $\phi = .528$) is the strategy given the most support--by the number of mentions it received in the sources reviewed; by the panel members who gave it the highest aggregate rating; by the percentage of high-IPE group members who say they observe it (85%); and by the correlation in these data between membership in the low-IPE group and failure to observe the strategy, a correlation which was significant at the .001 level.

Five other strategies (significant at the .05 level) were used by over two-thirds of the high-IPE shoppers. On this list are trying new recipes (P7, $\phi = .389$, panel ranked 48th), making a shopping list (P2, $\phi = .365$, panel

rank tied for 1st), considering the costs of time and fuel when planning shopping trips (P8, $\phi = .339$, panel ranked 22nd), avoidance of shopping when rushed (IS21, $\phi = .339$, panel rank tied for 26th), and being attentive to USDA grading (IS16, $\phi = .329$, also ranked 26th).

Stocking ahead when prices are low (IS13, $\phi = .489$, panel ranked 18th) and analyzing recipe costs (L10, $\phi = .461$) were found significant at the .003 and .006 levels, respectively. Both were reported as observed by approximately two-thirds of the high-IPE respondents, but analyzing recipe costs received a relatively low rating (42nd) from the panel of experts. Interestingly, one of the most common exercises in courses with food budget management content (judging from end-chapter activity suggestions in the texts) is the exercise of menu/recipe cost analysis.

Being ones own butcher (L11, $\phi = .397$), or the practice of buying roasts and cutting them into steaks and chops (and also buying ground meat in bulk and forming the patties at home) also ranked low (44th) with the panelists. This strategy received the 4th highest correlation coefficient but was used by only 55% of the high-IPE group members while the seemingly related strategy of buying whole chickens (L4, $\phi = .102$, not significant) was used by only 25% of the high-IPE respondents. The researcher was told, during the telephone interviews, that chicken breast quarters (with wing) or leg quarters (with thigh) were more

frequently featured at reduced prices than whole chickens and could be more easily matched with family eating preferences, with less waste.

Ex post facto interpretation of two parallel strategies produced a significant ($p < .05$) finding. The strategies of watching the checker (IS10) and checking the register tape at the time the groceries are unpacked at home (L7) both reflect shopper attentiveness to checkout process accuracy. A new variable was created for those respondents whose responses to each of the two original variables had been "no." The correlation between practices indicating a trust in the checkout process and low-IPE group membership was .324 ($p < .046$). This restated strategy meets the criterion set in this study for inclusion in consumer education units on food budget management.

Relatively high correlations, although not significant at the preset .05 level, were attained by 11 other recommendations. Two of these were negative relationships. The positive correlations between strategy use and high-IPE group membership were for figuring the unit cost per serving (IS11, $\phi = .315$); avoiding foods high in sugars, fats, and sodium (L9, $\phi = .261$); refiguring unit prices based on coupons being redeemed and promotional packagings (IS7, $\phi = .257$); looking for in-store specials (IS29, $\phi = .248$); reviewing the cash register tape at home (L7, $\phi = .238$); watching the checker during the checkout process

(IS10, $\phi = .216$); planning the creative use of leftovers (L5, $\phi = .208$); buying juices in concentrated form and adding water at home (L2, $\phi = .208$); and serving water with meals (L16, $\phi = .197$). Those that correlated negatively with high-IPE (positively with low-IPE) group membership were avoidance of purchasing non-food items in food stores (P12, $\phi = -.261$) and buying for short time periods (IS22, $\phi = -.216$).

Several of the strategies had too few observers among the respondents in this study to determine their relative worth as contributors to food budget management. Staying slim (L14), figuring cost per serving in addition to unit price (IS11), and asking for rainchecks on out-of-stock items (IS27) each had seven or fewer adherents. In these cases, the chi-square calculations were not considered reliable in light of Kerlinger's (1973) notation.

Demographic Findings

The demographic data, when analyzed, indicated there was a significant relationship between low-IPE group membership and small household size, low household income, and the occupational classification "student." As might be expected with this result, small household size interacts positively with variables such as buying for short time periods. For this reason, both the "student" and "retired" occupational classifications could be expected to have low frequency counts for strategies reflecting volume buying. The households having fewer children under 12 may also

realize different benefits from failing to observe IS3 ("Shop alone") since shopping with another person may fulfill elected social needs in small-sized households. That may contrast with the needs of shopping with small children, a practice of many young parents.

Interactions

Interactions between strategy use, demographic characteristics, and the data gathering process are likely to be present in cases of multiple data variables. Some of the strategy statements, for example, are either parallel or contradictory. For instance, avoiding impulse buying (IS18) is very similar to sticking to the shopping list (IS2). Both probably limit observance of the strategies of looking for in-store specials (IS29), trying new products and brands (P7), and buying marked-down dented cans and crushed boxes (IS30).

Relating Strategy Use to Alternate Ranking Methods

Summaries of the research on strategy use and demographics were presented as phi correlations in Tables 11 and 12 in Chapter IV. The rankings achieved and reported in Table 22 for the various strategies were contrasted with two other methods of assessing relative strategy value from data in this study--(a) percentage of the high-IPE group members who report using the strategy, and (b) the panel's aggregate assessment. The coefficient of concordance demonstrates the difference between two empirical measures related to high-IPE performance and the

Table 22
Comparison of Food Budget Management Strategies:
Rankings According to Three Criteria

<u>Strategy Number</u>	<u>Shortened Name</u>	<u>Observance by High-IPE Shoppers (%)</u>	<u>Observance Rank</u>	<u>Phi Rank</u>	<u>Panel Rank</u>
P1	Plan menus a week at a time	42.1	36.5	24	6.5
P2	Always make a shopping list	75.0	6	6	1.5
P3	Organize your shopping list	30.0	48	36	15
P4	Read ads for more than one food store	60.0	21.5	32.5	19.5
P5	Plan menus around seasonable produce	45.0	34	47	22.5
P6	Plan menus around meat and fish specials	60.0	21.5	21	37
P7	Try new recipes and menus	68.4	13	5	48
P8	Consider time and fuel value when food shopping	90.0	1.5	7.5	22.5
P9	Be open to new brands and products	68.4	13	32.5	36
P11	Avoid "convenience" stores	45.0	34	39	31.5
P12	Avoid buying non-foods in food stores	35.0	42.5	53	46
P13	Clip and organize cents-off coupons	70.0	10.5	35	46
P14	Save high value coupons for promotions	20.0	52	46	33

Table 22 (continued)

<u>Strategy Number</u>	<u>Shortened Name</u>	<u>Observance by High-IPE Shoppers (%)</u>	<u>Observance Rank</u>	<u>Phi Rank</u>	<u>Panel Rank</u>
P15A	Save trading stamps	63.2	18	41	38.5
P15B	Redeem stamps for food where appropriate	21.1	NR	NR	NR
IS1	Shop in at least two competing food stores	68.4	13	32.5	44
IS2	Buy only those items on your shopping list	50.0	29.5	40	15
IS3	Shop alone	57.9	24	50	49
IS4	Shop when store is not busy	63.2	18	29	34.5
IS6	Compare unit prices	85.0	3	1	1.5
IS7	Figure unit costs after coupons	40.0	38.5	12	22.5
IS8	Use store brands and generic labels	40.0	38.5	19	19.5
IS10	Watch the checker tally your order	73.7	8	15	12
IS11	Figure cost per serving of meats	55.0	26	10	31.5
IS13	Stock ahead when prices are low	65.0	15.5	2	18
IS14	Be alert to promotional packaging	50.0	29.5	27	12
IS15	Learn how to interpret open dating	73.7	8	43	6.5
IS16	Learn how to interpret USDA grading	73.7	8	9	26

Table 22 (continued)

<u>Strategy Number</u>	<u>Shortened Name</u>	<u>Observance by High-IPE Shoppers (%)</u>	<u>Observance Rank</u>	<u>Phi Rank</u>	<u>Panel Rank</u>
IS17	Read nutritional labels	25.0	49.5	42	6.5
IS18	Avoid impulse buying	55.0	26	28	3
IS19	Avoid shopping when hungry	80.0	4.5	16.5	12
IS20	Avoid shopping when tired	70.0	10.5	51	26
IS21	Avoid shopping when rushed	90.0	1.5	7.5	26
IS22	Buy for short time periods	31.6	46	52	50
IS23	Buy perishables in small quantities	60.0	21.5	49	28
IS24	Check day-old bakeries, etc.	35.0	42.5	23	34.5
IS25	Buy soft drinks in returnable bottles	35.0	42.5	45	53
IS27	Get rainchecks for out-of-stock items	21.1	51	37	29.5
IS28	Return defective merchandise	52.6	28	26	6.5
IS29	Look for in-store specials	47.4	31.5	13	9.5
IS30	Check for specials on dented cans, crushed boxes, etc.	47.4	31.5	25	15
L2	Buy juice concentrates, add your own water	35.0	42.5	16.5	46
L3	Buy meat substitutes and cheaper cuts	45.0	34	20	51.5

Table 22 (continued)

<u>Strategy Number</u>	<u>Shortened Name</u>	<u>Observance by High-IPE Shoppers (%)</u>	<u>Observance Rank</u>	<u>Phi Rank</u>	<u>Panel Rank</u>
L4	Buy whole chickens	25.0	49.5	30	22.5
L5	Avoid waste, use leftovers creatively	80.0	4.5	16.5	9.5
L6	Avoid food spoilage	31.6	46	43	4
L7	Review cash register tapes	31.6	46	14	29.5
L9	Avoid fats, salt, sugar	65.0	15.5	11	17
L10	Analyze recipe costs	63.2	18	3	41
L11	Be your own butcher	55.0	26	4	43
L12	Can or freeze seasonable produce	36.8	40	22	41
L13	Eat out less frequently	60.0	21.5	32.5	41
L14	Stay slim	5.0	53	48	38.5
L16	Serve water with meals	42.1	36.5	18	51.5

NR not ranked (added after panel review)

subjective panel rankings. Either E^2 (calculated from sums of squares in an analysis of variance table) or Kendall's W expresses this coefficient of concordance (Kerlinger, 1973). The possible range is from 0 to 1. Among the three ranking systems, W is .5018. Similarly, individual W calculations for ϕ_i and "percent high-IPE user" and the ϕ_i and panel ranks are .4997 and .4986 respectively (showing some relationship but not enough to permit prediction of one set of rankings by examining either of the others).

Contrast with Burgoyne Data

All 106 observations in the IPE calculation base were compared with the 2430 observations in the Burgoyne study (Table 2). In that study, expenditures were tabulated without regard for budget level, and were categorized as "through \$30," "\$31 through \$50," "\$51 through \$70," and "\$71 or more." With the present study's 1986 data categorized this same way, the expenditures were crosstabulated with the age and household size variables used by Burgoyne (1980). (The first three expenditure categories were increased by 99 cents to accomodate those weekly averages transformed from biweekly or monthly reportings which came out unevenly.)

The present study obtained data for exact household size, but made no attempt to establish family status whereas Burgoyne reported under the heading, "family size." Only two levels "1-3" and "4 or more were shown in the

Burgoyne data. Only 21 of the respondents of this study fell into the larger of the Burgoyne sizes. Nine of these 21 respondents reported expenditures in the third category (\$51 through \$70.99) and only 6 in the highest category (over \$71.00). The earlier study proportionally would have placed 6 and 8, respectively, in those same categories. Matching the results of the two studies for smaller-sized households shows a more marked distribution difference in the first and second expenditure categories, but chi-square analysis of the contingency tables does not show them to be significantly different from each other. Burgoyne showed smaller households spending in the two lower categories 73.5% of the time, the corresponding figure for the present study was 67.0%. The difference was within those four cells, however. Burgoyne showed about the same number of small-household respondents in each of the first two weekly expenditure categories; this study placed twice as many in the first (under \$31) as in the second (\$31.00 to \$50.99).

Contrasting the Burgoyne study and this one on the age variables produced similar (non-significant) results although only 9 of the respondents in this study were 55 or over, a number which when divided into 4 cells, is too small for chi-square analysis. The differences between the two studies lies not in the demographic results obtained, but in the respondent base, which was not family-focused in this study due in part to its setting in a university community. Further, the contrast between grocery

expenditure data gathered five or six years apart as in these two instances is not discernable.

Phi correlations of the 38 cases used in compiling Table 11 and the 87 cases used in compiling Table 12 for demographic variables are presented in Table 23. Both sets of cases in the comparison represent larger samples, because the high and low-IPE groups each consist of four performance deciles--the mid-range deciles closest to average performance were dropped. The similarity between the small and large samples of the phi correlations in Table 23 supports adequacy of the sample size. Statistical analysis of the larger sample revealed twice as many significant relationships.

Table 23
Comparison of Calculations for the Number of Respondents
in Table 11 with those in Table 12 for Demographic Variables

<u>Variable</u>	With <u>N</u> = 38		With <u>N</u> = 87	
	<u>Phi</u>	<u>p</u>	<u>Phi</u>	<u>p</u>
Sex (female)	-.062	.703	-.040	.709
Age 30 or under	-.149	.358	-.033	.761
Upper income	.102	.529	.221	.039
Lower income	-.229	.158	-.241	.024
Small household size	-.443	.006	-.379	.001
Large household size	.154	.344	.185	.085
Young Children in family	.328	.043	.311	.004
More than 15% of meals not eaten at home	.050	.758	.059	.582

Retrospective on the Phase 1 Process

The initial step in obtaining respondents for the phase 2 interviews involved postal cards mailed to cable television subscribers. To test an assumption that, in the return of the cards, there was no difference between telephone number providers and non-providers; a chi-square analysis was completed. Two variables relating to household decision-making were constructed from responses under the headings of "you," "your spouse" and "another" to the question, "who in your household makes (or shares in making) the decisions regarding (three different areas)?" Analysis of the responses led to the inference that a smaller number of 1-member household respondents than would have been expected made themselves available for the telephone interviews. This may be attributable to the failure of female respondents (especially those over 30) to volunteer for the telephone survey. A perceived security risk, as well as a desire not to have their privacy invaded, could have impacted the decision to omit the phone number on the return cards.

The significantly fewer respondents who indicated "spouse" as the decision maker was also examined. When no "spouse" or "another" space was checked, no conclusion could be drawn as to marital status or household size; the respondent not sharing the decisions may have filled the role in a traditional family setting, lived alone, or have

been a single parent of small children. Respondents suspecting the nature of the research may have wanted to avoid committing a family member as subject of a telephone survey. That perceived inconvenience was, of course, not a factor for respondents electing to not provide the telephone number.

Phase 3 Reconsidered

The eight follow-up interviews demonstrated mixed reliability for respondent recall of food expenditures. While four of the IPE recalculations were close to the original IPEs (differing by $-.09$, $.12$, $.06$, and $-.04$, respectively), the others varied (-1.37 , 1.56 , -1.24 , and $.86$, respectively). The net change of all eight was only $-.02$. Had such results been obtained with a larger sampling, considerable confidence could be placed in the reliability of respondent recall.

