

THE DEVELOPMENT OF A SIMULATION GAME FOR  
TEACHING A UNIT ON THE USE OF  
CONSUMER CREDIT

By

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## CHAPTER I

### SIGNIFICANCE OF THE PROBLEM

Money and credit management is a problem with which the teenager must cope as a member of his present family situation and, in the not-too-distant future, of a home of his own. It was estimated in 1966 that teenagers were paying out some \$15 billion annually on goods and services. "The Teen-Age Tide," an article appearing on October 9, 1964 Time magazine, noted that one 17-year-old girl in five and two boys in five had their own charge accounts. In addition to buying on their own, teenagers' influence in the home controlled the purchase of up to \$30 billion more a year. Thus teenagers bought on their own and influenced the family's buying of goods and services that totaled an estimated \$45 billion a year (Mendenhall, 1967, pp. 14-15).

Marriages are occurring at increasingly earlier ages. Economists tell us that fifty percent of all first brides are under the age of 18. On the average, the first baby is born about one year after marriage. Male high school graduates who are one-time fathers feather the nest with from \$3,500 to \$4,400; the college graduate will earn from \$5,200 to \$6,300 (Krustev, 1967, p. 52). These young people are faced with the problem of financing an ever-rising standard of living in an economy of spiraling costs. They are turning to consumer credit as a means of acquiring needed and wanted possessions at a time when needs are greatest.

Business, realizing that the early years is the period of greatest credit use, is slanting its advertising and business practices to gain a share of the young consumer's dollar. A growing trend in many stores is to allow adolescents some kind of credit privileges. As early as 1950, a survey of 183 department stores and specialty shops showed that 60 offered credit plans to teenagers and 23 more were considering the possibility (Changing Times, December, 1960, pp. 31-32).

A vice president in charge of credit activities of a large chain of retail stores and mail order houses expressed his company's philosophy of extending credit to young people in this way:

Our responsibility in the Credit Sales Department under this program is to achieve and maintain complete understanding by all company employees of our credit policies and practices as they apply to the young new credit customer. Every customer must open his first credit account some place--"LET'S MAKE IT OUR COMPANY!" (Wheeler, p. 1).

It would seem that there is a need for education in consumer practices including the use of consumer credit for teenagers regardless of their socioeconomic and cultural backgrounds. In the preface of the 1967 Bulletin of the National Association of Secondary School Principals, Briggs advocated the need for consumer education for all. He said:

Since all of us are consumers and since relatively few of us will become maximally efficient without instruction, we ought to assume that consumer education is a universal need. Instead of being elected by a minority, mostly those in terminal programs, appropriate consumer preparation should be required of all students, of the college bound as well as those who drop out before graduation. They all need it (Briggs, 1967, pp. 1-2).

In response to those who would argue that consumer education should be the responsibility of the home, Briggs is of the opinion that "some important learnings can no longer be reliably passed on by home or just picked up (Briggs, 1967, pp. 1-2)." He believes that without instruc-

tion, a person is likely to go through life crippled by inefficiency. From childhood and adolescence on every person is a consumer.

In spite of the great hue and cry about the negative aspects of credit, the economic facts of life are that the amount of credit outstanding will continue to grow. When discussing the place of consumer credit in the economy at a workshop for home economists, Mitchell expressed the opinion that "As I sight the future of consumer credit, it is here to stay in financing the acquisition of consumer durables (Mitchell, 1968, p. 20).

It has become standard practice for young married couples to place heavy mortgages on their future earnings in order to start out with a package of durable goods at a time when they feel that the goods are most needed to create a satisfying life. The prospect of present need or enjoyment seems so important that the inevitability of eventual payment may be lost in the distant haze of the future.

Then there are those whose income just will not meet their needs. Credit becomes the somewhat unsatisfactory answer to their problem. In a study of low-income families in New York, Caplovitz found that poor people not only use credit, but pay more for the privilege because they are poor risks. Not only are credit rates high, they are stated in complicated terms which are difficult for the consumer to understand (Caplovitz, 1963, p. 2). Weeks' findings that three-fourths of the families in a low-income housing development in Massachusetts used installment credit and paid more for it supports the findings of Caplovitz (Weeks, 1965, p. 439).

On the other hand, Caplovitz says that the middle class has adopted the pattern of credit use from the poor and has made it a part

of the American way of life (Caplovitz, 1963, p. 1). Evidence presented in the 1967 Survey of Consumer Finances conducted by the University of Michigan contends that debt is a phenomenon mainly of the middle- and upper-income brackets (Katona, et al, 1968, p. 16). Others agreed that installment buying was most commonly practiced by middle-income families (Morgan, 1968, p. 21, Whyte, 1956, pp. 13, 133-137).

Authors of the Vocational Amendments of 1968 forcefully expressed the clear intent that consumer education become an important component of the Vocational Homemaking Education job. According to Tuttle and Portwood

Part F of the Vocational Education Amendments of 1968 (Public Law 90-576) makes it clear that the Congress of the United States intends that more emphasis be put on the consumer aspects of the home and family education. Efforts to educate the consumer must be increased. Learning opportunities must be provided for individuals trying to cope with increasingly complex consumer problems. While our nation is dedicated to providing employment for its citizens, it must also be dedicated to educating people to make maximum use of their resources. Learning to earn and learning to use more wisely what one earns contributes greatly to the quality of our way of life (Consumer Education Curriculum Guide, 1969, p. iii).

According to Pratt (1970, p. 61) more than 200,000 individuals-- the majority of them more confused than conniving--accepted bankruptcy as a last resort for solving financial problems in 1969. Obviously credit is a subject deserving of study.

The irresponsible use of consumer credit has been cited as a major cause in the rising number of personal bankruptcy filings. A member of the Consumer Bankruptcy Committee of the American Bar Association, speaking before the Thirteenth Annual National Consumer Credit Conference about the relationship of consumer credit to bankruptcy, said:

. . . consumer credit bears some relationship to our bankruptcy problem. But let's try to keep it in its proper

perspective. . . The relationship is not between consumer credit and consumer bankruptcy. . . It is this irresponsible use that is one of the many causes for the substantial increase in bankruptcy filing (Brunner, 1965, p. 7).

Intelligent as the modern teenager is, his very young years necessitate subtle guidance to develop his unbridled eagerness into mature judgments. If the young person is to learn to manage his money and to live with credit, he must be educated in its proper use. He must be taught that the useful tool of credit can, through misuse, lead to financial problems.

Teachers seem to experience difficulty in getting money and credit management units underway. Thal and Guthrie (1969, p. 764) have pinpointed two problems which limit the effectiveness of consumer education in the secondary schools. The first of these is that teachers tended to teach consumer education within their own value systems rather than those of the students, thus reducing student motivation and relevance of the subject matter. Secondly, homemaking teachers tended to teach buymanship practices that first of all were economical and secondly, were isolated from other real-life values which determine the life style of the individual. Paolucci and Thal (1964, p. 23) list four areas in which teachers experience difficulty: (1) motivation of students, (2) teaching methods, (3) resources and materials, and (4) concepts to be included.

#### Statement of the Problem

The basic problem with which this investigation was concerned was the development of a simulation game for teaching money and credit management to eleventh and/or twelfth grade Vocational Homemaking students in the secondary school.

A second aspect of the problem was to use the game in the classroom to: (1) find out teachers' opinions about using the game as a teaching method; (2) determine the students' attitudes about using the game as a learning experience; and (3) assess the effectiveness of the simulation game as compared with other teaching methods traditionally used.

### Objectives of the Study

It was the intent of this study to investigate the problem of teaching money and credit management in the secondary school and to develop meaningful teaching materials to help the teenager become a knowledgeable consumer for himself and his future family.

Specific objectives were:

1. To write a simulation game incorporating selected concepts and generalizations for use in teaching money and credit management at the eleventh and/or twelfth grade level of Vocational Homemaking classes in the secondary schools.
2. To determine the effectiveness of the simulation game as a method of teaching as compared with teaching methods traditionally used in terms of student achievement of the selected concepts and generalizations.
3. To determine student attitudes and opinions of the simulation game as a learning experience.
4. To determine teacher attitudes and opinions of the simulation game as a teaching tool.
5. To recommend areas for revision and improvement of the simulation game and recommend areas for further study.

### Basic Assumptions

The validity of the findings of this study was subject to the accurateness of the following assumptions:

1. Vocational Homemaking teachers in the classroom are qualified to assess the effectiveness of teaching methods.
2. Simulation games are a bona fide teaching tool.
3. The evaluation of the simulation game by the teachers and students of the experimental group were candid, conscientious expressions of their attitudes and opinions of the Family Finance Game.