Possible reasons for the differences between the four close estimates and the four poor estimates should be considered. One of the respondents grossly underestimated the amount of her nonfood purchases but did a good job (apparently) of recalling total purchases. Had she made a similar error in her initial recall, the IPE performance would have been calculated to a higher level. Another instance of wide disparity between the recall period and the documentation period involved what might be considered comingling of funds: much of the respondent's business expense and household expense overlapped, making it

difficult to pinpoint specific costs of feeding the family. Still another case seemed to reflect lifestyle changes between the study periods--one during the school year and the other in the summer.

The recall period was the two weeks that included the July 4 holiday. People who varied their family eating routines during the recall period would understandably also vary their expenditures. Researchers conducting similar studies are advised to attempt avoiding follow-up periods that include holidays, vacations, the first or last weeks of school, or football weekends.

Limitations

Interpretation of Data

Inherent limitations of the study were discussed at the end of Chapter I. Conducting the three phases of contact with consumers uncovered other possible threats to generalizability.

The method used for obtaining respondents (phase 1), while certainly unobtrusive, was cumbersome and expensive. The return rate of 9% was a matter of some concern, as was the fact that significant differences were found between the makeup of households which provided telephone numbers and those which did not. In several instances where cell frequencies were small, these phase 2 data were inconclusive. Additionally, the lack of preciseness in a few of the questions may have concealed other significant correlations. For example, the respondent who said she

redeems \$40 every week in coupons (35% of her food bill, decile 9 IPE performance) made a significant impact on her own food budget by doing so. Her case, although extreme, is worthy of discussion in consumer education units on food buying but was not dealt with in depth in this study.

Half of the respondents who were participants in the phase 3 follow-up study with documentation shifted more than one decile in their IPE performance. This finding underscores the need for researchers to develop assurances that interviewee expenditure recall reflects accurate averages rather than simply the most recent purchasing situation.

Also, a more precise measurement of food waste would be needed to properly evaluate the impact of both the leftovers (L5) and spoilage (L6) variables. There is a wide difference between the costs of a rotten cucumber on the one hand and half a roasted turkey on the other, but this study treated all spoilage in the past 2-week period as the same degree of failure to avoid waste.

The variable for measuring convenience store food purchasing also needs more precision. A 2-week monitoring period quite possibly could miss substantial purchases in this category over a longer period of time. Also, modern convenience stores with their microwave ovens and delicatessen counters, are widely used as a source of away-from-home-meals, which in most households form a separate portion of the budget from in-home meals. These

data are further confounded by the data collection period, which encompassed the July 4 holiday--a period during which snack foods and road travel are traditional for many individual food buyers.

Beer, wine, and soft drink purchases present a problem in food budget analysis. The sale of various alcoholic beverages in food stores varies according to state and local laws; in Gainesville both wine and beer are in supermarket displays with other beverages. According to Supermarket Business, (36th Annual Consumer Expenditure Study, 1983) 29.6% of beer and wine is not sold in food stores (nationally). This fact, and the potentially sensitive nature of alcohol consumption within some households or between respondent and interviewer, make self-reports of expenditures for beverages open to further question. Despite the definition of non-foods given in the interview, there may also have been misperceptions among some interviewees as to whether or not these beverages are indeed food items.

Data analysis or conclusive interpretations in the instances of small crosstabulation cell counts has been questioned elsewhere (Kerlinger, 1973). The wording of several of the questionnaire items in this study may have contributed to misinterpretation of the underlying intent. For example, one of the textbook recommendations that seemed outdated to the researcher was IS16, learn about USDA grades. In Gainesville, butter is the only product

available in any given supermarket in more than one USDA grade, and the AA butter is a slow selling item. The author assumes the respondents, when asked the question for IS16, perceived "learn about USDA grades" to mean giving attention to the (ungraded) quality of foods. The significance of reported observance of this item could thus have been confounded by misinterpretation on the part of respondents.

Internal Consistency

An ordering of the 106 IPE calculations showed a distribution of 54 positive and 52 negative IPEs. To check for internal consistency, the ordered list was divided into even-numbered cases with an average IPE of $-.34$, and the odd-numbered cases, which averaged $-.36$. With the 10 values at the extremes of the range excluded, the averages were $-.11$ and $-.16$ respectively. This finding supports the USDA averages selected for reference within the IPE calculation (since the perfect average value would be 0).

Data were collected through telephone interviews. The representativeness of the respondents was limited in part because of the lack of both urban poor and rural households among the cable television subscribers from whom the respondents were selected. Additionally, (a) all respondents live in the same community, (b) they shop in the same array of stores, (c) the design of the study permitted respondents to self-select to some degree, and (d) there was a small sample size.

General Considerations

Food budget level. Food budget level is a subjective categorization. Nearly two-thirds of the subjects in this study placed their own households at the "moderate" level, with the remainder nearly equally divided between "low" and "liberal." No correlations could be found between budget level and household size, number of children, or total dollars spent. Among members of the "under \$14,000 annual household income" group, there were no liberal budgets reported, but there were two "low" budget characterizations in the "above \$36,000" group. It seems likely that studies with lower income groups would find greater frequencies of lower food budget levels.

Ethnicity and race. Ethnic and racial patterns of food buying and consumption were not considered in this study because textbooks appropriately refrain from emphasizing such differences. The same purchase strategies apply to a broad range of foods.

Food stamps. Participants in the USDA Food Stamp Program buy their groceries in the normal manner but pay with special coupons from booklets issued according to social service parameters for need. This study made no attempt to identify users of food stamps, but the researcher recognized persons who do use food stamps as operating with the same purchase objectives as other food shoppers. The incentive to stretch available food money probably does not differ although some adaptive strategies

of food stamp users are practiced to some degree. One example would be buying soft drinks in deposit bottles, not for the reason in strategy IS25, but because this practice allows transfer of food stamps into cash when the bottles are returned.

Diversity of household budgetary needs. Food budget management is also affected by such variables as dietary needs and preferences, time demands, geographical distance between residence and store, household size and composition, availability of transportation, income and food budget, and availability of storage space. These were not dealt with directly in the present study.

USDA averages used in this study. Whether the 1983 USDA average "Southern Region" expenditure figures (presented in Table 8) remain valid several years later is of minor importance because the effect of their inaccuracy would merely be a shift in the index from zero. Since the calculated IPEs averaged $-.34$, it can be assumed inflation has occurred, although such a shift could also result from sampling errors.

Data Analysis

This study employed nonparametric statistical methods which allowed elimination of some of the standard statistical assumptions for analysis of variance (Kerlinger & Pedhazur, 1973). The method is appropriate since the data are drawn from interviews which cannot be claimed as randomly selected.

Many of the recommended food-buying strategies cannot be classified entirely as related to budget management. Wise management includes important considerations beyond the scope of this study: nutritional needs, aesthetic meal preparation, and safe preservation and storage. For example, probably the longest-standing and most universally recommended money-saving strategy is the purchase of quantities of nutritious foods that can be prepared with minimum waste and stored so as to avoid spoilage. Such a strategy recognizes both nutrition and safety. Apparently it is so basic that some of the texts omit it from their lists as being too obvious.

Suggestions for Further Study

This study was confined to a limited geographic area in a community with a good mix of food stores. Future studies, in other markets, might include a broader range of competitive market situations, from the isolated non-competitive "company store" communities to trade centers with a wide range of wholesale outlets accessible to the public.

Support for the conclusions of the research in the form of replications with larger samples is desirable. Several strategy use measurements need more precise questionnaire wording. Development of additional methods for the unobtrusive gathering of data from food shoppers would be a significant contribution to this field of research.

Larger samples, as shown in table 24, allow the researcher to detect a greater number of significant relationships. Additional data variables, such as distance from workplace or residence to available food stores, would be needed to evaluate completely such variables as frequency of shopping and the value of planning trips in light of efficient shopping.

Educational software developers of consumer education simulations and games may benefit from the IPE concept. The USDA averages in this study are regionalized to southeastern United States, and were compiled in 1983. Wider application of the IPE concept should use the most recent averages available for the entire nation.

Implications for Textbook Writers

The product of this study was designed to be a more concise, up-to-date, and potentially more effective strategy listing for consumer educators to present in units on food budget management. A substitution of objective criteria for subjective considerations, as called for in consumer education by Engel, Kollat, and Blackwell (1973), would place emphasis on recommendations with empirical support. The findings of the study imply that textbook writers seeking to use objective criteria in teaching consumers about effective food buying strategies should include effective ways of teaching students to figure unit prices, stock ahead when prices are low, analyze recipe costs, use shopping lists, be their own butcher, try new

recipes, consider the time and fuel costs when planning food buying trips, avoid shopping when rushed, be attentive to quality, and be actively involved with the checkout process. Student consumers would benefit also from fostering a skepticism of checkout accuracy.

APPENDIX A

FLORIDA-APPROVED TEXTBOOKS CONTAINING FOOD BUDGET MANAGEMENT RECOMMENDATIONS With Subject Designation and Catalog Numbers for 1985-86

Chamberlain, V. M., Budinger, P. B., & Jones, J. P.
(1982). Teen guide (5th ed.). New York:
McGraw-Hill, 527 pp.

FUNDAMENTALS OF HOMEMAKING
73-959-0 Grades 9-12

Brinkly, Chamberlain, and Champion coauthored the fourth edition (1977), entitled Teen Guide to Homemaking. The expanded (by 144 pages) edition is the most comprehensive of the home economics texts reviewed. Home economics teachers in Buchholz High School (Gainesville, FL) consider it a reference text because the readability level is too difficult for many of the 12th grade students participating in the curriculum.

Clawson, E. U. (1984). Our economy: How it works (2nd ed.). Palo Alto, CA: Addison-Wesley, 362 pp.

CONSUMER EDUCATION
88-101-0 Grades 7-10

Primarily for junior high use, this text provides a wholistic explanation of our economic system. Five of the eight chapters tell product stories: "Canvas to Cutoffs" (about jeans); "Wheat to Bread"; the story of paper; petroleum; and the banking system. Each of these integrates the role of financing, energy, government, and product users. While the text emphasizes the importance of cost control for producers, it contains no mention of consumer buying strategies or behaviors.

Craig, H. (1982). Thresholds to adult living (3d ed.). Peoria, IL: Bennett, 564 pp.

FUNDAMENTALS OF HOMEMAKING
73-513-0 Grades 9-12

A 16-page consumer buying guide covers, in general terms, the topics of misleading seller practices and consumer rights and responsibilities, but makes no mention of food specifically. One third of the 17-page chapter on purchasing food is devoted to storage methods. Like many of the other texts reviewed, there is an overemphasis on such outdated issues as the grading of meats. Nothing is said about purchasing bulk vs. packaged foods, UPC scanning, evaluating advertisements, or selecting lean meats. The Teacher's Resource Guide for this text (1978) has 11 pages relating

to food buying. The learning activities are unimaginative and the vocabulary list of 19 terms includes the irrelevant "drawn" and "post exchanges". The unit pricing exercise is valuable for junior high students. Two pages of "additional information on food additives" is worthy of inclusion in the text.

Cronan, M. L., & Atwood, J. C. (1976). First foods (2nd ed.). Peoria, IL: Bennett.

EXPLORATION OF THE OCCUPATION OF HOME MAKING

73-520-0 Grades 7-9

Chapter 8 is entitled "Getting Your Money's Worth at Market." The content may be just as dated as the title. One area of emphasis is polite behavior in supermarkets! A basic discussion of gimmicks used in marketing is included, but not a list of consumer suggestions for dealing with them. This is probably suitable, with supplementation, for junior high students with a low potential for going much beyond this course in their schooling.

Dunn, M. D., & Peeler, M. Y. (1981). Living, learning, and caring. Lexington, MA: Ginn, 472 pp.

EXPLORATION OF THE OCCUPATION OF HOME MAKING

73-581-0 Grades 7-9

The section on buying and storing food contains 32 pages. The presentation offers hints for selecting and storing quality foods but the discussions of nutrition and saving money is in terms that are probably too general to serve the students well. Written on a basic level that can be misleading. For example, references to volume are metric with approximate avoirdupois equivalents, but 1 liter (1 quart) may lead to assumptions causing unwise consumer decisions.

Foster, J. A.; Hogan, M. J.; Herring, B. M.; & Gieseck-Williams, A. G. (1982). Creative living: Basic concepts in home economics. Encino, CA: Glencoe.

FUNDAMENTALS OF HOME MAKING

73-709-0 Grades 9-12

The section on food and nutrition was authored by B. M. Herring.

Goe, W. E. (1979). Consumer mathematics (3rd ed.). New York: Hartcourt Brace Jovanovitch, 472 pp. The activity book has 160 pages.

GENERAL MATHEMATICS

82-380-0 Grades 9-12

Chapter 2, "Food", has 36 pages. Goe focuses on the relationship between budgeting and timing. The exercises in unit pricing explore common multiples

and estimating, two practical devices not approached by other authors reviewed here. This book includes comparison on a nutritional level such as dry beans vs. cheese for protein. One of the activity book exercise deals with double coupon redemption, the consumer price index, another section deals with home freezer plans (containing an excellent insert with hints for saving with the home freezer).

Hodgetts, R. M., & Smart, T. L. (1982). Essentials of economics and free enterprise. Menlo Park, CA: Addison-Wesley, 431 pp.

ECONOMICS

88-102-0 Grades 9-12

Four of the five units in this text are presented from perspectives of producers and marketers. The fifth unit, "Economics and You," offers one chapter of 42 pages on consumer economics. Food purchasing is discussed first, in five pages. Considering the space, the presentation is sound. Headings included are types of food stores, figuring costs per serving, coupons, and quantity purchasing. No attempt to consider nutrition or grading is made.

Jelley, H. M., & Herrmann, R. O. (1978). The American consumer: Issues and decisions (2nd ed.). New York: McGraw-Hill, Gregg Division.

AMERICAN ECONOMY/CONSUMER EDUCATION

71-460-0 Grades 10-12

These authors, long associated with the American Council on Consumer Interests, list budgeting, wise buying principles, sources of consumer information, and "understanding the effects of advertising" in an opening section. Added later is a separate chapter of 20 pages, "Buying Food."

Kowtaluk, H. (1980). Discovering nutrition. Peoria, IL: Bennett, 224 pp.

EXPLORATION OF THE OCCUPATION OF HOMEMAKING

73-518-0 Grades 7-9

Within the 33-page unit on "Nutrition in the Kitchen" are eleven pages on buying food. Featured are comments on the components of a standard cereal box label and pointers on buying fresh produce, dairy, grains, meat, poultry, fish, and eggs. Open dating is covered, but lean meats, coupons, unit pricing, marketing gimmicks are not. A suggestion to "experiment with" the lower-priced generics and house brands seems sounder advice than the outright statements to "buy and use" them which other authors use when referring to non-advertised labels. The student workbook does little to prepare students for buying food wisely. The only activity

other than trite fill-in-the-blanks exercises is a requirement to respond to three fictitious letters of inquiry to a "Wise Shopper" columnist. The idea is interesting, but the text does little to prepare students for adequate responses and I suspect most students would lack stimulation to prepare the activity adequately. The teacher's guide devotes a little more than three pages to this chapter. Six related activities are suggested, and they are interesting, but the potentially convenient and productive strategy of using local newspaper food sections for critiquing ads and articles is not one of the recommendations.

Kravitz, W. W., Brant, V., & Reed, M. J. (1980). Consumer related mathematics (3rd ed.). New York: Holt, Rinehart, & Winston, 408 pp.

GENERAL MATHEMATICS
82-472-0 Grades 9-12

Food buying receives brief mention (4 pages) in the "Comparison Shopping" section. Both unit pricing and proportional computations are offered for making comparisons. The teacher's guide has one paragraph explaining that price is not the only consideration when comparison shopping.

Levy, L., Feldman, R., & Sasserath, S. (1976). The consumer in the marketplace (2nd ed.). Belmont, CA: Fearon-Pitman, 481 pp.

HOME ECONOMICS - CONSUMER EDUCATION
73-690-0 Grades 9-12

Chapter 6, "Purchasing Food and Drugs," includes subheadings absent in most of the other texts: comparing different forms of a product, selecting a store, shopping in more than one store, food stamps, trading stamps and other inducements (3 paragraphs), buying meat for the freezer, 'health foods,' and weight reduction. The workbook has three subsections, each 2 pages long. Each subsection's format follows the sequence of a vocabulary exercise, knowledge application, consumer mathematics, keeping informed, and consumer reaction. Follow-up of workbook activities by the teacher is vital for learning because the responses solicited are not fully covered in the text. The answer key could serve as supplemental teaching material.

Linder, B. L., & Selzer, E. (1977). You the consumer (2nd ed.). New York: Sadlier-Oxford, 190 pp.

HOME ECONOMICS - CONSUMER EDUCATION
73-696-0 Grades 10-12

Although not a comprehensive consumer text, this light, thin, paperback gives some coverage to food consumer strategies not found elsewhere: rain checks, brand loyalty, buying the specials, and marketbasket comparisons. A false sense of security may come from readers believing the following excerpt:

At one time, food processors added various chemicals which could have been hazardous to health, and consumers had no knowledge of their use or of their potential danger. Laws now prohibit this practice.

An activity, "Do your own comparison shopping" is included in the accompanying Research and Discovery workbook. The marketbasket descriptions included need revision and updating. A better approach may be to suggest teachers provide local listings. A single page per chapter is the only coverage in the brief teacher's guide. Nonetheless, it is quite comprehensive, and is also available bound in cloth.

Maedke, W. O., Lowe, R. E., Boardman, C. C., & Malouf, C. A. (1979). Consumer Education. Chicago: Glencoe, 520 pp.

HOME ECONOMICS - CONSUMER EDUCATION
73-692-0 Grades 10-12

Unit 12 is entitled "Buying Food." The four chapters cover nutrition, wise food buying practices, consumer problems related to food buying, and drugs and cosmetics. Nothing in the table of contents relates to advertising. The opening chapter is of a general nature, including a brief section on consumer problems, and makes no mention of food-related consumer complaints. The second section, on wise food buying practices, narrates a couple's trip through a supermarket. They select specific purchases, which are always the wise ones, and the authors tell the reader why. The 22 shopping rules are well-reasoned and sound, but far from comprehensive. Section 3 contains a discussion of inflation of food prices, cooperative buying, food stamps, cents-off labeling, and automated check-outs. An Activity Guide places emphasis on consideration of food's relation to a household budget. The authors suggest, for example, that food and non-foods be separated in the shopping cart. This separation process, with two

separate register tapes, could serve to underscore for a young shopper the relation of actual food costs to some other household expenses. The activity suggestions in the teacher's manual are brief and only marginally relevant.

Miller, R. L. (1978). Economics today and tomorrow.

New York: Harper & Row, 416 pp.

SOCIAL STUDIES - CONSUMER EDUCATION

88-144-0 Grades 9-12

Chapter 4, entitled "Buying Essentials - Food and Housing," contains only 11 pages. Rather than attempting a comprehensive discussion in this brief space, Miller focuses on several areas which should stimulate a search for supplemental materials: electronic grocery shopping in Sweden, the pitfalls of the non-uniform grade designations in produce, and home preparation vs. fast food sources of meals. The instructor's manual, by Kevin Gleason, is simply a summary of the textual material with closely related objective and essay examinations. Like the text and instructor's manual, the study guide covers the entire area in so few pages that only a few concepts are developed. The main ones are Engel's Law and the value of time.

Plunkett, W. R. (1979). The consumer in America. New

York: Hartcourt Brace Jovanovich, 406 pp.

SOCIAL STUDIES - CONSUMER EDUCATION

88-143-0 Grades 7-10

Part three concerns buying to meet needs. Chapter 7 (23 pages), "Guidelines for Buying" covers department stores, services, even garage sales, but not food. Chapter 8 (33 pages) is entitled "Buying Food," but only 9 of those pages cover shopping. The rest of the chapter is on nutrition (5 pages) and food preparation and storage (13 pages). One graphic offers 11 tips on ways to stretch the food dollar, but doesn't give much detail. The missing detail isn't in the text, either. The rule of thumb that frozen convenience foods are more expensive includes discussion of exceptions, such as orange juice concentrate. One valuable section discusses the check-out process in greater detail than the other texts reviewed.

Tsumara, T. K., Jones, L. H., & Bonekemper, T. W.

(1984). Health and safety for you (6th ed.). New York: McGraw-Hill.

HEALTH

73-475-0 (5th ed.) Grades 9-12

This is the text adopted in Alachua County for Health I - Life Management Skills. As suggested by the title, the emphasis is on prevention and safety

measures in life experiences. The chapter entitled "Nutrition, Labels, and the Consumer" devotes one paragraph to unit pricing, which is the only mention of cost considerations. Even so, the conceptual approach of the authors (one of whom, Bonekemper, is a physician) allows many opportunities for interjection of supplemental materials. A unit on consumer health presents sound basics for wise buying of health services, some of which are applicable to the purchase of consumables.

Warmke, R. F., & Wyllie, E. D. (1983). Consumer economics (10th ed.). Cincinnati: South-Western, 505 pp.

SOCIAL STUDIES - CONSUMER EDUCATION
88-196-0 (9th ed.) Grades 10-12

Chapter 5, "Buying Food," is primarily focused on food purchasing. The discussion covers grades, labels, generics, trading stamps, and advertisements. This text, after so many revisions, is packed with explanations about our economic system. It is my feeling that the coverage of that economic activity engaged in by nearly everyone throughout life--food buying--deserves a more careful presentation.

APPENDIX B

SELECTED RECENT TEXTBOOKS CONTAINING FOOD BUDGET MANAGEMENT RECOMMENDATIONS BUT NOT APPROVED FOR USE IN FLORIDA 1985-86

Texts are adopted for 6-year cycles in Florida. The cycle is near the end in many subject areas. Many current texts will be continued in updated editions, and others will be considered for inclusion. Some related texts which will be considered are listed here. Many Florida teachers currently use the following as supplemental resources. These texts may already be adopted in other parts of the nation or in private schools.

Antell, G., & Harris, W. (1980). Economics for everybody. New York: Amsco School Publications, 374 pp.

Ten brief chapters on the consumer are considered before the units on kinds of business organizations, role of government, money and banking, trade, and a comparison of economic systems. The presentation seems logical and simple to follow, but some relatively unimportant areas (USDA grades of meats) receive disproportionate depth.

Campbell, S. R. (1984). The confident consumer (2nd ed.). South Holland, IL: Goodheart-Willcox, 368 pp.

This consumer economics text is divided into six sections, two of which contain discussions relating to buying food. Many realistic case studies present illustrations of shopping situations. A 36-page chapter entitled "The Grocery Cart" contains sections on nutrition, menu planning, store selection, charts on cheese types and meat cuts provided by marketing associations, supermarket etiquette, food storage, and selection

of restaurants (which combine to reduce the presentation of shopping tips and strategies to 9 pages). The predominance of black and white photos tends to belie the fact that most of the material is contemporary.

Green, D. A. (1983). Consumers in the economy. Cincinnati: South-Western, 471 pp.

"Nutrition and Food" and "Shopping for Food" are each 19-page chapters. The subheadings under food shopping are shopping lists, unit price, quantity buying, government grading, coupons, reading labels, marketing gimmicks, government responsibilities, and rain checks.

Kimbrell, G. & Kern, S. T. (1984). The savvy consumer!. Bloomington, IL: McKnight, 320 pp.

The theme of this book is to aid in making "satisfying purchases and to consistently get the greatest value for the money spent." Chapter 4, on food, covers the topic in 25 pages. The coverage given to the types of food waste instead of a simple admonishment to readers to not waste food should be helpful. Likewise, the discussion of effects of values and lifestyle on food costs is both concise and clear but perhaps misleading. For example, the conclusion can be made from this text that four hours a day can be routinely saved by using convenience foods instead of preparing homemade meals. Another misleading statement is "trading stamps add two to two and a half cents to each dollar of food purchased." That implies consumers pay that much of a premium in the stores that give trading stamps, whereas research shows the costs of the stamps come from overall promotional budgets resulting in retail prices no higher than local competition. Eight types of stores are mentioned under "Deciding where to shop." The short paragraph devoted to each type generally fails to convey the economic distinctions between them,

McConnell, C. R. (1978) Economics (7th ed.). New York: McGraw-Hill, 954 pp.

This is a comprehensive economics text best suited for a college-level course. Some of the topics covered are price and output determination, rural and urban economics, trade patterns, with the focus more on production and marketing than on consuming.

Petersen, H. C., & Lewis, W. C. (1985). Free enterprise today. Cincinnati: South-Western, 499 pp.

This text is organized into seven instructional units. Chapter 22, "Spending Money Wisely" includes four rules for good consuming: get reliable information, buy in established stores, pay cash if possible, know the people with whom you are dealing.

Wilson, J. H., & Clark, J. R. (1984). Economics: The science of cost, benefits and choice. Cincinnati: South-Western, 554 pp.

The authors examine the costs and benefits of alternative solutions to economic problems. Readers are led through the process in a logical fashion and, if able to draw inferences from the presentation, will find much useful information for everyday food buying. Specific food merchandising techniques (and buyer defense strategies) are not covered.

APPENDIX C

A COMPILATION AND CONDENSATION OF FOOD BUDGET MANAGEMENT STRATEGIES RECOMMENDED IN SELECTED CONTEMPORARY SOURCES

This section consists of two parts. The first is a recapitulation of the price-efficient strategies listed in each of the 13 sources selected: the USDA, a New York extension booklet, and 11 Florida-approved texts for junior high and high school consumer education, homemaking, and consumer mathematics courses. Second, these strategies are compiled into 61 summary strategies. The code numbers assigned in Part I are used for strategy citations in Part II. The instrument on which the 61 summary strategies were presented to the local panel of practitioners is reproduced in Appendix D.

Part I

Food Budget Management Strategies Listed by Source

Peterkin, B. B., & Junker, C. C. (1982). Your money's worth in foods (Home and Garden Bull. 183). USDA Human Nutrition Information Service.
[Prefix PJ]

- PJ01 Put yourself on a food budget. Select economical foods that are nutritious. (p. 1)
- PJ02 Prepare a shopping list. (p. 4)
- PJ03 Keep track of the food you put in the garbage or disposal for a week or two. (p. 4)
- PJ04 Read the food advertisements and buy featured foods. (p. 6)
- PJ05 Build your menus around the week's specials.

- PJ06 Stock ahead on specials if you have the necessary storage space. (p. 6)
- PJ07 Use coupons if they are available for the foods you usually buy. (p. 6)
- PJ08 Avoid impulse buying. (p. 6)
- PJ09 Try new menus and recipes. (p. 6)
- PJ10 Weigh the extra costs of convenience foods against the value of preparation time. (p. 6)
- PJ11 Figure unit prices. (p. 7)
- PJ12 Consider time and transportation costs related to the store and frequency you select. (p. 7)
- PJ13 The search for the best produce buys extends beyond the fruit and vegetable displays to canned goods, frozen foods, and dried food sections. (p. 7)
- PJ14 Compare the cost per serving as well as the unit cost. (p. 9)
- PJ15 Limit purchases of perishable foods. (p. 10)
- PJ16 Take advantage of seasonable abundance. (p. 10)
- PJ17 Try lower priced brands and generics. (p. 10)
- PJ18 Season and prepare sauces for frozen vegetables yourself. (p. 10)
- PJ19 Cereals you cook yourself are almost always less expensive than the ready-to-serve ones. (p. 11)
- PJ20 Watch for day-old bread and baked goods. (p. 11)
- PJ21 Use nonfat dry milk. (p. 11)
- PJ22 Whole chicken is usually a better buy than chicken pieces. (p. 13)
- PJ23 Look for USDA grades on meats. (p. 13)
- PJ24 Serve smaller portions of meat, poultry, and fish and fill in meals with more economical foods--potatoes, rice, macaroni products, and breads. (p. 13)
- PJ25 Use leftover meat in casseroles. (p. 14).

- PJ26 Cut down on purchases of foods from the fifth food group--fats, sweets, and alcohol. (p. 14)
- PJ27 Check your register receipt at home. (p. 15)
Biesdorf, H. B., Buris, M. E., & Swanson, J. (1980).
Be a better shopper (Misc. Bull. No. 86).
Ithaca, NY: Cornell University.
[Prefix NY]
- NY01 Wrap fresh foods before storing to retain freshness and extend usefulness.
- NY02 Plan ahead to use leftovers creatively. Avoid waste.
- NY03 Eat at home. Carry your lunch.
- NY04 Serve water with meals. Order water as your beverage when eating out.
- NY05 Raise your own food. Can or freeze the surplus.
- NY06 Try new ways to prepare food.
- NY07 Buy soft drinks in deposit bottles. Return the bottles promptly for credit.
- NY08 Form or join a food co-op.
- NY09 Use the freezer efficiently.
- NY10 Don't purchase labor (delivery service or convenience foods) if it is less expensive to do it yourself.
- NY11 Use low cost nutritional snacks such as raw carrots and celery.
- NY12 Eat a nutritious diet to save on medical budget. The side effects of a reduced medical budget affect food costs [i.e., obese people eat more and vitamin and mineral supplements probably are not needed.]
- NY13 Shop from a list, figure the cost per serving.
- NY14 Stock up on specials if feasible.
- NY15 Watch for specials and coupons on items that the family eats.
- NY16 Watch for rebate offers. Save proofs-of-purchase for likely future rebates.