### Delimitation of the Problem

This study was limited to 16 Oklahoma secondary schools whose Vocational Homemaking teachers were planning to offer units in consumer education during the second semester of the 1969-70 school term. The population was confined to students from four schools from each supervisory district as defined by the State Department of Home Economics Education. Two of the schools from each district were requested to participate in the study as the experimental group and two were requested to serve as the control group.

The use of the simulation game as a teaching tool was limited to the area of money and credit management in the Vocational Homemaking classes at the eleventh and/or twelfth grade level. It was used by teachers who had a minimum of instruction in the use of the simulation game technique.

## Definition of Terms

Simulation Game. A simulation game is a technique for studying complex, real-life phenomena under controlled conditions. The technique consists of designing a representative model of the phenomena of interest, manipulating various aspects of the model according to some plan, and assessing the outcome. It is expected that the knowledge gained by working with the model in this way will be applicable to the real-life phenomena from which it was derived. (Ryans, 1962, p. 2).

Money and Consumer Credit Management. Money and Consumer Credit Management is the way the individual or family uses money and consumer credit to satisfactorily achieve life goals.

Experimental Group. The experimental group was composed of those Vocational Homemaking teachers and students who used the simulation game as a part of the Money and Consumer Credit Management unit.

Control Group. The control group was composed of those Vocational Homemaking teachers and students who used methods traditionally employed to learn about money and consumer credit management in Vocational Homemaking classes of secondary schools of Oklahoma.

District of Home Economics Education. District of Home Economics Education is the division of Oklahoma, within demographic and geographic limits, into four districts for purposes of supervision of Vocational Homemaking programs.

State Department of Home Economics Education. The State Department of Home Economics Education is the agency responsible for the supervision and administration of the Vocational Homemaking program in Oklahoma.



Family Finance Game. The Family Finance Game is a simulation game developed by the writer to teach money and credit management to eleventh and / or twelfth grade students in Vocational Homemaking classes. An attempt was made to create realistic situations for financial decision-making.

Achievement Test. The achievement test is the evaluation instrument designed by the writer to assess student achievement of the concepts, generalizations, and behavioral objectives for the Money and Consumer Credit Management unit.

Student Rating Scale for Family Finance Game. The Student Rating Scale for Family Finance Game is the instrument designed by the writer to collect data pertaining to student attitudes toward and opinions of the Family Finance Game as an activity for learning about money and credit management.

Teacher Evaluation of the Family Finance Game. Teacher Evaluation of the Family Finance Game is the instrument designed by the writer to collect data pertaining to teacher attitudes and opinions of the value of the Family Finance Game as a teaching tool.

#### Procedure

An objective of this study was to develop curriculum materials for teaching consumer credit. Interviews with business people concerned with the use of credit by young consumers and with young homemakers who use credit were the means to delineate the situations which might be incorporated into a simulation game for teaching consumer credit. The game was developed, revised, and field-tested in vocational homemaking classes in Oklahoma.

The value of the game as a teaching tool was measured by analysis of the responses of vocational homemaking teachers to a Likert type rating scale. Responses to a student rating scale revealed the opinions of students relative to the value of the simulation game as a learning device. Achievement test scores of students experiencing the simulation game were compared with the scores of students experiencing teaching methods traditionally used in vocational homemaking to determine if one group scored significantly different from the other group.

### Organization of the Study

This chapter has presented the problem with which this study is concerned, the overall purpose of the study along with specific objectives, a plan for the procedure to be followed, and other information of importance for the completion of the research. Chapter II will contain a review of the literature of consumer education, of the role of consumer education in home economics, of some principles of learning as they relate to the use of simulation games in the classroom, and of simulation games--their design and use as a teaching tool.

The third chapter will focus on the designing and structuring of the game and on the testing of the game before using it in the high schools of the experimental group. The philosophy basic to the Family Finance Game, a description of the model, and the empirical tryout of the game are included.

Chapter IV describes the instruments used to assess student achievement and to collect data regarding student and teacher attitudes toward the use of the simulation game. Chapter V will present an analysis of the findings of the study. A summary of the study, conclusions reached as a result of the study, and recommendations for further research will be included in the sixth chapter.

## CHAPTER II

### THEORETICAL BACKGROUND

#### Introduction

This study involved the development of curriculum materials for teaching consumer education in the high school. The specific material to be developed was a simulation game to teach money and credit management. The review of literature will be presented in four sections:

The first section covers consumer education and its history as a subject in the high school curriculum. The second area reviewed is the role of consumer education in home economics. A brief look is taken at concepts included in consumer education in its early stages as compared with those now included.

Literature related to some generally accepted principles of learning is the third area to be reviewed. Simulation games are suggested as an innovative technique for communicating the subject content of consumer education. Germane to the development of a simulation game for educational purposes is the consideration of how learning takes place. Knowledge of learning principles can also be valuable in isolating desirable and undesirable characteristics of games and in planning for the use of games in the classroom. Literature relevant to the history of games, the advantages claimed for games, the design, the use, and the evaluation of games will be presented in the fourth section of this chapter.

## Consumer Education

Consumer education has assumed increasing importance in our society in the past few years. A major factor contributing to the emphasis to enlighten the consumer is the large variety of products and the many forms in which products appear on the market. To decide on the kind of potatoes to serve for dinner is no longer a simple task. After the decision is made to serve potatoes, the homemaker must decide which of 35 kinds, including different brands and prices, will be purchased (counted by writer). These potatoes may cost from a few pennies to about 25 cents per serving, depending on whether one chooses the raw, frozen, canned, dehydrated, or ready-to-serve form. The second factor is the bewildering variety of forms of credit and the common use of credit in the United States. There are thousands of sources of credit (Oppenhien, 1965, p. 54). The variety of "buy now, pay later" plans is matched only by the wide differences in the annual percentage rates of paying for the privilege to use credit. In addition, buying on credit is much more complicated than paying cash for commodities.

## History

This is the second time since the Great Depression that there has been widespread interest in the education of the consumer. Some time after 1930, small groups, including laymen and educators, urged that consumer education be provided for all students, especially at the high school level. It was difficult for consumer education to gain a foothold for several reasons. The curriculum was already crowded; instructional materials and teachers were hard to find; college-bound students, impressed by the prestige of traditional courses, were reluctant to

enroll in consumer education courses; and parents, unaware of the urgent need for consumer education, showed little interest in their children's study of wise money and credit management (Briggs, 1967, p. 1).

Some elective courses of consumer education were offered; however, the general practice was to incorporate consumer education into such courses as home economics, business education, social studies, or mathematics. Most of the classes were an exercise in the study of business practices that were detrimental to the consumer, such as misleading advertising, confusing packaging, over-stressed brand names, and exorbitant charges for money borrowed to pay for installment buying.

The Consumer Education Study sponsored by the National Association of Secondary School Principals in cooperation with the National Better Business Bureau in 1942, stressed a positive and constructive set of attitudes and emphasized personal and social goals as a guide to money and credit decision making (Wilhelms, 1967, p. 11).

#### Home Economics and Consumer Education

Home Economics instruction has been a source of much of the formal consumer education which has been offered in the high schools. Here and there schools offered elective courses; but, for the most part, such instruction as has been given was incorporated into courses in home economics. Briggs (1967, pp. 1-2) and Spafford (1942, p. 74) noted that units on buying food, clothing, home furnishings, equipment and family financing were taught by home economics teachers for the teachers of other courses in the high school.

A form of consumer education has long been integrated in other units of home economics classes. In the main, these units stressed good buying practices such as checking labels, grading of products, and cost comparisons. With the advent of dual roles for women, the evaluation of time for family activities versus the saving of money has gained impetus. As an example, the homemaker may buy ready made clothing and use what would have been sewing time for participating in family activities.

Home economists, family financial counselors, and others have come to understand that consumer education is more than developing a set of good consumer practices. This is not to say that good buying practices are not of value; however, we must recognize decision-making as an integral part of money and credit management. Our shopping decisions are made within the context of our life style. Consumer buying has been taught as though every choice has to be a rational one forgetting that certain choices are made because certain goods have an intrinsic value and meaning to the consumer. It is often forgotten that meeting emotional needs is as important as meeting physical needs (Committee for Economic Development, 1961, p. 9).

Thal and Guthrie (1969, p. 767) emphasized the trend away from teaching good buying practices when they stressed that the life style of the family or individual is central to consumer decisions. They discovered in an interview with a group of teachers, that the teachers were attempting to mold a style of life for their pupils that conformed to what the teachers believed it ought to be rather than the style and quality which the students considered to be desirable. As a result of this kind of an approach, students were unmotivated. The subject

matter was irrelevant as far as they were concerned. Thal and Guthrie suggested that the consumer education program should include certain processes necessary to the development of a personal life style. These processes include management, spending, saving, borrowing, protecting, sharing, and investing. They conclude with

We would have it understood that our students are needful human beings, already experimenting with consumer activities that furnish them a means of self-expression and social acceptability. They are unwittingly in the first stages of developing their own life styles. As their teachers, our responsibility rests in teaching them to engage in consumer activities that will enhance their life style and enrich the quality of their lives (Thal and Guthrie, 1969, p. 767).

The concept of managing resources to make possible a chosen style of living was presented by Wilhelms in this way:

The purpose of education in buymanship and money management is not (as so many seem to think) to teach young people to buy less, to snuff out their dearest desires, and scrimp along in miserly fashion. Consumer education makes no sense--especially to vigorous adolescents, with their keen desires--unless it opens the road to getting more of what one thinks contributes to a good life. . . . The real goal is to improve the quality of his wanting (Wilhelms, 1967, p. 6).

During the Great Depression and again in World War II consumer education programs were undertaken by home economists to help people meet the scarcity of money and material resources that affected the family living unit. There are those in our secondary schools today who need help to make ends meet; there are others who need help in learning to make rational decisions; all need guidance in using resources to enhance their life style and to enrich the quality of their lives.

Home economics received the mandate to assume the responsibility for consumer education when Congress specified consumer education in Part F of the Vocational Education Amendments of 1968 (PL 90-576, 1968,

p. 22). The challenge is to strengthen consumer education in the home economics programs of the nation. The chief concern is to guide young people in the establishment of money and credit management practices that will help them achieve their life goals. Oppenheim believed that consumer education for adolescents is extremely important because the consumer practices of the teenager are likely to become the consumer practices of the adult (Oppenheim, 1965, p. 29; Smith, 1965, p. 72).

Nearly all states and most cities had, or were in the process of developing, curriculum guides for home economics teachers' use when planning consumer education units; however, teachers seemed to be having some difficulty in deciding on the best approach to teach consumer education. In its report of 1961, The National Task Force on Economic Education maintained that the most important step toward understanding economics is the replacement of emotional, unreasoned judgments by objective, rational analysis. They recommended that central emphasis on the problem solving approach to economic problems be a prime objective of teaching economics. The report elaborated by saying:

There is research evidence to substantiate the claim that analysis is beneficial to everyone, not merely to those of high ability. It is true that students of high ability can be expected to learn more in less time. But this should not mean analysis for the bright and mere memorization for the less able (Committee on Economic Development, 1961, p. 72).

Use of the concepts learned was looked upon as the key to effective teaching of consumer education. Topics must cover realistic experiences and represent attainable goals. What teachers need to do is to try to stimulate the conditions in which the questions that have to be asked, the facts that need to be assessed, and the judgments that have to be made in relation to individual needs and wants, will provide



some insight into the kind of approach that buying and using goods and services involve in adult life. The techniques employed in teaching consumer education should be as practical as possible so as to enable the individual to relate the materials directly to his own problems. Morgan supported the practical approach to teaching consumer education with the following statement:

Finally, if we are to educate people as to the complexities of modern merchandising and credit systems, something more than dull books, teaching, and panel discussions will be necessary (Morgan, 1967, p. 19).

Methods traditionally used for teaching consumer education and homemaking in high school have been reasonably successful; however, the opportunity to involve students in making decisions relevant to consumer credit and money management may be missing. The introduction of simulation games as a part of the teaching method in money and credit management units may provide the opportunity for students to make financial decisions which are relevant to their use of money and credit in real life situations. Pertinent to the development of a simulation game for educational purposes is an understanding of the relationship of the principles of learning to meaningful curriculum materials.

#### Principles of Learning

The diversity of ideas about learning have not yet produced a coherent set of explanations, laws, and principles to guide education. Those studies concerned with learning deal with much simpler phenomena than those faced by schools. Spence classified types of learning and

behavioral situations into six groups: (1) conditioning; (2) selective learning; (3) verbal or serial learning, which includes rote learning; (4) learning of skills, both perceptual and motor; (5) symbolic learning, including reasoning and thinking; and (6) social learning, which involves the learning of attitudes, interests, and feelings. Precise laws are available for only the first three types. Only some very low level laws are available on the last three which constitute the bulk of learning that concerns educators (Spence, 1959, pp. 92-93).

In spite of the lack of unified theory about learning, it is possible to single out from the diverse views several commonalities. These understandings can be consolidated into descriptive principles about learning. Hilgard (1956, pp. 486-487) developed fourteen points of agreements among the theories. These points are mainly concerned with: (1) the capacities of the learner; (2) motivation of the learner; (3) involvement of the learner; and (4) the feedback available to the learner. Schuller (1959, pp. 110-111) presents essentially the same ideas in four broad principles of learning. He summarizes the principles which are areas of agreement among theorists as follows:

1. Learning proceeds most effectively and tends to be most permanent when the learner is motivated; that is, when he has a stake, as it were, in the activity being undertaken.
2. Learning proceeds most effectively and tends to be most permanent when the activity involved is geared to the learner's physical and intellectual level.
3. Learning proceeds most effectively and tends to be most permanent when the learner is able to perceive meaningful relationships among the elements of a goal toward which he or she is working.
4. Learning proceeds most effectively and tends to be most permanent when the learner has some means by which to judge his own progress.

Schuller's four principles of learning and their relevance to curriculum development and simulation games will be discussed in the

order of listing. The first principle, "Learning proceeds most effectively and tends to be most permanent when the learner is motivated" is supported by Kingsley and Garry (1957, p. 191). They maintained that motivation is equally as important as capacity in the learning process. Without the desire to attend school and to engage in learning activities little behavioral change is achieved, especially in the desired direction. Hall and Paolucci (1963, p. 129) succinctly stated their regard for motivation in learning when they held that motivation is the key to behavioral change.

Motivation is the primary task of the teacher according to Gagné (1965, p. 247). Learning itself takes place within the learner, but some conditions must direct this activity. Motivation may be maintained by removing the mystery of the objectives of the course. "Why are we learning this?" is a question that always needs to be answered as thoroughly and precisely as possible (Gagné, 1965, p. 247).

Availability of feedback which allows the student to assess his progress is one effective means of motivating the learner. Some means must be provided during instruction for the student to perceive the results of his activity and to receive from the learning environment some measure of the correctness of his performance (Gagné, 1965, pp. 224-225). When principles are being learned, feedback may come from the concepts or principles recalled by the learner himself. Motivation results from the feeling of having achieved. In addition, feedback may result from the interaction of the learner with his peers, especially in situations where group work or team work prevails. This external source of evaluation is often more effective than that forthcoming from the teacher.

Simulation games with clearly stated behavioral objectives provide an excellent vehicle for providing a classroom environment for motivating learners. By the use of a simulation game the teacher provides the conditions for the learning experience and for self-evaluation by the learner. The simulation game provides an opportunity for students to apply concepts and principles of a "lower order" to the solving of problems. Hopefully "higher order" principles will be the result. The motivational characteristics of relevance of content, learner involvement, a sense of direction for the learner, and feedback, are all present in well designed simulation games.

The second principle presented by Schmuller (1965, pp. 110-111) states that "Learning proceeds most effectively and tends to be most permanent when the activity involved is geared to the learner's physical and intellectual level. To support this belief, Schmuller (1965, p. 6) relates that

The essence of learning lies in the relevance to human needs. Learning should reflect experiences which the individual meets in society. To make the individual competent and self-reliant requires much more effort than it ever did before. The individual needs to become aware of the relationship between learning and his role in society.

Fleck (1968, p. 91) and Hatcher and Andrews (1963, p. 81) believed that learnings tend to occur more rapidly and to be more enduring if they are related to the individual's life goals.