- NY17 If your store offers trading stamps, redeem them for grocery items as there is little advantage in allowing them to accumulate for "gifts" which end up having less per-stamp redemption value.
- NY18 Choose foods by grade and use lower grades rather than choice or whole product.
- NY19 Read ads and watch nutritional value.
- NY20 Watch prices and compare sales slip with groceries purchased. Keep a running record so you can analyze the food budget.
- NY21 Buy at discount outlets, sharing case lots with friends or relatives.
- NY22 Don't buy fad diets or multi-vitamins. Avoid imported specialty foods and foods that are sold in expensive packaging.
- NY23 Ask for rainchecks if the featured item is out of stock.

Chamberlain, V. M., Budinger, P. B., & Jones, J. P. (1982). Teen guide (5th ed.). New York: McGraw-Hill.
[Prefix TG]

- TG01 Do not shop when you are hungry. (p. 410)
- TG02 Make a shopping list and stick to it. (p. 410)
- TG03 Plan menus around refundable items. (p. 410)
- TG04 Save labels for possible future refund offers. (p. 410)
- TG05 Use on-hand perishables in place of items on your shopping list. (p. 412)
- TG06 Use coupons whenever possible. (p. 412)
- TG07 Shop on "double-off" coupon days when possible. (p. 412)
- TG08 Buy vegetables and fruits in season, when they are cheaper. (p. 412)
- TG09 Buy foods you can prepare rather than prepackaged, processed foods. (p. 412)

- TG10 Buy whole chickens and unboned meat. (p. 412)
- TG11 Buy large sizes if you can use them, but check the unit price to be sure it is cheapest. (p. 413)

Craig, H. (1982). Thresholds to adult living (3d ed.). Peoria, IL: Bennett.
[Prefix CR]

- CR01 Become familiar with "house" brands of items you buy frequently. (p. 457)
- CR02 Avoid shopping when you are tired. (p. 458)
- CR03 Learn to recognize worthwhile sales and take advantage of them. (p. 458)
- CR04 Overweight people not only spend more for food, but waste money on reducing fads. (p. 461)
- CR05 Watch papers for sales and coupons. (p. 461)
- CR06 Shop when supermarket is not crowded and soon after fresh produce arrives. (p. 462)
- CR07 Try to shop alone for food. (p. 462)
- CR08 Encourage all family members to eat varied foods; special dish preparation is time-consuming and costly. (p. 462)
- CR09 Serve smaller portions to help avoid waste. (p. 462)
- CR10 Use less expensive cuts of meats and protein substitutes. (p. 462)
- CR11 Look for imaginative new ways to use leftovers. (p. 462)
- CR12 Compare both unit prices and costs per serving. (p. 462)
- CR13 Lower grades are cheaper and equally nutritious. (p. 462)
- CR14 Limit money spent on bottled drinks, snacks that have little food value, and alcoholic beverages. (p. 463)

- CR15 Buy fresh fruits in season when in plentiful supply. (p. 463)
- CR16 If you have freezer space, buy meat and fish when prices are low. (p. 464)
- CR17 Prices are higher in convenience stores. (p. 465)
- Cronan, M. L., & Atwood, J. C. (1976). First foods (2nd ed.). Peoria, IL: Bennett.
[Prefix CA]
- CA01 Compare unit prices. (p. 140)
- CA02 Learn about and use the weekly specials. (p. 141)
- CA03 Be aware of merchandising gimmicks. (p. 143)
- CA04 Buy produce in season. (p. 144)
- CA05 Make a shopping list, write the prices on list, and compare with the register tape. (p. 145)
- Dunn, M. D., & Peeler, M. Y. (1981). Living, learning, and caring. Lexington, MA: Ginn.
[Prefix DP]
- DP01 Plan menus, check foods on hand, write down what you need to buy, and then prepare a shopping list. (p. 287)
- DP02 Plan your buying so you can use all the food you buy. (p. 287)
- DP03 Shop the sales if you can use the food. (p. 290)
- DP04 Buy fresh fruits and vegetables in season, when they are plentiful. Read the newspaper for reports on plentiful foods. (p. 301)
- DP05 Consider buying "seconds" if the price is attractive and you can use the merchandise quickly. (p. 302)
- DP06 Day-old breads and bakery products cost less. (p. 306)
- DP07 Ready-to-eat cereals cost more per serving than cereals which must be cooked. (p. 308)

DP08 Use nonfat dry milk, perhaps mixing it with fresh milk. (p. 313)

Goe, W. E. (1979). Consumer mathematics (3rd ed.).
New York: Harcourt Brace Jovanovitch.
[Prefix G]

- G01 Prepare lunches at home rather than buy them in cafeterias. (p. 52)
- G02 Use a proportion to compare costs and find which size is the better buy. (p. 53)
- G03 Buy less expensive cuts of meat and cook them skillfully. (p. 64)
- G04 Use low-cost meat substitutes. (p. 64)
- G05 Take advantage of supermarket sales and discount coupons. (p. 64)
- G06 Eliminate impulse buying. (p. 69)
- G07 Pay careful attention to nutrition. (p. 69)
- G08 Buy fresh foods in season and quality items on sale. Don't overstock to the point of eliminating space for other foods coming into season. (p. 72)
- G09 Consider the appliance and power costs of owning a freezer, not just the savings from bulk purchases. (p. 74)
- G10 Shop the thrift shops of food processing plants. (p. 74)
- G11 Consider store brands and no-frills labels. (p. 74)
- G12 Use a shopping list of what you need to buy. However, be willing to make substitutions when you find unexpected bargains. (p. 74)
- G13 Try new recipes. (p. 74)
- G14 Use hot cereals, which cost less than ready-to-eat varieties. (p. 74)
- G15 Plan your food buying a week at a time. (p. 75)
- G16 Join a food buying club. (p. 77)

G17 Keep records of what you spend for food.
(p. 80)

G18 Eat out less. (p. 80)

Hodgetts, R. M., & Smart, T. L. (1982). Essentials of economics and free enterprise. Menlo Park, CA: Addison-Wesley.
[Prefix HS]

HS01 Comparison shop the ads to select a store, and buy the specials your family likes to eat. (p. 378)

HS02 Major food purchases should never be made at the convenience food stores. (p. 379)

HS03 Be careful about spending too much time shopping and driving around town. (p. 380)

HS04 Consider private brands and generics. (p. 380)

HS05 Carry a hand calculator to the market for figuring cost per serving and unit pricing to evaluate comparisons. (p. 381)

HS06 Save and use coupons for the items you use. (p. 381)

HS07 Evaluate the advantages and disadvantages of quantity purchasing such items as sides of beef. (p. 382)

Jelley, H. M., & Herrmann, R. O. (1978). The American consumer: Issues and decisions (2nd ed.). New York: McGraw-Hill, Gregg Division.
[Prefix JH]

JH01 Read product labels carefully, for ingredients, nutritional content, and sometimes dating information. (p. 143)

JH02 Plan menus wisely considering nutrient sources, family preferences, some flexibility for unexpected guests, and the cost of ingredients. (p. 143)

JH03 Take advantage of fresh produce during the harvest season. (p. 143)

JH04 Watch the food pages of the newspaper for ads, recipes, product information and analysis by home economists. (p. 143)

- JH05 Plan meals around the meat specials, stock ahead if you have storage facilities and you can use the featured item. (p. 144)
- JH06 Use less expensive substitutes for meat as a source of animal protein--cheese, canned fish, and eggs. It is also possible to substitute vegetable protein sources such as dried peas and beans. (p. 145)
- JH07 Decide if the convenience value is worth the extra price of foods designed to save preparation time. (p. 147)
- JH08 Make shopping lists to avoid extra trips which have both time and transportation costs. (p. 149)
- JH09 Try to find a supermarket that does a high volume with lowest overhead costs. (p. 149)
- JH10 Learn how to use label information, both nutritional analysis and open dating. (p. 150)
- JH11 Be aware of standard grades and quality differences. (p. 155)

Kowtaluk, H. (1980). Discovering nutrition. Peoria, IL: Bennett.
[Prefix DN]

- DN01 Unit pricing makes it easier for you to shop. (p. 149)
- DN02 Use nutrition labelling. Buy the food that gives you the most nutrition for your money. (p. 151)
- DN03 Check newspaper ads for sales and coupons. (p. 152)
- DN04 Make up a shopping list and stick to it except if you find a food bargain that can substitute for one on your list, buy it. Avoid impulse buying. (p. 152)
- DN05 Don't shop when you're hungry. (p. 152)
- DN06 Experiment with generic foods. (p. 152)

- DN07 Be aware you pay extra for foods fortified with vitamins and minerals. You probably don't need them. (p. 152)
- DN08 Use fresh fruits and vegetables in season. (p. 152)
- DN09 Cook extra amounts of meatloaf, chicken, fish and meat. Use the leftovers for nutritious sandwiches instead of buying cold cuts. (p. 152)
- DN10 If produce is packaged or unitized, you do not have to buy the whole package in most stores. Have the clerk repackage the exact quantity you wish to buy. (p. 154)
- DN11 Look for specials on day-old baked goods. (p. 155)
- DN12 Avoid products with added sugar and fats. Not only are there adverse nutritional considerations, but these contribute empty calories to the consumer. (p. 155)
- DN13 Don't compare the price per pound for different cuts of meat. Instead, figure out the price per serving. (p. 156)
- DN14 Compare the grade and size of eggs with the price. (p. 158)
- Levy, L., Feldman, R., & Sasserath, S. (1976). The consumer in the marketplace (2nd ed.). Belmont, CA: Fearon-Pitman.
[Prefix LF]
- LF01 Consider the time and transportation costs connected with the store you select. (p. 49)
- LF02 Buy when you are relaxed and unhurried. (p. 51)
- LF03 Be alert for such infrequent buying opportunities as going-out-of-business sales, grand openings, anticipated strikes, etc. (p. 156)
- LF04 Shop alone, with a shopping list. (p. 156)
- LF05 Figure the cost per serving. (p. 157)
- LF06 Take advantage of unit price information on shelf tickets. (p. 157)

- LF07 Buy advertised specials if they represent price reductions and they are on items you will use. (p. 158)
- LF08 Shop in different stores, taking advantage of the strong points of each. (p. 159)
- LF09 Carefully weigh the advantage of convenience foods (example - frozen french fries) against the preparation time and savings afforded by using the traditional product (whole white potatoes). (p. 159)
- LF10 Buy the quality appropriate for the recipe (example, cheap canned tomatoes or "seconds" for casseroles, first quality fresh tomatoes for salads). (p. 159)
- LF11 Consider the promotional costs vs. redemption value of trading stamps. (p. 160)
- LF12 The largest portion of the food budget is meat, poultry, and seafood. By knowing what to look for when buying them, it is possible to save money without sacrificing quality. (p. 163)
- Maedke, W. O., Lowe, R. E., Boardman, C. C., & Malouf, C. A. (1979). Consumer education. Chicago: Glencoe.
[Prefix CE]
- CE01 Stores offering services such as 24-hour operation and contests usually have higher prices. (p. 412)
- CE02 Arrange shopping list according to store layout. (p. 412)
- CE03 Plan menus for the week based on advertised specials. (p. 412)
- CE04 Do not buy large quantities if there is doubt about some of the merchandise spoiling before it will be used. (p. 413)
- CE05 Plan to shop when the store is not crowded and you are not hungry. (p. 413)
- CE06 Pay more attention to net weight (and drained weight, if applicable) than to package dimensions. (p. 413)

- CE07 Stock ahead on specials if the items will be used in a reasonable time period. (p. 414)
- CE08 Seek out less expensive cuts of meat. (p. 415)
- CE09 Buy day-old baked goods from marked down displays. (p. 418)
- CE10 Limit purchases of "convenience foods" that have been premixed or processed. (p. 418)
- CE11 Buy fresh produce in season. (p. 419)
- CE12 Buy nonfat dry milk. (p. 419)
- CE13 Consider food items that have been marked down, if the family will enjoy them and they are not in rusted or leaking cans. (p. 419)
- CE14 Keep food and nonfood items separate and charge only food items against the food budget. (p. 419)
- CE15 Shop at more than one store. (p. 422)
- CE16 Join a food cooperative if one is available. (p. 423)
- CE17 Check the register tapes against the merchandise received. (p. 429)

Plunkett, W. R. (1979). The consumer in America. New York: Harcourt Brace Jovanovich.
[Prefix P]

- P01 Check the supermarket ads in your newspaper. Plan meals that include foods that are on sale and fresh fruits and vegetables in season. Clip and use coupons.
- P02 Keep a grocery list. Shop with your list in hand, and buy only those items on your list.
- P03 Compare the cost per unit of products. Read labels for ingredients, nutritional information, and the number of servings.
- P04 Buy small quantities of fresh vegetables and fruit.
- P05 Pay for your groceries with cash. Keep track of your food budget by recording each amount you spend.

- P06 Ask for your money back if a product is spoiled or defective. Keep all your receipts so you can prove where you bought the product.
- P07 Don't throw food away. Use leftovers in soups, casseroles, and sandwiches.
- P08 Eat out less.
- P09 Cut out packaged snacks.
- P10 Compare name brands with house brands, which are usually cheaper.
- P11 In general, do some of the work yourself. Buy fresh instead of prepared products. Buy whole chickens and cut them up. Buy larger pieces of beef and make beef cuts yourself. Freeze some.