Relevance of learning is influenced by the environment and the maturity of the learner. The student learns by doing what he is capable of doing, not by doing what is beyond his grasp. Havighurst (1952, Ch. 5) has set down developmental tasks which the individual strives to accomplish. A person must be sufficiently mature physically and intellectually to make mastery possible. To achieve an appropriate

dependence-independence pattern is a developmental task that must be accomplished by degree for a greater part of our life. It is of particular importance to the learner in senior high school. To achieve economic independence is a developmental task of the seventeen- and eighteen-year-old; therefore, a unit having to do with the management of money and credit will have relevance for him. If the subject content is provided in a realistic setting such as that provided in simulation games, the learning experiences will be more meaningful for the learner. This subject matter, which is of importance to the teenager now and in the future, presented in a simulated situation will allow the student to observe the relationship between his present situation and the decisions which he has made in the past. The abstraction of social processes in simulation games provide the opportunity for the student to become aware of the relationship between his learning in school and his role in society.

The third principle according to Schmuller is "Learning proceeds most effectively and tends to be more permanent when the learner is able to perceive meaningful relationships among the elements of a goal toward which he or she is working." Learning will proceed best in a sensible step-by-step procedure. Gagné (1965, Ch. 2) has listed the conditions of learning in eight steps to form a hierarchy of learning. The distinctions that he makes are: Type 1: Signal Learning; Type 2: Stimulus-Response Learning; Type 3: Chaining; Type 4: Verbal Association; Type 5: Multiple Discrimination; Type 6: Concept Learning; Type 7: Principle Learning; and Type 8: Problem Solving. The most important class of conditions that distinguishes one form of learning from another is the initial state of each. The conditions for chaining

require that the individual have previously learned stimulus-response connections available to him, so that they can be chained. This principle applies to the varieties of learning which have been stated as follows:

Problem Solving (Type 8),  
 requires as prerequisites:  
 Principles (Type 7),  
 which require as prerequisites:  
 Concepts (Type 6),  
 which require as prerequisites:  
 Multiple Discriminations (Type 5),  
 which require as prerequisites:  
 Verbal Associations (Type 4) or Other Chains (Type 3),  
 which require as prerequisites:  
 Stimulus-Response Connections (Type 2). (Gagné, 1965, p. 60).

It does not seem possible, wrote Gagné, to conclude that S-R Connections (Type 2) require Signal Learning (Type 1) as a prerequisite.

The relationship between the kinds of learning, whether as in Gagné's hierarchy or some other relationship, is an aid to the achievement of goals by the student. The individual needs to understand concepts such as "finance charges" and "time payment" before he can make a rational decision about using credit. When he understands the concepts, he is then able to perceive principles or generalizations which will be applicable to a wide variety of situations, hopefully, both in school and out of school.

The problem of transfer of learning is central to all education. It is hoped that whatever is taught in school is somehow used in the individual's later life. Since no program can teach everything, the task of all education is to teach for maximum transfer (Bruner, 1960, p. 11).

Kingsley and Garry were unequivocal in their statement that

Transfer of training occurs when the results of learning in one situation affect our performance in different situations

or when training in one activity affects other forms of activity. The nature and conditions of transfer are of prime importance to education both with regard to what subjects shall be taught and to how they shall be taught (Kingsley and Garry, 1957, p. 519).

They believed that transfer is greatest when situations have greatest similarity; however, they went on to say

Transfer also takes place through generalizations developed during training when the learner sees the applicability of a principle, rule, or method of attack to a new situation or problem (Kingsley and Garry, 1957, p. 520).

Simulation games afford the opportunity for several different kinds of learning. The learning of facts, the learning of cause and effect relationships, and the use of strategies for problem solving may proceed simultaneously. The problem situations incorporated into simulation games affords the student the opportunity to use the simpler learnings as tools for the more complex activities of discovering more complex principles and decision-making.

One of the goals for using simulation games for teaching is that transfer of learning from the simulated situation to real life experiences will take place. This has been found to be successful in skill training such as the use of the link trainer for pilot training. Transfer of learning from one situation which does not require motor skills to another situation of the same category is hard to prove. Some evidence of transfer of training from the Legislature Game to the Parent-Child Game was noted by Schild (Schild in Boocock and Schild, 1968, p. 152).

The fourth principle of Schmuller is "Learning proceeds most effectively and tends to be most permanent when the learner has some means by which to judge his own progress." Learning requires a sense of direction. There is need for the learner to have an idea of where he

is going and some idea of the progress he has made in that direction.

An aid to the student's assessing his progress is objectives stated in behavioral terms as a part of the learning situation. Behaviorally stated objectives will give a sense of direction to the learning process and provide criteria for learner assessment of his progress in achieving the goals of the unit (Mager, 1962).

Problem solving, stated in a variety of forms all of which go back to Dewey's theories, is based on previously acquired knowledge (Gagné, 1965, p. 57). The use of this knowledge involves a process of evaluating the knowledge through feedback provided in the previous learning situation and a process of thinking and decision-making. Gagné says

The major condition for encouraging the learner to think is to be sure that he has something to think about. Learning by problem-solving leads to new capabilities for further thinking. Included among these are not only the "higher order" principles we have emphasized here, but also "sets" and "strategies" that serve to determine the direction of thinking and therefore its productiveness (Gagné, 1965, p. 57).

In addition to and probably part and parcel of strategic thinking is the ability to evaluate the results of decisions. Problem solving experiences provide feedback which may be used by the learner to answer the questions, "How am I doing?", "Where am I going?", and "What is my next move?"

Simulation games provide another approach to problem solving. The problems included are often those in which failure might be quite costly in real life. Simulation games afford the opportunity for trying out alternate decisions and weighing the costs and the benefits in a safe environment situation. The learner can experiment with alternate decisions under the guidance and with the assistance of a more knowledgeable person. Problem solving in the game situation enables the



student to apply principles and concepts learned through other classroom and life experiences.

### Simulation Games

A growing number of schools are finding that the use of simulation games can be helpful in teaching a variety of subjects. Simulation games have been called an educational innovation which is being used to teach personal and social problems in a more realistic manner; however, when one delves into the background of games, he finds that they have been used since the mid-seventeenth century to study war maneuvers. In the 1950's, business management began to use a combination of simulations and the gaming technique to teach management principles and to study decision-making in business and industry (Wigderson, 1968, p. 1). Coleman, a sociologist at Johns Hopkins, has been the stimulus to the design and much of the research on simulation games for educational purposes (Boocock and Schild, 1968, p. 11).

### Definition of Simulation Games

A simulation game as defined by Coleman is a game in which life processes are explicitly mirrored in the structure and functioning of the game. The simulation game is an abstraction of social processes, making explicit certain of these social processes that are ordinarily implied in our everyday lives. A game constitutes a kind of caricature of social life. Even those games which are played for our entertainment or the entertainment of others exemplify this. A boxing or a wrestling match abstracts from its context the direct physical violence that resides in social life and recreates this violence under a set of

explicit rules (Coleman in Boocock and Schild, 1968, p. 8).

Simulation games combine two different techniques according to Boocock: (1) the game structure with its rules of play and a method of determining a winner; and (2) the simulated environment with its creation of key elements of the outside or future world within the classroom so that the student must make decisions and act as if he were actually operating in this environment (Boocock and Schild, 1968, p. 63). Cruickshank succinctly defined simulation games as the creation of realistic games to be played by participants in order to provide them with life-like problem solving experiences related to their present or future work (Cruickshank, 1966, p. 23).

Ryans (1962, p. 2) describes simulation as a

...technique for studying complex, real life phenomena under controlled conditions. The technique consists of designing a representative model of the phenomena of interest, manipulating various aspects of the model according to some plan, and assessing the outcome. It is expected that the knowledge gained by working with the model in this way will be applicable to the real life phenomena from which it was derived.

A presentation of what a simulation game is would be incomplete without some mention of what a game is not. It is the view of Greenlaw, Herron and Rawdon (1962, p. 5) that the choice of the term game is in many ways unfortunate, since to many not familiar with gaming it suggests entertainment rather than a serious educational tool. Games are not a fad, but a serious educational technique, often requiring much study and work on the part of the student both in class and outside of class.

A clear distinction should be made between simulation games and the so-called "theory of games" developed by von Neumann and Morgenstern. The latter is a highly complex theoretical branch of mathematics and

bears little relation to simulation gaming. Simulation games may or may not involve computational procedures (Greenlaw, Herron and Rawdon, 1962, p. 6).

#### Kinds of Games

Four basic types of simulation games are modeled after the four types of human decision making. The first type is identified as puzzles. In this type of game, the player can manipulate the environment, but the environment does not manipulate the player. The second type is the game of chance. In this instance the environment manipulates the individual.

The aesthetic game is the third type. This is not a board game, but involves the application of a set of rules to someone's behavior. Judgment is indicated.

The fourth type is the game of strategy. As the name indicates, this type of game requires the use of strategic tactics in making decisions. The environment and the controlling rules are designed to represent a social decision-making situation. It is this type of simulation game that has been developed by the writer for use in teaching consumer education. An attempt has been made to simulate the financial situation and some of the problems of a young married couple as they use their income and credit to create a satisfying life style. Decision-making in the use of family resources has long been based on verbal training. The simulation game has been developed to provide a problem solving environment in which the financial decisions of one period influence financial decisions of a future period (Fleck, 1968, p. 159).

### Advantages of Simulation Games for Teaching

One of the main problems faced by the high school teacher is the students' sense of relevance of the offerings of the school to their present and future activities. Motivation must be maintained beyond the immediate rewards of grades and college admission for some students; for other students motivation must be maintained for staying in school until they are prepared to enter the world of work. Students must believe that what they learn is important to their present world and will be important to them in their adult world. Importance should be defined to include not only useful career guidance and training, but also a sense of meaningful identity and the appreciation of general intellectual, social, and cultural values. The clearest advantage of simulation games is increased student motivation (Boocock and Schild, 1968, p. 81).

Ireelan (1968, p. 45) is of the opinion that for those children who need additional incentives to remain in school, the use of short term rewards will tend to increase both intelligence and need for achievement scores. The use of group work techniques as a means of maximizing peer support has proved helpful as a part of the remedial programs for older low-income children. There is evidence that students prefer to work together in pairs, threes, or small groups and that this type of experience results in higher achievement (Fleck, 1968, p. 91). Simulation games, with their rapid feedback and opportunity for group work, provide another method by which teachers may be able to motivate those students with lower predispositions to learn.

Play and work are not really antithetical to one another as both are active occupations. The major difference is that play is its own

end while work has ulterior ends with rewards external to itself. Play as its own end is the source of intrinsic motivation which is an advantage of using games as a method of teaching. Abt expressed the opinion that

Educational games that simulate reality can present the great problems of contemporary society on a level of specific human action that directly relates the student's decisions to the larger world. The relevance of educational games perceived by students is both substantive and methodological. Games dealing with economic, political, social, and scientific problems on the adult scale are of obvious substantive relevance to the student's future adult activities. But the educational games and simulations also encourage the student to make systematic rational cost-benefit calculations in face of uncertainty and use intuitive heuristics (Abt in Boocock and Schild, 1968, p. 80).

Educational games convert the abstract impersonal solution of problems in conventional school situations to include the interpersonal aspects of most of the decision problems faced by adults. The student not only needs to make his own decisions, but must persuade others to the effectiveness of his decisions or be persuaded to view their decisions as more meaningful. There is a realistic foretaste of competition and cooperation which is characteristic of real-life situations. Deviant behavior is punished in a non-fatal way in games through group member interactions. The second advantage of games is that the players learn something about the give and take of human relations (Boocock and Schild, 1968, p. 80).

A third advantage of simulation games over real-life experience is their relative safety. Students can test alternatives and analyze the consequences of their actions in an objective way, and may make mistakes without having to pay real-life consequences. There is also the opportunity to play the game over, testing and evaluating alternative decisions. Thus comparisons of alternate decisions may be made which

help increase learning without the cost which would probably accompany a real-life situation (Kibbee, et al, 1961, p. 3).

That simulation is less complex than real-life, facilitating adaptation to the crucial factors which are included in the game, is a fourth advantage. Simulation games pluck out of life a certain aspect and attempt to reconstruct the principle rules by which behavior in this isolated aspect is governed and the principle rewards that it holds for the participant (Schild in Boocock and Schild, 1968, p. 143).

Feedback, the fifth advantage of simulation games, is usually more rapid than in real life, thus reinforcing the judicious decisions or revealing errors in the behavior of the participant. Rapid feedback is essential to effective learning. It enables the student to assess the results of his decisions in an objective manner. Since the instructor does not have to judge the quality of the decisions the results offer a common focus for student-instructor discussion (Kibbee, et al, 1961, p. 92; McKenney, 1967, p. 18).

Games help develop problem-solving abilities by engaging the student in an interesting and understandable problem which demands solution. They allow him to experience success in forming strategies and making decisions (Abt in Boocock and Schild, 1968, p. 80). Farran (in Boocock and Schild, 1968, p. 199) related the instance in which a group of four boys who decided to treat the Life Career Game as a joke found that they had their subject in trouble as far as his life career was concerned. They then became serious about the game and spent the remainder of the game play getting him established in a career. That conventional teaching would not have provided the opportunity for assessing the results of decisions is highly probable.

Another advantage of simulation games is their requirement for active participation on the part of the student. One only has to observe a group of people playing or reminisce to perceive the advantages of active involvement in most any activity. There is the tendency to greater interest and more learning when individuals are actively engaged in an experience (Zaltman in Boocock and Schild, 1968, pp. 205-214).

Closely akin to, and perhaps a result of, active participation is the ability of games to focus attention. Most students of all ages become completely absorbed in what they are doing. Those who may withdraw are usually drawn back into participation by the team members. In the conventional classroom withdrawal of a student will likely go unnoticed (Coleman in Boocock and Schild, 1968, p. 29).

One of the major advantages of simulation games is that they show good results with heterogeneous groups of students. Abt (in Boocock and Schild, 1968, pp. 65-83) and others have found that where student motivation may be low due to socio-economic factors, and where students find that much of the curriculum lacks relevance to their own life experiences, educational games can make previously uninteresting material fascinating. The tentative conclusion is that the poorest students show greater improvement when learning with games (Abt in Boocock and Schild, 1968, p. 78).

The socio-economically deprived students seem to be at less of a disadvantage in educational games than in conventional classrooms. Interaction provides the opportunity for the slow learners to learn subject matter from the faster learners. A further benefit from this interaction is the promotion of crosscultural understanding (Carlson,

1967, pp. 62-64 and 82-83; Abt in Boocock and Schild, 1968, pp. 65-83). Research has found that the deprived individual appears to learn most readily through a physical, concrete approach and that, though he is often slow, he is persistent when content is meaningful and valued (Black, 1965, p. 465 ). Educational games present concrete problems in a simplified, but dramatic form. For those who are inept at dealing in the abstract, educational games translate the student's primarily concrete, intuitive thinking into a sequence of dramatized possibilities that expand his awareness of hypothetical alternative and fundamental relations.

Novel use of time dimension is a feature which makes simulation games a worthwhile teaching method. When planning strategies, the player must consider the present and the future. As the student views the results of his decisions, he can understand, often without assistance, that present decisions can limit, guide, or dictate future ones. The ability of students to comprehend this cause and effect relationship was cited as the reason for students learning content that was not included in the games. After considerable study, it was concluded that the games furnish a frame of reference for uniting various ideas which students had learned prior to encountering the game (Farran in Boocock and Schild, 1968, p. 198).

Learning to make a strategic decision, to see relationships between events, to understand cause and effect, and to piece together ideas all lead to the ability to formulate and carry through a plan. Experience in strategic planning is one of the most fundamental experiences that games provide for the student and is particularly valuable for the underachiever. Kibbee thinks that this characteristic of games



may be of particular significance for those people who lack orientation toward the future (Kibbee, et al, 1961, p. 42).

#### Disadvantages of Simulation Games in the Classroom

Those who look upon learning as a "serious business" view with suspicion the use of simulation games in the classroom. Cherryholmes (1966, pp. 4-7) believes that the desire of the players to win the game may cloud the real goals of learning claimed for this technique.

The validity of simulation games in the classroom is unproven. An evaluation of the results of several studies on the educational impact of simulation games proved to be disappointing to Cherryholmes (1966, pp. 4-7). He found no evidence to support consistent or significant differences in learning, retention, critical thinking, or attitude change.

There are those who feel that the cost in money, time, and personnel is out of proportion to the benefits which accrue from the use of simulation games. Games do not reduce the time that the teacher spends in preparation for classwork; they do change the kind of preparation the teacher does as well as alter his role in the classroom (Kibbee, et al, 1961, Ch. 1).

Neglect of the individual student has been offered as an objection to the use of games. It is felt that individual needs may be lost in group participation. Game play often requires an informal arrangement of the classroom; classes may become noisy when players become absorbed in their activities (Twelker, 1969, p. 68).

Kraft (1967, pp. 71-72) was particularly critical of the use of the Legislative Game for social studies classes. It was his judgment

that Coleman "has applied a modestly useful teaching device to inappropriate subject matter--social studies."