Part II
Compilation of Food Budget Management
Strategies from Part I Sources

Planning Strategies

- | <u>Number</u> | <u>Recommendation and Source Code from Part I</u> |
|---------------|--|
| P 1 | Plan menus a week at a time. This strategy was listed in the foregoing section as DP01, G15, CE03, and as part of PJ01, TG05, and JH02. When planning meals, do not customize them (CR08) because it costs more to serve diversified menus. |
| P 2 | Always make a shopping list. This was mentioned in Part I as PJ02, TG02, CA05, DP01, JH08, DN04, LF04, PO2 and as part of G12 and CE092. |
| P 3 | Organize your shopping list (from CE02). |
| P 4 | Read ads for at least two competing food stores before you shop. This recommendation is derived from PJ04, NY19, CR05, CA02, HS01, JH09, DN03, and P01. This incorporates a related suggestion (DP04 and JH04) to read newspaper agricultural reports and other news about food. |
| P 5 | Plan menus around seasonable produce. This suggestion was offered as JH03 and DN08 and formed part of PJ04, CE03, and P01. |
| P 6 | Plan menus around meat and fish specials. PJ05, TG03, JH05, DN08, CE03, and P01 recognize the most expensive item in the meal is generally the meat. |

- | <u>Number</u> | <u>Recommendation and Source Code from Part I</u> |
|---------------|--|
| P 7 | Try new recipes and menus. PJ09, NY06, and G13 recommended this strategy. |
| P 8 | Consider value of time and fuel. Plan carefully to minimize trips and shopping time, according to PJ12, NY10, HS03, and LF01. |
| P 9 | Be open to new brands of familiar products, and new products (from PJ13 and CR11). |
| P10 | Join food cooperative or buying club. Using this strategy, from NY08 and G16, allows purchase at or near wholesale prices. |
| P11 | Avoid "convenience" stores. Strategies reflecting this are NY10, CR17, HS02, and CE01. |
| P12 | Avoid buying non-foods in grocery stores (from CE01). |
| P13 | Clip and organize coupons. Plan to redeem them on items normally purchased--rather than buying a product for the prime reason you have a coupon for it--according to PJ07, NY15, TG06, CR05, G05, HS06, DN03, and P01. A related suggestion in NY16 and TG04 concerns manufacturer's rebate offers. Since it would be difficult to track those rebate amounts as they relate to food expenditures, that suggestion was not presented as a separate strategy in this study. |
| P14 | Save high value coupons for Double Coupon redemption days (from TG07). |
| P15 | Save trading stamps, redeem them for food where appropriate (from NY17 and LF11). |

In-Store Strategies

- | | |
|------|--|
| IS 1 | Shop in at least 2 competing stores (from LF08 and CE15). |
| IS 2 | Buy only those items on the shopping list (from G12, DN04, and P02). |
| IS 3 | Shop alone (from CR07 and LF04). |
| IS 4 | Shop when store is not busy (from CR06 and LF04). |
| IS 5 | Pay with cash (from CE05). |

- | <u>Number</u> | <u>Recommendation and Source Code from Part I</u> |
|---------------|--|
| IS 6 | Compare unit prices. This is one of the most basic of recommendations, as it appears in PJ11, TG11, CR12, CA01, G02, HS05, DN01, LF07, and P03. A variation having to do with egg sizing was offered as DN14 but is not considered a separate strategy in this listing because the margin of error from failure to employ the strategy is unlikely to exceed a dime per week in any household. |
| IS 7 | Figure unit cost after coupons; the smaller sizes may be cheaper (from TG11). |
| IS 8 | Use store, or "house" brands and generic-labelled products. This and a related recommendation to explore various grades of foods for different recipe purposes were mentioned in PJ17, CR01, G11, HS04, DN06, LF10, and P03. |
| IS 9 | Buy large sizes for economy (from TG11). This was probably a good rule for many years, but a better statement of the idea is found in I6, comparing unit prices. |
| IS10 | Watch the checker tally your order (from CE17). |
| IS11 | Figure cost per serving on meats. The unit price can be very deceptive due to fat and bones, a fact recognized in PJ14, NY13, CR12, HS05, DN13, LF05, CE06, and P03. |
| IS12 | Buy meats in primal cuts (from HS07 and P11). If you have the freezer space, you can cut steaks, chops, and roasts and wrap them for many meals. This parallels strategy L11. |
| IS13 | Stock ahead when prices are low. This was mentioned in Part I as PJ06, NY14, CR03, DP03, G08, LF06, and CE07. |
| IS14 | Be alert to promotional packaging--bonus content, cents off, rebates (from DP05, HS01, DN07, and LF03). |
| IS15 | Learn how to interpret dating (from JH10). Dairy and bakery products near the end of the market period should be reduced in price. If the customer asks for a discount on older merchandise, it is frequently given. |

- | <u>Number</u> | <u>Recommendation and Source Code from Part I</u> |
|---------------|--|
| IS16 | Learn how to interpret USDA grades (from PJ23 and JH11). |
| IS17 | Read nutritional labels for content (from NY12, G07, JH01, DN02, and P03). The importance of an overall awareness of nutrition principles is stressed in most of the texts. Further, nutrition instruction is assumed to be presented as a compliment to any unit on price efficiency. |
| IS18 | Avoid impulse buying (from PJ08, G06, and DN04). |
| IS19 | Shopping when hungry plays into the marketer's hand: the delicatessen and bakery aromas, elaborate displays of snack items await vulnerable consumers. These items are more expensive than foods prepared in the home, according to TG01, DN05, and CE05. |
| IS20 | Shopping when tired (from CR02 and LF02) may lead to shoppers' "letting their guard down" and forgetting some of the other recommendations such as P13, IS6, and IS10. |
| IS21 | Shopping when hurried (from LF02) also may cause one to overlook the same perils listed in IS20. |
| IS22 | Don't buy more than you will use in a short time period (from DN10, CE04, and P04). |
| IS23 | Buy small quantities of perishables (from PJ15 and DN08). |
| IS24 | Check day-old bakeries, close-out counters, roadside produce stands, etc. As noted by PJ20, NY21, DP06, G10, DN11, and CE09, volume purchases can make special trips worthwhile. |
| IS25 | If you use soft drinks, buy them in deposit bottles and then return for refunds promptly (from NY07). |
| IS26 | If your store uses UPC scanners, use a marker to copy shelf price on to your selection (from NY20 and CA05). |
| IS27 | Ask for rain-checks on specials (from NY23 and CA03). |
| IS28 | Ask for refunds on defective goods (from P06) or return them for exchange. |

Number Recommendation and Source Code from Part I

- IS29 Look for in-store specials (from CE13).
- IS30 Dented cans and split packages can be bargains, but do not buy them if cans are bulging or seeping (from DP07 and CE13).

Life Style, or Preference Strategies

- L 1 Use hot cereals, they're cheaper (from PJ19, DP07, and G14).
- L 2 Buy juice concentrates, add your own water (from PJ10). Another strategy, that of using non-fat dry milk as a substitute for bottled milk, appeared as PJ21, DP08, and CE12. Since the principle of adding water at home is common to both using juice concentrates and using dry milk, the two recommendations were combined at this point in the study.
- L 3 Buy meat substitutes or cheaper cuts. Resources NY18, CR10, G04, JH06, and CE08 contain the recommendation to experiment with vegetable protein entrees or cheaper cuts of meat.
- L 4 Buy whole chickens, cut for frying or baking yourself. This suggestion appears in the USDA listing (PJ22) and textbooks as TG10 and P11.
- L 5 Plan ahead to use leftovers creatively. Avoid waste. The wording varies considerably, but the idea comes through in PJ03, NY02, CR11, DP02, G03, DN09, CE04, and P07.
- L 6 Store perishable foods promptly and appropriately (from NY01, G08, JH05, and LF03). A strategy to "use the freezer efficiently" (NY09, CR16, and G09) may tie in here but it was excluded from the final listing because it was deemed more of a way of saving on the utility budget than on food.
- L 7 Review the cash register tape when unpacking the grocery order. (PJ27, NY20, CE17, and P05). This supplements watching the checker (CA05).
- L 8 Keep price records (from NY20, which makes available color-coded forms elaborately designed to assist in analyzing the data recorded by shoppers.

- | <u>Number</u> | <u>Recommendation and Source Code from Part I</u> |
|---------------|---|
| L 9 | Avoid foods high in sugars, fats, salt (from PJ26, CR14, and DN12). One specific recommendation related to this idea concerned the substitution of nutritional snacks such as raw carrots and fruit for the commercially packaged snacks (NY11, JH01, DN12, and P09). Another (PJ18) suggested avoiding the frozen vegetables sold with sauces. |
| L10 | Analyze recipe costs. This is a partner of L8 (from JH02 and CE06). |
| L11 | Be your own butcher: cut steaks and stew meat from large roasts. In slightly different form perhaps, but mentioned as TG09, JH01, and CE01. |
| L12 | Preserve fresh fruits and vegetables. Learn safe canning and freezing techniques (from PJ16, NY05, TG08, CR15, and CA04). |
| L13 | Eat out less frequently (from NY03, G18, and P08). |
| L14 | Stay slim (from NY04 and CR09). |
| L15 | Serve smaller portions (PJ24 and CR09). |
| L15 | Serve water with meals (NY04). |

APPENDIX D

POLL INSTRUMENT FOR USE WITH
LOCAL PANEL OF CONSUMER EDUCATORS

What is your opinion of these money-saving tips (or shopping strategies)? Specifically, if you were asked to assess strategies for possible inclusion in a module on food buying, from a resource management perspective, would you include the items on this list?

Please respond using a 7-point scale:

7	+++	I would emphasize this
6	++	I'd be sure to mention
5	+	might mention, not too important
4		probably would not teach this
3	-	agree only with qualifiers
2	--	I don't understand this one
1	---	I would advise AGAINST this

PLANNING STRATEGIES

	---	--	-	0	+	++	+++
Plan menus a week at a time	1	2	3	4	5	6	7
Always make a shopping list	1	2	3	4	5	6	7
Organize your shopping list	1	2	3	4	5	6	7
Read ads for at least 2 competing food stores before you shop	1	2	3	4	5	6	7
Plan menus around seasonable produce	1	2	3	4	5	6	7
Plan menus around meat and fish specials	1	2	3	4	5	6	7
Try new recipes and menus	1	2	3	4	5	6	7
Consider value of time and fuel	1	2	3	4	5	6	7
Be open to new brands, products	1	2	3	4	5	6	7
Join food cooperative or buying club	1	2	3	4	5	6	7
Avoid "convenience" stores	1	2	3	4	5	6	7
Avoid buying non-foods in groceries	1	2	3	4	5	6	7
Clip and organize coupons	1	2	3	4	5	6	7

Please respond using a 7-point scale:

7	+++	I would emphasize this
6	++	I'd be sure to mention
5	+	might mention, not too important
4		probably would not teach this
3	-	agree only with qualifiers
2	--	I don't understand this one
1	---	I would advise AGAINST this

--- -- - 0 + ++ +++

Save high value coupons for Double Coupon redemption days 1 2 3 4 5 6 7

Save trading stamps, redeem them for food where appropriate 1 2 3 4 5 6 7

IN-STORE STRATEGIES

Shop in at least 2 competing stores 1 2 3 4 5 6 7

Buy only items on your shopping list 1 2 3 4 5 6 7

Shop alone 1 2 3 4 5 6 7

Shop when store is not busy 1 2 3 4 5 6 7

Pay with cash 1 2 3 4 5 6 7

Compare unit prices 1 2 3 4 5 6 7

Figure unit cost after coupons (the smaller sizes may be cheaper) 1 2 3 4 5 6 7

Use store brands, generics 1 2 3 4 5 6 7

Buy large sizes for economy 1 2 3 4 5 6 7

Watch the checker tally your order 1 2 3 4 5 6 7

Figure cost per serving on meats 1 2 3 4 5 6 7

Buy meats in primal cuts 1 2 3 4 5 6 7

Stock ahead when prices are low 1 2 3 4 5 6 7

Be alert to promotional packaging (bonus content, cents off, rebates) 1 2 3 4 5 6 7

Learn how to interpret dating 1 2 3 4 5 6 7

Learn how to interpret USDA grades 1 2 3 4 5 6 7

Read nutritional labels for content 1 2 3 4 5 6 7

Please respond using a 7-point scale: important

7 +++ I would emphasize this
 6 ++ I'd be sure to mention
 5 + might mention, not too important
 4 probably would not teach this
 3 - agree only with qualifiers
 2 -- I don't understand this one
 1 --- I would advise AGAINST this

IN-STORE STRATEGIES (CONTINUED)

	---	--	-	0	+	++	+++
Don't buy more than you will use in a short time period	1	2	3	4	5	6	7
Buy small quantities of perishables	1	2	3	4	5	6	7
Check day-old bakeries, close-out counters, roadside produce stands, etc.	1	2	3	4	5	6	7
If you use soft drinks, buy them in deposit bottles and then return for refunds promptly	1	2	3	4	5	6	7
If your store uses UPC scanners, use a marker to copy shelf price on to your selection	1	2	3	4	5	6	7
Ask for rain-checks on specials	1	2	3	4	5	6	7
Ask for refunds on defective goods	1	2	3	4	5	6	7
Look for in-store specials	1	2	3	4	5	6	7
Dented cans and split packages can be bargains, but do not buy if cans are bulging or seeping	1	2	3	4	5	6	7

Please respond using a 7-point scale:
 important

7 +++ I would emphasize this
 6 ++ I'd be sure to mention
 5 + might mention, not too
 4 probably would not teach this
 3 - agree only with qualifiers
 2 -- I don't understand this one
 1 --- I would advise AGAINST this

ADOPT ECONOMY ATTITUDES AND BEHAVIORS

Use hot cereals, they're cheaper	1	2	3	4	5	6	7
Buy juice concentrates, add your own water	1	2	3	4	5	6	7
Buy meat substitutes, cheaper cuts	1	2	3	4	5	6	7
Buy whole chickens, cut for frying or baking yourself	1	2	3	4	5	6	7
Plan ahead to use leftovers creatively. Avoid waste	1	2	3	4	5	6	7
Store perishable foods promptly and appropriately	1	2	3	4	5	6	7
Review your tape as you unpack	1	2	3	4	5	6	7
Keep price records	1	2	3	4	5	6	7
Avoid foods high in sugars, fats, salt	1	2	3	4	5	6	7
Analyze recipe costs	1	2	3	4	5	6	7
Be your own butcher: cut steaks and stew meat from large roasts	1	2	3	4	5	6	7
Preserve fresh fruits and vegetables	1	2	3	4	5	6	7
Eat out less frequently	1	2	3	4	5	6	7
Stay slim	1	2	3	4	5	6	7
Serve smaller portions	1	2	3	4	5	6	7
Serve water with meals	1	2	3	4	5	6	7

Please respond using a 7-point scale:

7	+++	I would emphasize this
6	++	I'd be sure to mention
5	+	might mention, not too important
4		probably would not teach this
3	-	agree only with qualifiers
2	--	I don't understand this one
1	---	I would advise AGAINST this

--- -- - 0 + ++ +++

CAN YOU THINK OF OTHER STRATEGIES THAT HAVE NOT BEEN MENTIONED ABOVE? PLEASE LIST THEM:

1.	1	2	3	4	5	6	7
2.	1	2	3	4	5	6	7
3.	1	2	3	4	5	6	7
4.	1	2	3	4	5	6	7
5.	1	2	3	4	5	6	7
6.	1	2	3	4	5	6	7

If you will allow me to use your name as a home economics practitioner for the "panel of experts" in my dissertation, I will be grateful. I may call you again for your reaction to other matters related to the teaching of food buying skills.

Thank you!
Don Guttinger
(904) 378-3680

YOUR NAME PLEASE:

IS YOUR DEGREE IN HOME ECONOMICS?
(If not, what is your degree?)