#### Kinds of Learning Promoted by Simulation Games

Boocock (1968, pp. 111-130) describes three different kinds of learning which resulted from the use of the Life Career Game and the Legislative Game. The simulated games served as a vicarious experience for the players. They felt that the games afforded a more vivid or "real" understanding of the problems and goals of people faced by life decisions such as education, career, and marriage.

Secondly, these games produced evidence of factual learning. Evaluation revealed that players learned facts about various careers plus such concepts as "higher education goes hand-in-hand with higher pay and a better job."

An attitudinal change having to do with the students' feeling of effectiveness was the third type of learning mentioned. This feeling of being able to understand and to some extent control the world around him promotes mental health generally and seems to be related to a person's participation and performance in a variety of situations. A group of researchers (Coleman, 1961, Ch. 11) found that one of the most powerful predictors of school success is feeling that one's share of the rewards of the school system is not controlled by luck or other forces, but that one's own efforts will be rewarded. The implication is that if students can be instilled with the feeling that they can control their environment, therefore, making it worthwhile to make an effort to understand it, the level of student performance can be raised, regardless of other features of the school and its student

body. This feeling of efficacy is especially important to the less able and socio-economically and culturally disadvantaged student.

It was found that feelings of efficacy occur along with the realization of the difficulties of making decisions in a complex society. Decision making in simulated games gave some players greater confidence in their ability to control social situations at the same time that they acquired a more realistic view of the complexity of the simulated situation and the necessity for further knowledge about it (Boocock, 1968, p. 126-127).

Farran agrees with Boocock that games help the student develop a sense of control over his environment. After participation in decision-making exercises in simulation games, the student is no longer convinced that things just happen, but, that through planning and rational decision-making, he can achieve certain goals which he may set for himself. The element of uncertainty is usually introduced into games to encourage students to anticipate and plan for the unexpected (Farran in Boocock and Schild, 1968, p. 201).

Zaltman (in Boocock and Schild, 1968, p. 213) investigated the effects of active player participation on the amounts of learning acquired by the players. Evidence, statistically significant at the .01 level, supported his hypothesis that experienced-induced learning is associated with the degree of participation in the basic game processes. Kibbee, et al (1961, p. 37) found that active participation is essential to learning from the play of simulation games.

Whereas Boocock was concerned with the learning of content and attitudinal changes of students, Schild was concerned with what he designated as the elementary learning of strategies and skills conducive

to winning in simulated games. A systematic change of strategies is learning the give and take of interpersonal interactions. The question of whether or not this learning of strategies and skills will transfer to real life situations is problematical. Evidence was found that strategies learned in playing the Legislative Game were transferred to the Parent-Child Game (Boocock and Schild, 1968, p. 143).

Schild's view that a major value of educational games is learning the strategies of problem solving was supported by Farran when he said

Game play has a value which goes beyond the content imparted to the player. The content in a game could be taught in a number of different ways, but there is a combination of elements inherent in games, regardless of their content, which cannot be imparted by any other means; strategic decision-making, relational thinking and planning (in Boocock and Schild, 1968, p. 198).

The impact of a simulation experience as compared with that of conventional teaching methods was investigated by Baker (in Boocock and Schild, 1968, p. 135). He was concerned with the immediate learning, the retention of material learned, and attitudes toward issues pertinent to the pre-Civil War period of 131 eighth graders with above average intelligence. He concluded that the simulated technique for teaching American History was more efficient than traditional methods for communicating historical facts, concepts, and attitudes to the subjects of his investigation.

Simulation games are efficient learning devices because they allow three levels of learning to occur simultaneously without ability grouping of students. These levels are: (1) efficient learning of facts; (2) learning of cause and effect relationships by substituting gaming for personal experience; and (3) learning of strategic thinking concepts by considering results of alternative courses of action (Boocock,

1968, pp. 111-130).

It was the opinion of several authorities that a good deal of learning can occur through the use of simulation games. Perhaps Boocock (Boocock and Schild, 1968, p. 130.) expressed the idea best when she said that her findings in the study of simulation games supported the basic tenet of the philosophy of educational gaming--that students can have fun and learn at the same time.

### Designing A Simulation Game

The simulation game is an educational tool. While a game is not an end in itself, the manner in which a game program is organized and administered will have significant bearing on the educational value derived. Developing a game continually involves compromises, deciding what to include as well as what to leave out. These decisions will be facilitated by considering the following factors:

1. Purpose. Many questions relevant to designing a game can be answered by considering the purpose of the game, the purpose usually being the fulfilling of certain educational objectives.

2. Simplicity. Simplicity is extremely important and can often make it difficult to satisfy all requirements of the model. Four facets are: simplicity of participation; simplicity of computation (if computation is involved); simplicity of administration; and simplicity of construction.

3. Verisimilitude and Realism. Verisimilitude is the appearance of reality to the player. It does not necessarily imply reality of the model; an illusion of reality can sometimes be more convincing than reality itself. The degree of reality depends on the educational

objectives of the game. If a game is designed to teach specific procedures, established facts, or quantitative relationships, realism is important. Realism is of less importance in games designed to teach general principles (Kibbee, et al, 1961, Ch. 7).

#### Steps for Developing Simulation Games

Developers of games have listed the steps necessary for designing a practicable simulation game. Some games may require that all of the steps be included; other games will require only part of the steps. Following is an adaptation of the steps which Abt considers necessary for developing an education game:

1. Define operationally the behavior which the student should be capable of after the game that he was not capable of before the game.
2. Determine the scope of the game--simulated duration, geographic scope, and issues that are to be exercised or decisions that are to be made.
3. Identify key actors or roles in the game situation.
4. Identify actors' objectives in terms of their objective for the game and resources for achieving these objectives.
5. Determine the interaction sequence.
6. Determine decision rules or criteria for action.
7. Identify constraints on actions.
8. Identify win criteria. Games usually are a mixture of competition and cooperation as in reality. Often there is more than one winner and/or degrees of winning.
9. Choose the form of the presentation of the problem.
10. Chance elements are usually included to dramatize the limita-

tions of effort and skill. Although the goal of most games is to make the player feel that he can manage his environment through his own effort and skill, he must also realize that there are unexpected events and emergencies with which he must learn to cope. Chance elements add to the drama of the game because of the element of uncertainty (Greenlaw, Herron, and Rawdon, 1962, p. 23).

Test plays, which are of major importance, follow the designing of the game. Test plays serve three functions:

1. Testing the computational scheme,
2. testing the operability of the game, and
3. testing the administrative procedure (Kibbee, et al, 1961, Ch. 7; Twelker, 1969, p. 70).

There are ordinarily two methods of incorporating the environment into the structure of the game. One of these is to let each player in the game act as a portion of the environment of each of the other players. The rules of the game establish the obligations of each role and the players, acting within these roles, interact with each other.

A second way of incorporating the environment into the game is in the rules themselves. The rules may contain contingent responses of the environment representing the actions of persons who are not players, but nevertheless relevant to the individual's actions.

Most games use a combination of these two means of incorporating the environment into the structure of the game. A portion of the environment is represented by other players, and a portion is represented by the environmental response rules. Types of rules included in simulation games are: (Coleman in Boocock and Schild, 1968, pp. 32-35).

1. Procedural rules which describe how the game is put into play

and the general order in which play proceeds. Procedural rules must follow roughly the order of activities in the phenomenon being studied. A subtype of procedure rule is the mediation rule. This is a set of rules which specify how an impasse in play or a conflict of paths is resolved.

2. The behavior constraint rules correspond to the role obligations found in real life and specify what a player must do and what he cannot do.

3. A third type of rule is the rule specifying the goal and means of goal achievement of each type of player. The goals must correspond roughly to the goals that individuals in the given role have in real life. Insofar as the theory underlying goal specification is correct and behavior constraints are correct, the behavior of the player should correspond to the behavior of the individual in real life. If the behavior of the players deviate greatly, it is very likely that the theory about goals of persons in that role is defective.

4. The environmental response rule specifies how the environment would behave if it were present as a part of the game. The environmental response rules are of special importance; since a simulation game is an abstraction from reality, these rules give the probable response of that part of the environment which is not incorporated in the action of the players.

5. Police rules give the consequences to a player of breaking the game rules.

Most all games are constructed and played so that there is a winner, whether it is an individual or a team. The players' scores may be determined by "satisfaction points" as used in the Johns Hopkins



games or by the highest dollar profit as used in business management games.

The no-final score, no-winner variety of game, which has been used in some instances, was criticized by Coleman. He said

The principal defect of the no-winner variety of the no-final score approach is that it assumes what is hardly true: that the player can understand and internalize the goals of persons in the role he is playing in the game, and when those goals are not given to him by the rules of the game, and then evaluate his performance on the basis of these assumed goals. For if he cannot, his behavior will be aimless, that is without a goal, or will be directed toward incorrect goals, thus destroying the value of the simulation. Parenthetically, I should say that this anti-competitive view apparently is a misdirected generalization from the harm that punishment through low school grades, and punishment from adults generally, does to children. The idea of winning and losing in a game, and accepting defeat, is an early element in the socialization of a child. Children unable to accept defeat in a game are as Piaget's researches suggest, at a very early state of socialization, approximately the four to six year age level (Coleman, in Boocock and Schild, 1968, p. 49).

#### Evaluation of Simulation Games

Simulation games are designed to give students realistic insights into the forces producing a situation. This does not imply reality of the model, and the game design should not be evaluated with this criterion in mind.

Games should be evaluated for their operability, motivational effectiveness, intellectual content, and relevance. Operability is easily tested in actual play. If the instructions are unclear, the rules are incomplete or unreasonable, some roles are boring, and outcomes are difficult to score, it will be apparent after a few plays.

Motivational effectiveness is partially made up of the dramatic qualities of the game. Uncertain outcomes and interesting roles are

the primary methods for achieving dramatic and exciting decision-making situations to arouse student interest.

Intellectual richness is evinced by the number of times the game can be played without exhausting its possibilities. Relevance to specific educational objectives desired as outcomes can be tested by conventional objective examinations and creative problem-solving assignments (Abt, 1967, pp. 92-93 and 118).

#### Administration of Simulation Games

The capability of the person in charge of gaming sessions was found to be more important than had been suspected, especially in games that are not self-administered. Kibbee, et al, (1961, Ch. 4 and 5) emphasized that, in the final analysis, the skill with which the instructor uses the game is possibly the greatest factor in its success.

While a game is not an end in itself, the manner in which the game exercise is organized and administered will have significant bearing on the educational value derived. Briefing and critiquing of game sessions leave the greatest impression on the participants.

Briefing is the familiarization of the participants with the simulation game. They should be informed of the objectives to be sought, the decisions to be made, rules to be followed, and any other special procedures. This is usually accomplished through the distribution of players' manuals followed by an oral briefing. The potential value of the exercise can be lost immediately if the procedure and the data are not understood by the participants (Kibbee, et al, 1961, Ch. 2). While the overall reaction of students is generally positive, it is quite possible to reduce the amount of negative reaction to the experience by

proper presentation of games and handling of the sessions (Coleman, in Boocock and Schild, 1968, pp. 29-51).

The critiquing session consists of an analysis and discussion of the appropriateness of the actions taken and/or decisions made by participants in performing the problem situation. This analysis and discussion of decisions affords the opportunity for relationships such as the effect of present decisions on future decisions to be made more vividly. The critiquing sessions seem to be most effective when the topics to be discussed are identified at the beginning of the session. Kibbee, et al (1961, Ch. 2) believed that the critique is the most important part of the gaming session because it is in the critique that the lessons are driven home.

#### Uses of Simulation Games

Games are not a substitute for, but a complement of, conventional study methods. Background information must still be carefully studied through such methods as reading, writing, and discussing. Abt (in Boocock and Schild, 1968, p. 83) proposes that the best use of games is in conjunction with background reading before the game play and class discussion afterwards.

Game play has been found particularly useful when played on the first day of a unit of study. The game serves to arouse interest and to motivate students for further study. It may set the stage or initiate a way of thinking about a problem. If the problem is social, it may raise issues pertinent to the problem. It will likely establish rapport between the instructor and the students and act as a focus for discussion during the remainder of the unit (Kibbee, et al, 1961, Ch. 2).

Simulation games may be played on one or more occasions to unify the course. When played discontinuously the game tends to weave a unifying thread throughout the course. Kibbee, et al (1961, p, 9) suggests that the effectiveness of simulation games appeared to be strengthened by splitting the game plays into at least two sections. The participants had an opportunity to evaluate their performance of the first session of play, discuss what they had learned about decision-making, and change strategies accordingly. This evaluation and discussion may provide some of the most important educational outcomes in the form of improved interpersonal relations and interaction.

The use of game play as the culminating activity has proven valuable. It provides the opportunity for summarization of the unit and as a laboratory for trying out new tools, principles, and techniques acquired during the unit. It provides the chance for the teacher to strengthen weak points in the students' understanding of the subject matter. It may also afford a means of evaluating the unit of instruction.

Whatever the use and whenever used, the simulation game should be utilized only with a clear understanding of the objectives to be attained. Assignments, if in consonance with the simulated environment, seem to induce more conscientious involvement in the game and do not detract from the objectives. In fact, assignments are essential if the exercise is to achieve its potential as a learning experience (McKenney, 1967, p. 18).

The general educational implication is that games, by way of their carry-over potential, may make conventional instruction more effective. A further implication is that to use a simulation game alone is to make

only partial use of its learning potential. By supplementing the game with reading and other conventional learning activities, the additional potential can be utilized (Kibbee, et al, 1961, Ch. 1; Cherryholmes, 1965, pp. 227-281).

### Summary

Educational theorists have provided basic principles by which learning experiences can be evaluated and the understanding of the learning process improved. Nothing from this body of knowledge would discredit interesting, effective learning experiences regardless of the approach. Worthwhile learning may result from "fun" experiences.

The innovative technique of gaming can be viewed as an approach for supplementing other teaching methods. Simulation games have been adjudged as effective in bringing learning principles to bear on a learning situation. The use and development of simulation games must give attention to building on the student's past knowledge and experiences. The knowledge may be as recent as last week's learning experiences or principles and concepts learned from past experience.

The responsibility for creating conditions for learning lies with the teacher and/or the game designer. The following chapter refers to learning principles reviewed in this chapter as bases for evaluating possibilities and limitations of the Family Finance Game.

## CHAPTER III

### DEVELOPMENT OF THE FAMILY FINANCE GAME

The Family Finance Game, a simulation experience, was designed to add relevance to and practical learning experiences for consumer education units emphasizing consumer credit and the management of money as it relates to the use of consumer credit. The Family Finance Game represents an attempt to bring reality and the classroom together (See Appendix A).

The following discussion will include the various decisions involved in designing the simulation game. Procedures listed in Chapter II on pp.38-41 and the steps illustrated in Figure 1, p.47 served as guidelines for the development of the game. As defined in Chapter I, the problem of consumer education has been placed in the hands of vocational homemaking teachers as specified by Part F of the Vocational Amendments of 1968. Authorities (Paloucci and Thal, 1964, p. 23) in the field listed the problems of homemaking teachers who were initiating units in consumer education as (1) motivation of students, (2) teaching methods, (3) resources and materials, and (4) concepts to be included in the units. ✓ 58

A survey of the literature revealed that the greatest users of credit range in age from 25 to 44. A characteristic of the typical person claiming personal bankruptcy was a husband twenty-eight years of age with a wife who is two years younger and two small children.