PROFESSIONAL AFFILIATION:

TELEPHONE NUMBER(S):

PLEASE LIST COURSES YOU TEACH THAT INCLUDE UNITS ON FOOD BUDGET MANAGEMENT. ALSO, PLEASE INDICATE TEXTBOOKS YOU USE IN THESE COURSES:

APPENDIX E

TELEPHONE QUESTIONNAIRE INSTRUMENT
FOR USE WITH FOOD SHOPPERS
FOR GATHERING DEMOGRAPHIC DATA

This appendix (for demographic data) and the next (for food budget management practices) contain the text of the respective telephone interviews, instructions for the interviewer, and encoding guide. The SAS variable name and the appropriate strategy number from Appendix C are presented in pointed brackets. Components of the index of pricewatching efficiency (IPE) are so noted.

GOOD AFTERNOON (EVENING). THIS IS ...(name)... I'M A GRADUATE STUDENT AT ...(institution name)..., INTERESTED IN ADVERTISING INFORMATION AND CONSUMER NEWS. ARE YOU THE PERSON WHO RECENTLY FILLED OUT A SURVEY POST CARD TO ...(name of cable company)...? (if not, ask to speak to the person who did) THANK YOU FOR RESPONDING TO THE QUESTIONNAIRE YOU RECENTLY RETURNED TO ...(name of cable company)... MAY I TALK WITH YOU FOR A FEW MINUTES NOW ABOUT THE SECOND PHASE OF THE SURVEY?

(Option for delay: offer to call back in an hour, or if more appropriate, earlier in the day tomorrow.)

Have you used any of the following sources for consumer information in the past couple of months? (Code No=0, Yes=1)

<MAGAZINS> General interest magazines such as Money, Good Housekeeping, Newsweek, and Southern Living. (At this point, clarify that content other than advertising is of main interest: articles on style, health, safety, corporate ethics, etc.)

<NETWKTIV> Network television features, including consumer news items on network television

<LOCALTV> Television features or news obtained over local (Gainesville, Orlando, Jacksonville) stations

<GOVTCONS> Government books and pamphlets

<NEWSPCON> Newspaper food section

<COOPCON> Newsletters or pamphlets from buying groups,
co-ops, or consumer organizations

<CONSULT> Consultations with people from the agricultural
extension service; county agents

<RADIO> Consumer features or news you get over the radio

Now, going back over the ones of those you said you found useful
(READ BACK "YES" RESPONSES), which would you say has been the
most useful as far as your GROCERY buying is concerned? (change
"1" code to "2")

<READADS1> Do you regularly read any of the food store
advertisements in the newspaper?

<READADS2> Do you read the weekly advertisements for more
than one store in your trading area? (Strategy P4)

<NEWSPROD> Do you read the food section for information
about new grocery products?

<ADSLSTWK> Did you use newspaper advertising information in
making any purchase selection for your most recent
major shopping trip?

<BUDGET> Considering both quality and quantity, which of
the following budget levels best summarizes the way
you buy food for home consumption? (* IPE component *)

- 1 = Low
- 2 = Moderate
- 3 = Liberal

<DAYS BETW> What is the usual number of days between your major
shopping trips? (* IPE Component *)

Please rate the following promotions on a 1 to 10 scale, a high
number for those you participate in, a 5 for a neutral position,
and a low number if you are "turned off" by the promotion. How
do you react to:

<PROMSTAM> Savings stamps, such as S&H

<PROM2F1> Buy 1, "get another free"

<PROMDCOU> Double coupon redemption (recode for P14)

<PROMDISH> Special patterns of dishes,
silverware, etc. where each
week one piece is offered at
a price reduction

<PROMGAME> Games and sweepstakes

<MAJBUX> I also would like to know how much members of your household spend in food stores. Please tell me first how much your average grocery bill is, in the store with which you do the most business during your major shopping trip. If you use coupons, tell me the amount before the coupon credits are applied. (* IPE component *)

<PKUPBUX> Then, how much more would you or other members of your household probably spend on "pick ups" in that store and all other food stores before the next major trip, ...(number of days)... later? (* IPE component *)

<CPNBUX> How much money would you estimate you and other members of your household save on groceries during the typical ...(time interval)... because of coupons redeemed? Include value of store coupons, manufacturer's coupons, and store doubling, if applicable. (* IPE component *); P13 = 1 if ratio between CPNBUX and (MAJBUX + PKUPBUX) exceeds --%.

<NFDBUX> What is your best estimate of the average number of dollars (out of what you just told me you spend in supermarkets) that is for non foods? (Some examples are laundry and cleaning supplies, pet foods, tobacco, stationery, plants, magazines, hardware, and health and beauty aids.)
[* IPE component *; P12 = 1 if NFDBUX / (MAJBUX + PKUPBUX) is less than --%]

What are the ages of each of the males in your household? (Verify by reading back and saying, "That means there are ...(number)... males, aged ...(age, age, age, etc.)...? (sort into * IPE components * INFANT, CHILD, MALE12, and MALE 55)

And how about the females in your household, what are their ages? (Verify as with males.) (sort into * IPE components * INFANT, CHILD, FEMALE12, and FEMALE55)

(Add the 6 age groups determined in the previous two questions to determine HOUSESIZ, another * IPE component *.)

Who in your household does most of the food purchase decision-making? (Go back over the last two items, circling the age representative of the response. If the interviewee insists the job is shared equally, use a box instead of a circle, and underline ages of the others with whom shopping is shared.) This will provide SEX and AGE and a way to develop other variables reflective of shared decision-making, should the need arise.

<MEALSOUT> Approximately how many meals are eaten in restaurants or cafeterias by all the members of your household in the average week? (* IPE component *) MEALSOU2 when divided by HOUSESIZ times 21.

<RESTBUX> What is your best estimate of the number of food dollars spent weekly for meals eaten in restaurants or cafeterias? Be sure to include vending machine purchases, tips, and taxes for entire household. (* IPE component *)

<FULLTIME> <0-9> How many of the people in your household earn fulltime incomes?

<OCCUP> <0-9> Please tell me your occupation (the respondent, not spouse). If unemployed, give most recent employment

1. Student
2. Business owner/manager
3. Professional
4. Homemaker
5. Farm/Forestry/Ranching
6. Trades/ Clerical
7. Civil Service/law/fire protection
8. Retired
9. Labor
0. Other (write in)

<INCOME2> <000-999> Please tell me the approximate spendable income for your entire household. This is not necessarily the taxable income, I would like to have a figure that includes Social Security, ADC, student loans, etc. for last year.

Thank you. Just one final question:

<GARDEN> <0-1> At any time during the past year, have you had a vegetable garden? (L12)

If you have a vegetable garden, what was the retail value of your harvest last week? (Inquire about free food, purchases from mail order, etc., and adjust PKUPBUX accordingly.)

WELL, THAT ABOUT TAKES CARE OF WHAT I NEED TO GATHER FROM YOU TONIGHT. I SURE DO THANK YOU FOR HELPING ME WITH MY DISSERTATION.

GOOD NIGHT.

APPENDIX F

TELEPHONE QUESTIONNAIRE INSTRUMENT
FOR USE WITH FOOD SHOPPERS
FOR GATHERING STRATEGY USE DATA

"Good Evening. This is . . .(name). . . I'm calling to talk with the person who helped me out several weeks ago with interview information about food shopping that I need for my dissertation." ["I believe you were that person, weren't you?" OR "I think it was your (relation) that I spoke with then. Is (s)he there now?"] (At this point, if another comes to the phone, repeat greeting.) "I have some related questions I need to ask. May I take another 8 or 10 minutes of your time? Great, let's get started."

I'm going to read you a list of ways some people save money on food. If anyone in your household does anything to acknowledge these practices for the purpose of saving money, please answer yes:

- <DAYOLD> <0-1> Buying past-date bakery or dairy products or withered produce (IS24)
- <DPSTBOT> <0-1> Buying soft drinks in returnable deposit bottles (IS25)
- <SHORTIME> <0-1> Buying for short time periods (IS22)
- <CHEAPCUT> <0-1> Using meat substitutes or cheaper cuts (L3)
- <LEFTOVER> <0-1> Avoiding waste by using leftovers creatively (L5)
- <SUGFATNA> <0-1> Avoiding foods high in sugars, fats, and salt (L9)
- <BROWNBAG> <0-1> Eating out less frequently or brown bagging when away from home (L13)
- <STAYSLIM> <0-1> Making an effort to control body weight (L14)

I'm going to list four groups of common foods. Please tell me which within each group you most frequently buy. If you buy the item only rarely or not at all, say so:

- <WHOLCHIK> 1. whole chicken
- 2. quarters or halves
- 3. chicken parts
- 4. skinned and boned breasts
- 5. deli or take-out prepared parts
- 6. other response (record and recode later to use in evaluating L4)

<FRESHPRD> 1. mostly canned or plain frozen vegetables
 2. depends on the season and the vegetable
 3. mostly fresh vegetables
 4. other response (record and recode later to use in evaluating P5)

<ADDWATER> 1. mostly canned or bottled fruit juices, unrefrigerated
 2. mostly refrigerated (full strength) juices
 3. mostly frozen concentrates
 4. other response (record and recode later to use in evaluating L2)

<BUTCHER> 1. mostly primal cuts of beef, pork, or lamb
 2. mostly large roasts which I cut into steaks, chops, or smaller roasts (L11 = 1)
 3. mostly ground meat
 4. mostly steaks and chops
 5. other response (record and recode later to use in evaluating P5)

<NUTRITN> <0-9> On a scale of 1-10, how important is nutrition in your food purchase selection? (IS17)

<DATING> <0-9> On a scale of 1-10, how important to your purchase selection is the date on the package? (IS15)

<USDAGRAD> <0-9> On a scale of 1-10, how important to your purchase selection is the USDA grading information on the package? (IS16)

<SPND1STR> <0-9> Of the ... (MAJBUX + PKUPBUX, FROM DEMOGRAPHICS INTERVIEW)... you spend every ... (number of days)... days in food stores, what percentage do you normally spend in your major food store? (IS1)

<INSTORE3> Do you systematically look for in-store specials? (IS29 and part of IS2 and IS18)

<UNPRCOUP> <0-1> Do you usually refigure unit price based on coupons you can redeem? (IS7)

<BRANDS> <0-1> Do you usually seek out major brands when you shop? (IS8)

<COSTSERV> <0-1> Do you figure the cost per serving in addition to the unit price? (IS11)

<SHOPLIST> <0-1> Do you know before you enter the supermarket the specific items you will be buying? (P2)

<ARNGLIST> <0-1> Do you arrange your shopping lists according to where the merchandise is displayed within the store? (P3)

- <SPOILAGE> <0-1> In the past two weeks, have you had to throw away any food because it spoiled before you could use it? (L6)
- <TAPECHECK> <0-1> Did you check off your register tape after you got home with your most recent major food order? (L7)
- <PLANMEAL> <0-7> When did or will you decide what you will serve at the main meal the next time your family/household will eat together? (P1)
- <DETMNUAD> <0-1> Do you wait to see what's being featured (either for price or seasonability) before you decide what your menus will be? (part of P5 and P6)
- <NEWRECIPI> <0-1> In the past 2 weeks, have you tried any new recipes for a meat or vegetable dish at home? (P7)
- <H2OMEALS> <0-1> Do you usually serve water with meals? (L16)
- <NEWPROD> <0-1> In the past 2 weeks have you tried any new brands of familiar products? (only if "no"--> Have you tried any unfamiliar (never purchased before) products in the past 2 weeks?) (P9)
- <CNVCEBUX> <0-9> How much would you say you, and members of your household, have spent for food or beverages in convenience stores in the past two weeks? (P11)
- <SAVSTAMP> <0-1> Do you save S&H or other trading stamps? (P15A)
- <CASHSVRF> <0-1> Do you redeem your trading stamps with Cash Saver Discounts on the food you buy at Publix? (P15B)
- <RAINCHEK> <0-1> In the past six months, have you asked for a rain check when an advertised item was not in stock in a food store? (IS27)
- <RTNCRED> <0-1> In the past six months, have you returned any defective food items for refund or exchange? (IS28)
- <DAMAGED> <0-1> In the past six months, have you purchased any damaged packs or outdated merchandise that was reduced in price? (IS30)
- <BUYALONE> <0-1> In the past six months, have you usually done your food shopping by yourself (IS3 = 1) or with somebody else? (IS3 = 0)
- <BUYBUSY> <0-1> Has either of your two most recent food shopping trips been accomplished at a time when the store was especially busy? (IS4 = 0 if "no")

<BUYTIRED> <0-9> Did you accomplish your most recent major food shopping trip while you were especially tired, hungry, or rushed? (IS19, IS20, and IS21)

CODING KEY:	T	H	R	T-H	H-R	T-R
Tired (T)	1	4	5	4	7	5
Hungry (H)	4	2	6	4	6	8
Rushed (R)	5	6	3	9	6	5

Home economists tell us certain practices are basic to good food budget management. Please tell me how closely you adhere to some of these practices. As I give the rule, you respond by indicating the approximate percentage of the time you follow the rule. (Encode as a single digit by dividing by ten and subtracting 1.)

<P8> Consider the costs of time and fuel when shopping for food (P8)

<IS13> Stock ahead when prices are low (store features at cut prices, seasonal availability, etc.) (IS13)

<P5> Plan meals around seasonable produce (P5)

<P6> Plan meals around the meat specials (P6)

<IS6> Compare unit prices (IS6)

<IS2> Buy only those items on your shopping list (IS2)

<IS18> Avoid impulse buying (IS18)

<IS23> Buy perishables in small quantities (IS23)

<L10> Analyze the cost of individual recipes you prepare (L10)

<INSTORE1> <IS14> In selecting from the several similar items displayed together, how do you determine which can or package to buy?

1. The same as I had last time if I liked it.
2. The brand I'm most familiar with.
3. I read the ingredients and nutrition labels.
4. I compare the unit price on the bin tickets.
5. I calculate the unit price myself.
6. I look for promotional pricing.
7. I pick the generic label.

<WATCHCKR> <IS10> Do you usually watch the checker tally your order?

<CANNING> <0-1> In the past six months, have you frozen or canned any fresh fruit or vegetables? (L12)

8. Other (make record)

<YRSFOOD> <00-99> How many years have you been making the food purchase decisions in your household?

COURSES> <0-1> Did you ever have school courses that included instruction in how to manage the household food budget?
(enter details, develop quantification scheme later)

<HISCHGR> <0-1> Did you complete high school?

WELL, THAT ABOUT TAKES CARE OF WHAT I NEED TO GATHER FROM YOU TONIGHT. I SURE DO THANK YOU FOR HELPING ME WITH MY DISSERTATION.

GOOD NIGHT.

APPENDIX G

"I P E CALCULATOR"
MICROCOMPUTER PROGRAM

The Applesoft BASIC® microcomputer program is reproduced below. First, the sequence of screen opportunities for interaction are shown. Hypothetical responses are illustrated within circles. The double pointed brackets "<<" and ">>" represent internal calculations based on the hypothetical previous input.

----- (Clear Screen)-----

CONSIDERING BOTH QUALITY AND QUANTITY,
WHICH OF THE FOLLOWING BUDGET LEVELS
BEST SUMMARIZES THE WAY YOU BUY FOOD
FOR HOME CONSUMPTION?

1=LOW 2=MODERATE 3=LIBERAL

? (2)

----- (Clear Screen)-----

WHAT IS THE NUMBER OF DAYS BETWEEN
YOUR MAJOR SHOPPING TRIPS?

EXAMPLE: IF ONCE A WEEK, DAYS WOULD BE SIX
NUMBER OF DAYS? (6)

----- (Clear Screen)-----

HOW MUCH, ON THE AVERAGE, DO YOU SPEND
IN YOUR MAIN SUPERMARKET ON THAT MAJOR
TRIP EVERY << 7 >> DAYS?
(BEFORE ANY COUPONS ARE DEDUCTED)

\$ (40)

----- (Clear Screen) -----

HOW MUCH MORE MONEY DO YOU GENERALLY
SPEND IN THAT << 7 >> DAY PERIOD?
PLEASE INCLUDE BAKERIES, CONVENIENCE
STORES, PRODUCE STANDS, ETC.

\$ (22)

----- (Clear Screen) -----

HOW MUCH WOULD YOU ESTIMATE YOU AND
MEMBERS OF YOUR HOUSEHOLD SAVE ON
GROCERIES IN THOSE AVERAGE VISITS DUE
TO COUPONS REDEEMED?
(INCLUDE VALUE OF STORE COUPONS,
MANUFACTURER'S COUPONS, AND
DOUBLING IF APPLICABLE)

\$ (15)

----- (Clear Screen) -----

WHAT IS YOUR BEST ESTIMATE OF THE
AVERAGE NUMBER OF DOLLARS
(OUT OF THE \$ << 47 >> THAT YOU SPEND
EVERY << 7 >> DAYS THAT IS SPENT
FOR NON-FOODS?

EXAMPLES--

- LAUNDRY & CLEANING SUPPLIES
- STATIONERY & MAGAZINES
- TOILET PAPER & TOWELS
- HEALTH & BEAUTY AIDS
- PET FOODS
- TOBACCO
- PLANTS
- FILM
- ETC

.....
FOOD STORES ONLY
.....

\$ (8)

----- (Clear Screen) -----

RESPOND WITH NUMBER OF HOUSEHOLD
MEMBERS IN EACH AGE CATEGORY

INFANTS: 0-6 MONTHS (EITHER SEX)?

CHILDREN: OVER 6 MONTHS & UNDER 12 YEARS?

BOYS: 12-18 YRS?

MALES: 19-54 YRS?

MALES: 55 AND OVER?

GIRLS: 12-18 YRS?

FEMALES: 19-54 YRS?

FEMALES: 55 AND OVER?

(0) (0)

(0)

(2)

(0)

(0)

(0)

(0)

----- (Clear Screen) -----

DO YOU MEAN THAT THERE ARE << 4 >> PEOPLE IN
YOUR HOUSEHOLD?

1) YES 2) NO
(ENTER '1' OR '2')

?

1

----- (Clear Screen) -----

OUT OF THE << 84 >> MEALS EATEN BY
MEMBERS OF YOUR HOUSEHOLD
(THREE MEALS PER PERSON PER DAY)
EACH WEEK, HOW MANY ARE PURCHASED
IN RESTAURANTS OR CAFETERIAS?

INCLUDE ORDER-OUT FOODS AND TAKE-HOME FOODS.

NUMBER OF MEALS:

20

----- (Clear Screen) -----

WHAT IS YOUR BEST ESTIMATE OF THE
COST OF THOSE MEALS?
(INCLUDE TAXES, TIPS, SNACKS, &
VENDING MACHINE PURCHASES)

\$

65

----- (Clear Screen) -----

YOUR INDEX OF PRICEWATCHING
EFFICIENCY IS . . .

<< .694 >>

CONGRATULATIONS!!! YOU HAVE SCORED
IN THE << TOP 10 >> % FOR PRICEWATCHING
EFFICIENCY FOR THE FOOD YOU BUY
FOR HOME CONSUMPTION.

This hypothetical shopper received a congratulatory message for scoring in the top 10%. An alternate interpretation, "APPROXIMATELY -- % OF FOOD SHOOPERS ARE MORE EFFICIENT THAN YOU ARE" is provided for those not scoring in the top decile. The text of the software follows.

```

4  REM      *****
5  REM      ***THIS PROGRAM PRO-***
6  REM      *** VIDES "INDEX OF ***
7  REM      *** PRICEWATCHING ***
8  REM      *** EFFICIENCY" ***
9  REM      *** BASED ON ***
10 REM      *** DEMOGRAPHICS ***
11 REM      *** AND AMOUNT ***
12 REM      *** SPENT FOR FOOD ***
13 REM      *****
14 HOME
19 VTAB 1
20 PRINT "CONSIDERING BOTH QUALITY AND QUANTITY, WHICH
OF THE FOLLOWING BUDGET LEVELS BEST SUMMARIZES THE WAY
YOU BUY FOOD FOR HOME CONSUMPTION?"
25 VTAB 12
30 INPUT " 1=LOW 2=MODERATE 3=LIBERAL ";A
35 IF A = 1 OR A = 2 OR A = 3 THEN 45
40 PRINT "PLEASE RESPOND WITH GIVEN VALUES": GOTO 19
45 HOME
49 VTAB 1
50 PRINT " WHAT IS THE NUMBER OF DAYS BETWEEN YOUR
MAJOR SHOPPING TRIPS?"
60 PRINT
65 PRINT "EXAMPLE: IF ONCE A WEEK, DAYS WOULD BE SIX"
70 NORMAL
74 VTAB 12
75 INPUT "NUMBER OF DAYS:";B
80 IF B > 60 OR BV < 0 THEN PRINT "PLEASE RECONSIDER":
GOTO 49
85 B = B + 1
90 HOME
94 VTAB 1
95 PRINT " HOW MUCH, ON THE AVERAGE, DO YOU SPEND IN
YOUR MAIN SUPERMARKET ON THAT MAJOR TRIP EVERY ";B;"
DAYS? (BEFORE ANY COUPONS ARE DEDUCTED)"
100 VTAB 12
110 INPUT "$";C
115 IF C > 999 THEN PRINT "ENTER WHOLE DOLLARS ONLY":
PRINT "MAXIMUM OF 3 DIGITS": GOTO 94
117 IF C < 0 THEN PRINT "BE REASONABLE "
125 HOME
129 VTAB 1
130 PRINT "HOW MUCH MORE MONEY DO YOU GENERALLY"
131 PRINT "SPEND IN THAT ";B;" DAY PERIOD?": VTAB 4
132 PRINT "PLEASE INCLUDE BAKERIES, CONVENIENCE"
133 PRINT "STORES, PRODUCE STANDS, ETC."
135 VTAB 12
140 "$";E
145 IF E > 999 THEN PRINT "WHOLE DOLLARS ONLY": PRINT
"MAXIMUM OF 3 DIGITS":GOTO 129
147 IF E < 0 THEN PRINT "BE REASONABLE": GOTO 129

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155 HOME
159 VTAB 1
160 PRINT " HOW MUCH WOULD YOU ESTIMATE YOU AND
MEMBERS OF YOUR HOUSEHOLD SAVE      GROCERIES IN THOSE
AVERAGE VISITIS DUE   TO COUPONS REDEEMED?"
161 PRINT : PRINT " (INCLUDE VALUE OF STORE COUPONS,
MANUFACTURER'S COUPONS, AND DOUBLING   IF APPLICABLE)"
164 VTAB 12
165 INPUT "$";F
170 IF F > 99 THEN PRINT "WHOLE DOLLARS ONLY-": PRINT
" TWO DIGIT MAXIMUM": GOTO 159
171 IF F < 0 THEN PRINT "BE REASONABLE           ": GOTO
159
180 HOME
181 VTAB 1
184 VTAB 1
185 PRINT " WHAT IS YOUR BEST ESTIMATE OF THE      AVERAGE
NUMBER OF DOLLARS (OUT OF THE  $";C + E - F;" THAT YOU
SPEND EVERY ";B;" DAYS      THAT IS SPENT FOR NON-FOODS?"
188 INVERSE : VTAB 6: HTAB 2: INVERSE : PRINT
"EXAMPLES--": NORMAL
190 VTAB 8: HTAB 2
200 PRINT "LAUNDRY & CLEANING SUPPLIES"
201 HTAB 2
205 PRINT "STATIONERY AND MAGAZINES"
209 HTAB 2
210 PRINT "TOILET PAPER AND TOWELS"
211 HTAB 2
212 PRINT "HEALTH & BEAUTY AIDS"
214 HTAB 2
215 PRINT "PET FOODS"
216 HTAB 2
220 PRINT "TOBACCO "
225 HTAB 2
230 PRINT "PLANTS"
235 HTAB 2
240 PRINT "FILM"
241 PRINT " ETC"
245 VTAB 6: HTAB 20: FLASH : PRINT "FOOD STORES ONLY":
NORMAL
250 VTAB 19: HTAB 8
255 INPUT "$ ";H
256 IF H > 999 THEN PRINT "WHOLE DOLLARS ONLY": PRINT
"THREE DIGIT MAXIMUM": GOTO 181
257 IF H < 0 THEN PRINT "BE REASONABLE": GOTO 181
260 H = INT (H + .5)
265 HOME
270 PRINT "RESPOND WITH NUMBER OF HOUSEHOLD"
271 PRINT "MEMBERS IN EACH AGE CATEGORY"
275 PRINT : PRINT "INFANTS:0-6 MONTHS (EITHER SEX)"
280 PRINT : PRINT "CHILDREN:OVER 6 MONTHS & UNDER 12 YRS"
285 PRINT : PRINT "BOYS:12-18 YRS"

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290 PRINT : PRINT "MALES:19-54 YRS"
295 PRINT : PRINT "MALES:55 AND OVER"
300 PRINT : PRINT "GIRLS:12-18 YRS"
310 PRINT : PRINT "FEMALES:19-54 YRS"
320 PRINT : PRINT "FEMALES:55 AND OVER"
330 VTAB 4: HTAB 34: INPUT I$
335 VTAB 6: HTAB 38: INPUT J$
340 VTAB 8: HTAB 20: INPUT K$
345 VTAB 10: HTAB 20: INPUT L$
350 VTAB 12: HTAB 20: INPUT M$
355 VTAB 14: HTAB 20: INPUT N$
360 VTAB 16: HTAB 20: INPUT O$
370 VTAB 18: HTAB 20: INPUT P$
375 I = VAL (I$):J = VAL (J$):K = VAL (K$):L = VAL
(L$):M = VAL (M$):N = VAL (N$):O = VAL (O$)P = VAL (P$)
380 HOME
381 IF I + J + K + L + M + N + O + P
= 1 THEN PRINT " DO YOU MEAN YOU ARE THE ONLY PERSON
":PRINT " FOR WHOM YOU BUY FOOD?": GOTO 395 385 PRINT "
DO YOU MEAN THAT THERE ARE ";I + J + K + L + M + N + O + P
390 PRINT " MEMBERS IN YOUR HOUSEHOLD?"
395 VTAB 12
400 PRINT "1) YES 2) NO"
401 PRINT "(ENTER '1' OR '2'))"
402 VTAB 14: HTAB 17: INPUT Q
410 IF Q = 1 GOTO 425
420 PRINT :- PRINT "PLEASE INCLUDE EACH PERSON FOR WHOM
YOU"; PRINT "BUY FOOD": FOR X = 1 TO 2000: NEXT X: GOTO
265
425 HOME
427 R = (I + J + K + L + M + N + O + P) * 21
430 PRINT " OUT OF THE ";R;" MEALS EATEN BY": PRINT "
MEMBERS OF YOUR HOUSEHOLD"
433 PRINT " (THREE MEALS PER PERSON PER DAY)"
435 PRINT " EACH WEEK, HOW MANY ARE PURCHASED"
440 PRINT " IN RESTAURANTS OR CAFETERIAS?"
445 PRINT " : PRINT " INCLUDE ORDER-OUT FOODS AND TAKE
HOME" 450 PRINT " FOODS."
455 VTAB 12
460 INPUT " NUMBER OF MEALS:";S
465 IF S > R THEN PRINT " NO, NO, NO. IT MUST BE LESS
THAN ";R: FOR X = 1 TO 2000: NEXT X: GOTO 425
470 IF S < 0 THEN PRINT " OH, REALLY? RE-ENTER A
POSITIVE NUMBER": PRINT " OR ZERO."
475 VTAB 14: PRINT " WHAT IS YOUR BEST ESTIMATE OF THE
COST": PRINT " OF THOSE MEALS?": PRINT " (INCLUDE TAXES,
TIPS, SNACKS, & ":PRINT " VENDING MACHINE PURCHASES)"
480 VTAB 19: INPUT " $";T
485 IF T > 999 THEN PRINT "WHOLE DOLLARS ONLY": PRINT
"MAXIMUM OF 3 DIGITS": GOTO 475

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490 IF A = 1 THEN G = I * 9.64 + (J * 13.64) + ((K+L) *
21.7) + (M * 19) + ((N + O) * 17.6) + (P * 15.7)
495 IF A = 2 THEN G = I * 12.93 + (J * 16.93) + ((K + L)
* 27.2) + (M * 23.5) + ((N + O) * 21.8) + + (P * 19.3)
500 IF A = 3 THEN G = I * 16.23 + (J * 20.23) + ((K + L)
* 32.6) + (M + 28.1) + ((N + O) * 25.9) + (P * 22.9)
510 IF R / 21 = 4 THEN U = G
515 IF R / 21 = 3 THEN U = G * 1.05
520 IF R / 21 = 2 THEN U = G * 1.1
525 IF R / 21 = 1 THEN U = G * 1.2
530 IF R / 21 = 5 OR R / 21 = 6 THEN U = G * .95
535 IF R / 21 = > 7 THEN U = G * .9
537 Y = S / R
540 V = G - (Y * G)
541 IF R / 21 = 4 THEN W = V
542 IF R / 21 = 3 THEN W = V * 1.05
543 IF R / 21 = 2 THEN W = V * 1.1
544 IF R / 21 = 1 THEN W = V * 1.2
545 IF R / 21 = 5 OR R / 21 = 6 THEN W = V * .95
547 IF R / 21 = > 7 THEN W = V * .9
550 Z = ((C + E - F - H) * 7) / B
555 AA = V - Z
560 GF = AA / (W - (Y * G))
570 HOME
571 PRINT "HOUSESIZ ('R/21') - ";R / 21: PRINT "MEALSOU2
('Y') - ";Y
572 PRINT "WKSPEND ('Z') - ";Z: PRINT "TOTPRED1 ('G')
-";G
573 PRINT "PWFDS ('U') - ";U: PRINT "WFSDSIF2 ('AA') -
";AA
574 PRINT "PWFDS2 ('W') - ";W: PRINT "TOTPRED2 ('V') -
";V
577 PRINT : PRINT " YOUR INDEX OF PRICEWATCHING"
580 PRINT " EFFICIENCY IS . . ."
585 HTAB 26
586 GF$ = STR$(GF)
587 PRINT LEFT$(GF$,4)
589 IF GF > .419999 THEN 630
590 IF GF > .401999 AND GF < .53 THEN ZX = 10
591 IF GF > .249999 AND GF > .402 THEN ZX = 20
593 IF GF > -.2 AND GF < -.055 THEN ZX = 60
594 IF GF > -1.499 AND GF < -.499 THEN ZX = 80
595 IF GF < -1.5 THEN ZX = 90
596 IF GF > = -.499 AND GF < - .201 THEN ZX = 70
597 IF GF > -.054 AND GF < .03 THEN ZX = 50
598 IF GF > .031 AND GF < .14 THEN ZX = 40
599 IF GF > .141 AND GF < .25 THEN ZX = 30

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REFERENCES

- Antell, G., & Harris, W. (1980). Economics for everybody. New York: Amsco School Publications.
- Antil, J. H. (1985). Couponing as a promotional tool: Consumers do benefit. Journal of Consumer Affairs, 19(2), 316-327.
- Axiom Market Research Bureau, Inc. (1977). Target group index: Dining out, grocery shopping, plants and gardening (Vol. P-33). New York: Author.
- Babbie, E. (1983). The practice of social research (3rd ed.). Belmont, CA: Wadsworth.
- Bannister, R. (1983). Classification of concepts in consumer education. NASSP Bulletin, 67, 10-15.
- Bassler, E., & Newell, G. K. (1982). Food shopping behaviors and food use by well-educated young parents. Journal of Nutrition Education, 14(4), 146-149.
- Biesdorf, H. B., Buris, M. E., & Swanson, J. (1980). Be a better shopper (Misc. Bull. No. 86). Ithaca, NY: Cornell University.
- Bowers, F., Zell, F., Horowitz, D., Figliulo, S., Shade, J., Ryan, N., & Shames, E. (1984, November). CD special report: How to survive in today's supermarket. Consumers Digest, pp. 39-53/76-77.
- Brown, F. E., & Oxenfeldt, A. R. (1972). Misperceptions of economic phenomena. New York: Sperr & Douth.
- Burgoyne, Inc. (1980). The national study of supermarket shoppers (Vols. 1-2). New York: Author.
- Campbell, S. R. (1984). The confident consumer (2nd ed.). South Holland, IL: Goodheart-Willcox.

- Carsky, M. L. & McCabe, E. (1983). Food prices and selected food promotions: A decade comparison. In Goebel, F. P. (Ed.), Proceedings of 29th Annual Conference, ACCI. Kansas City, MO: American Council on Consumer Interests, 63-67.
- Chamberlain, V. M., Budinger, P. B., & Jones, J. P. (1982). Teen guide (5th ed.). New York: McGraw-Hill.
- Clawson, E. U. (1984). Our economy: How it works (2nd ed.). Palo Alto, CA: Addison Wesley.
- Clow, J. E. (Ed., 1985). Teaching strategies: Consumer economics (secondary). New York: Joint Council on Economic Education.
- Consumer behavior in the super market, part I (1975, October). Progressive Grocer, pp. 36-54.
- Consumer behavior in the super market, part II (1975, November). Progressive Grocer, pp. 34-57.
- Craig, H. (1982). Thresholds to adult living (3d ed.). Peoria, IL: Bennett.
- Cronan, M. L., & Atwood, J. C. (1976). First foods (2nd ed.). Peoria, IL: Bennett.
- Cross, J. (1976). The supermarket trap. Bloomington: Indiana University Press.
- Cude, B., & Walker, R. (1984). Quantity surcharges: Are they important in choosing a shopping strategy? Journal of Consumer Affairs, 18(2), 287-295.
- Dunn, M. D., & Peeler, M. Y. (1981). Living, learning, and caring. Lexington, MA: Ginn.
- Ellington, H., Addinall, E., Cooper, P., Hamilton, M., & Taggart, N. (1984). Budgeting for food: A multi-format game that can be used in a variety of ways. Simulation/Games for Learning, 14(2), 70-78.
- Engel, J. F., & Blackwell, R. D. (1982). Consumer behavior (4th ed.). Hinsdale, IL: Dryden.

- Engel, J. F., Kollat, D. T., & Blackwell, R. D. (1973). Consumer behavior (2nd ed.). Hinsdale, IL: Dryden.
- Flanders, N., (1971). Analyzing teaching behavior. Reading, MA: Addison-Wesley.
- Florida Department of Education (1985). Catalog of state adopted instructional materials 1985-86. Tallahassee: Author.
- Florida Department of Law Enforcement (1986). Crime in Florida: 1986 annual report. Tallahassee: Author.
- Gallo, A. E., Hamm, L. G., & Zellner, J. A. (1982). Couponing's growth in food marketing (Agricultural Economic Rep. No. 486). Hyattsville, MD: USDA Economic Research Service.
- Goe, W. E. (1979). Consumer mathematics (3rd ed.). New York: Harcourt Brace Jovanovitch.
- Green, D. A. (1983). Consumers in the economy. Cincinnati: South-Western.
- Groves, R. M., & R. L. Kahn (1979). Surveys by telephone: A national comparison with personal interviews. New York: Academic Press.
- Hamilton, S. (1986, February 6). Grocery shoppers in Gainesville pay 1.1 percent below state average. Gainesville Sun, p. 1C.
- Harrison, M. N. (1977). Stretching your \$\$ (Extension Home Economics pamphlet No. EHE-186). Gainesville: University of Florida Institute of Food and Agricultural Sciences.
- Harty, S. (1978, November-December). Who produced these teaching materials? Today's Education, pp. 62-63.
- Heisler, M., & Hook, N. (1984). Getting more for your dollar\$ (Pamphlet B3247). Madison: Wisconsin Extension Service.
- Henderson, C. M. (1984). The effect of price promotion on coupon redemption and brand choice. Dissertation Abstracts International, 44, 3477A-3478A. (University Microfilms No. DA8404396)

- Hodgetts, R. M., & Smart, T. L. (1982). Essentials of economics and free enterprise. Menlo Park, CA: Addison-Wesley.
- Hornik, J. (1984). Subjective vs. objective time measures: A note on the perception of time in consumer behavior. Journal of Consumer Research, 11(1), 615-618.
- Ingwersen, L. W., & Hama, M. Y. (1985, No. 4). Value of food used in households with elderly members. Family Economics Review, pp. 11-20.
- Jelley, H. M., & Herrmann, R. O. (1978). The American consumer: Issues and decisions (2nd ed.). New York: McGraw-Hill, Gregg Division.
- Johnson, E. J., & Russo, J. E. (1984). Product familiarity and learning new information. Journal of Consumer Research, 11(1), 542-550.
- Kerlinger, F. N. (1973). Foundations of behavioral research (2nd ed.). New York: Holt, Rinehart, & Winston.
- Kerlinger, F. N., & Pedhazur, E. J. (1973). Multiple regression in behavioral research. New York: Holt, Rinehart, & Winston.
- Kimbrell, G., & Kern, S. T. (1984). The savvy consumer!. Bloomington, IL: McKnight.
- Kowtaluk, H. (1980). Discovering nutrition. Peoria, IL: Bennett.
- Kravitz, W. W., Brant, V., & Reed, M. J. (1980). Consumer related mathematics (3rd ed.). New York: Holt, Rinehart, & Winston.
- Langrehr, F.W., & Robinson, R.K. (1979). Consumers' reactions to supermarkets with optical price scanners and consumer price marking. In N.M. Ackerman (Ed.), Proceedings of the 25th Annual Conference (pp. 43-46b). Columbia, MO: American Council on Consumer Interests.
- Lansing, J. B., & Blood, D. M. (1964). The changing travel market (Monograph No. 38). Ann Arbor, MI: Survey Research Center.

- Leet, D., & Driggers, J. (1983). Economic decisions for consumers. Belmont, CA: Wadsworth.
- Levy, L., Feldman, R., & Sasserath, S. (1976). The consumer in the marketplace (2nd ed.). Belmont, CA: Fearon-Pitman.
- Linder, B. L., & Selzer, E. (1977). You the consumer (2nd ed.). New York: Sadlier-Oxford.
- Madow, W. G. (1967). Interview data on chronic conditions compared with information derived from medical records. In Vital and health statistics (Series 2, No. 23). Bethesda, MD: USHEW Public Health Service.
- Maedke, W. O., Lowe, R. E., Boardman, C. C., & Malouf, C. A. (1979). Consumer education. Chicago: Glencoe.
- Margolius, S. (1972). Consumer's guide to better buying (2nd ed.). New York: Pocket Books.
- McConnell, C. R. (1978). Economics (7th ed.). New York: McGraw-Hill.
- McNeil, J. D. (1985). Curriculum: A comprehensive approach (3rd ed.). Boston: Little, Brown.
- Metcalfe, R. L. (1984). Managing wellness: Nutrition and meal planning, food selection, and meal preparation (Life Management Skills Curriculum Module HE 232 BK 84). Pensacola: University of West Florida.
- Miller, R. L. (1978). Economics today and tomorrow. New York: Harper & Row.
- Morgan, K. J., Johnson, S. R., & Burt, J. (1983). Household size and the cost of nutritionally equivalent diets. American Journal of Public Health, 73 (5), 530-537.
- Murphy, P. E., & Laczniak, G. R. (1979). Generic supermarket items: A product and consumer analysis. Journal of Retailing, 55, 3-14.
- Oumlil, A. B. (1983). Economic change and consumer shopping behavior. New York: Praeger.
- Peterkin, B. B., & Hama, M. Y. (1983, No. 3). Food shopping skills of the rich and the poor. Family Economics Review, pp. 8-12.

- Peterkin, B. B., & Junker, C. C. (1982). Your money's worth in foods (Home and Garden Bull. 183). USDA Human Nutrition Information Service.
- Petersen, H. C., & Lewis, W. C. (1985). Free enterprise today. Cincinnati: South-Western.
- Plunkett, W. R. (1979). The consumer in America. New York: Harcourt Brace Jovanovich.
- Porter, S. (1976). Sylvia Porter's money book (2nd ed.). New York: Avon.
- Rader, W. D. (1980). Viewpoints wanted: A plea for academic respectability. Consumer Education Forum, 11(1), 5.
- Ray, A. A. (Ed.), (1982). SAS user's guide: Basics. Cary, NC: SAS Institute.
- Remy, R. C. (1980). Citizenship and consumer education: Key assumptions and basic competencies (Fastback No. 144). Bloomington, IN: Phi Delta Kappa Educational Foundation.
- Ritzmann, L. J. (1983, No. 4). Household size and prices paid for food. Family Economics Review, pp. 27-31.
- School Board of Alachua County (1985). High school course descriptions. Gainesville, FL: Author.
- Sims, L.S. (1983). The ebb and flow of nutrition as a public policy issue. Journal of Nutrition Education, 15(4), 132-36.
- Sommer, R., Becker, F., Hohn, W., & Warholic, J. (1983). Consumer characteristics and attitudes at participatory and supermarket cooperatives. Journal of Consumer Affairs 17(1), 134-148.
- Sommer, R., Stumpf, M., & Bennett, H. (1982). Quality of farmer's market produce: Flavor and pesticide residues. Journal of Consumer Affairs, 16(1), 130-136.
- Sommer, R., Wing, M., & Aitkens, S. (1980). Price savings to consumers at farmer's markets. Journal of Consumer Affairs, 14(2), 452-462.

- Stayman, D. M., & Hagerty, M. R. (1985). Methodological issues in simulated shopping experiences. Advances in Consumer Research, 12, 173-176.
- Swagler, R. M. (1979). Consumers in the market: An introductory analysis (2nd ed.). Lexington, MA: D. C. Heath.
- 36th Annual Consumer Expenditure Study (1983, September). Supermarket Business, 38(9), 4-44.
- Thorelli, H. B., & Thorelli, S. V. (1977). Consumer information systems and consumer policy. Cambridge, MA: Ballinger.
- Torres, B., Jr. (1979). Supermarket price survey: A means of teaching consumer issues. Consumer Education Forum, 10(1), 2-4.
- Tsumara, T. K., Jones, L. H., & Bonekemper, T. W. (1984). Health and safety for you (6th ed.). New York: McGraw-Hill.
- Tull, D., and Hawkins, D. (1976). Marketing research: Meaning and measurement. New York: MacMillan.
- Uhl, J. N. (1982). Cents-off coupons: Boon or boondoggel [sic] for consumers? Journal of Consumer Affairs, 16(1), 161-165.
- Walker, R., & Cude, B. (1983). In-store shopping strategies: Time and money costs in the supermarket. Journal of Consumer Affairs, 17(2), 356-70.
- Ward, S., Wackman, D. B., & Wartella, E. (1977). How children learn to buy: The development of consumer information-processing skills. Beverly Hills, CA: Sage.
- Warmke, R. F., & Wyllie, E. D. (1983). Consumer economics (10th ed.). Cincinnati: South-Western.
- Wilson, J. H., & Clark, J. R. (1984). Economics: The science of cost, benefits and choice. Cincinnati: South-Western.

BIOGRAPHICAL SKETCH

Donald Gordon Guttinger was born and raised in Bay Shore, New York. He received B.S. degrees in liberal arts from Bradley University and in agriculture from the University of Florida. He received his M.Ed. from the University of Florida in 1978.

He managed general merchandise stores, sold insurance, directed the Shands Hospital admissions department, and provided tax counseling before deciding upon a career in education. During this time he lived in seven Florida communities, and in Mississippi and California.

His interest in consumer issues led to curriculum development for HES 4510, Consumer Health, a course he later taught in the University of Florida College of Physical Education, Health, and Recreation. He produced local radio features on consumer issues related to food for WDVH and WRUF in Gainesville, and also created "Area Grocery Best Buys" for Gainesville Cable Press, a 24-hour teletext channel. He is a member of the American Council on Consumer Interests and the Association for Consumer Research.

Hellen Ireland of Tallahassee has been his bride for 25 years. Hellen is now an Associate Professor in the College of Education's laboratory school. Hellen and Don have three children: Walt, Greg, and Carla.

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Gordon D. Lawrence

Gordon D. Lawrence, Chairman
Professor of Educational
Leadership

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Barbara E. Taylor

Barbara E. Taylor
Associate Professor of
Agricultural and
Extension Education

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

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