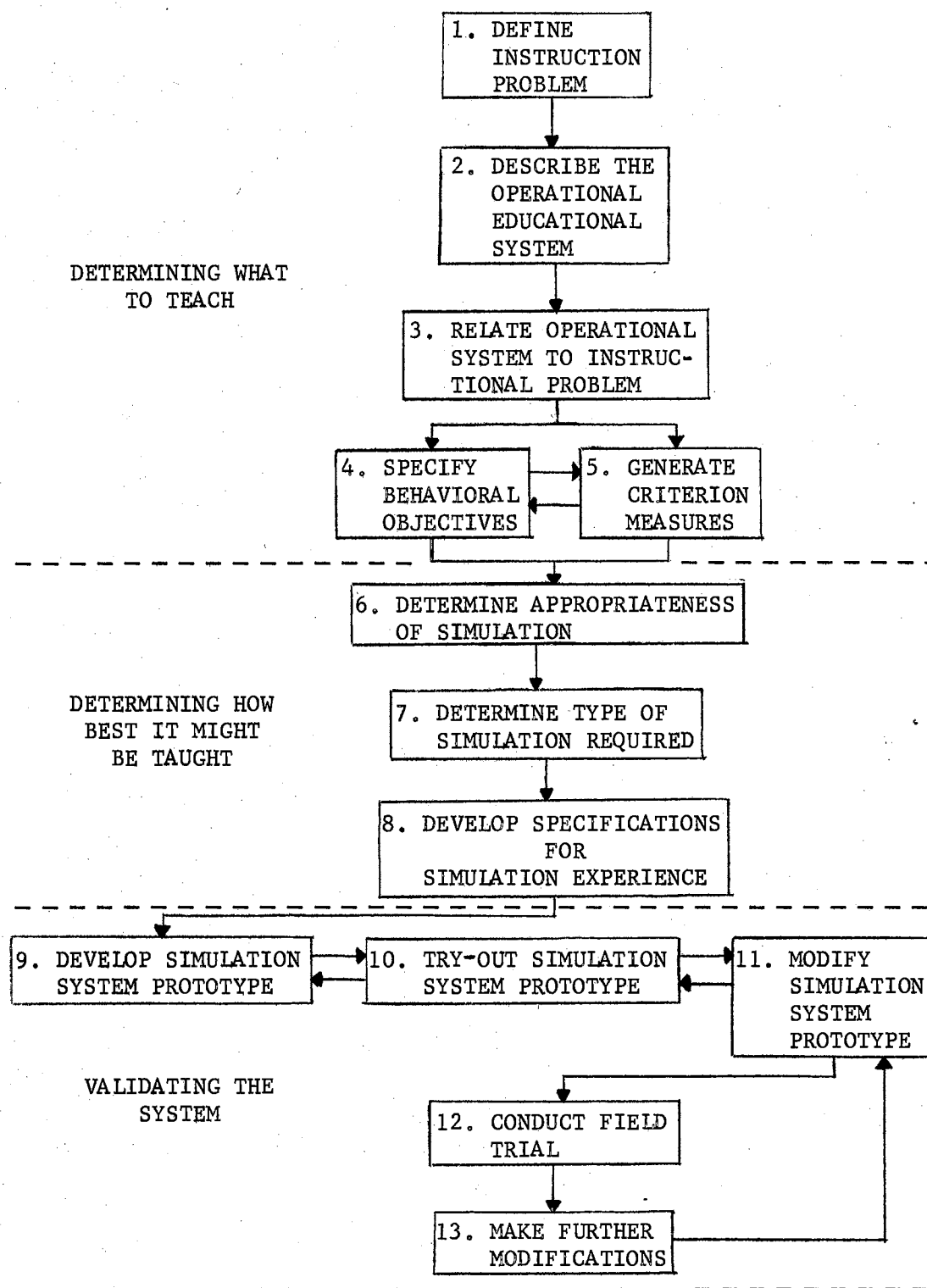


Figure 1. Steps in the Design of an Instructional Simulation System  
(Twelker, 1969, p. 66)

For these reasons it seems feasible to plan units of consumer education emphasizing consumer credit for Homemaking III and Homemaking IV classes in high school.

In an attempt to further delineate the problem of consumer education for vocational homemaking pupils a banker, a loan officer in a savings and loan association, two managers of retail businesses, a loan officer of a finance company, the manager of a small loan company, the manager of the Credit Bureau, and the loan officer for an insurance company were interviewed to discover the financial management problems of young people. The findings of these interviews were used to aid the writer in determining a feasible method for teaching a phase of financial management in vocational home economics classes in high school. The interviews centered around four questions: (1) What do you consider to be the most urgent financial problem of young people? (2) Do you extend credit to teenagers? (3) What problems of businessmen are the result of the use of credit by consumers? and (4) Do you have suggestions of activities and methods for teaching financial management to high school students? Questions one and four were also discussed with a group of four young homemakers to obtain their reactions and opinions of their most urgent financial problems.

Summarized, the results of the interviews were: (1) Both the businessmen and the young homemakers agreed that the major problem of young people is the lack of money to finance the standard of living which they desired and, in many cases, to which they had become accustomed in the parental home. (2) Bankers and retail businessmen do extend credit to teenagers using somewhat different regulations. (3) The most recurrent problem for those who extend credit to consumers is the



failure of people to think through their financial decisions, and (4) Both businessmen and young homemakers suggested teaching financial management in such a way that students could see the results of poor management of financial resources.

A simulation game seemed to afford several advantages over methods traditionally used to teach consumer and homemaking education. It appeared that the use of the game as developed would cost no more than the methods traditionally used. The possibility of presenting information in an innovative and more meaningful way was considered to outweigh the fact that more information might be presented in less time by more traditional means of instruction.

The advanced level of vocational homemaking classes was chosen as the target population. Advanced level vocational homemaking classes in Oklahoma include Homemaking III and Homemaking IV in which both eleventh and twelfth grade pupils may enroll. Some schools alternate Homemaking III and Homemaking IV from year to year, hence the decision to develop this unit for eleventh and/or twelfth grade vocational homemaking classes.

The use of a simulation game as a teaching tool for a unit on consumer credit and money management as it relates to credit was based on the following factors:

1. The opportunity for active involvement of students in decision-making (problem-solving) activities relevant to family financial management.
2. The opportunity afforded for self-paced instruction.
3. The opportunity for student-student interaction and student-teacher interaction based on objective problem situations. Interaction

has possibilities for promotion of cross-cultural understandings (Schild in Boocock and Schild, pp. 93-102).

4. The opportunity to build an experience of sequential learning in which more complicated learning activities build on previously learned facts and simpler principles.

5. The opportunity to include knowledge of subject matter, development of cognitive processes, orientation to the real world, and attitudes in the same learning activity.

6. The opportunity to provide meaningful learning experiences related to the learner's life goals and commensurate with his intellectual and physical development. These characteristics of learning activities are basic to learner motivation which has been described by Hall and Paloucci (1961, p. 129) as the key to learning.

7. The opportunity to provide a means of self-evaluation for students through feedback provided from the results of their decision-making.

8. The opportunity to provide learning experiences in a simulated situation which hopefully will transfer to real life situations.

9. The opportunity to provide rewarding learning experiences for heterogenous groups of students. Poor students especially seem to benefit from relevant, concrete learning experiences and interaction with other students.

10. The opportunity for experience in the strategies of formulating and carrying through planned decisions.

11. The opportunity for students to learn from experience without paying the price that would result from wrong decisions made in real life.

The content to include in the unit on management of financial resources was limited to the concepts and generalizations which could be taught in two weeks. The decision to place the main emphasis on consumer credit was based on two factors: (1) Both businessmen and homemakers specified the use of consumer credit to maintain a desired standard of living as one of the major problems of young people, and (2) Making credit purchases is much more complicated than making cash purchases. However, teaching the use of consumer credit in a unit such as this cannot be completely isolated from the management of money. The content for the unit was planned to include both money and credit management with emphasis on the use of consumer credit.

Content to be included in the unit was selected from Consumer Education: The Management of Personal and Family Financial Resources (1969, pp. 94-95), a curriculum guide developed by the Department of Home Economics Education in Oklahoma. The following generalizations were chosen for emphasis:

1. The use of credit involves definite responsibilities and obligations.
2. The ease of obtaining credit encourages spending which may not always be advisable.
3. The use of credit increases the cost of the product.
4. The acquisition of goods and services may be limited in the future (including emergencies) if credit is over-extended.
5. Credit is a valuable tool for individuals who are able to control it and use it cautiously.
6. A good credit rating is a valuable asset for the consumer.

In addition to the content delineated above, behaviorally stated

objectives were included in the unit and game materials for the students. Behaviorally stated objectives developed for the game were:

When you (student) have completed this unit you should be able to:

1. Compare costs of cash and credit buying by computing the total cost of goods bought on credit and comparing the total credit price with the cash price of the same goods.
2. Compare interest costs by computing the dollar costs and the annual percentage rates of interest.
3. Identify the terms and conditions of an installment contract in order to sign a contract with terms and conditions most beneficial to you.
4. Specify your financial situation by referring to your records kept on the Cash Flow Statement.
5. Figure your net worth at the end of each year.
6. Demonstrate an understanding of terms used in money and credit management by scoring 80% on an achievement test.
7. Demonstrate an understanding of the principles of money and credit management included in this unit by a minimum score of 70% on an achievement test (See Appendix E, p.163).

The outcomes of simulation are more difficult to evaluate because of the human processes that are modeled. This should not deter the game developer from the attempt to devise an instrument to measure outcomes.

Criterion measures, generated by the behavioral objectives, were developed for assessing the learning which resulted from the unit simultaneously to the development of the objectives. Student achievement of the objectives was measured in three ways. True-false questions were developed to measure student knowledge of facts and some principles.

A typical question measuring knowledge of facts was

- T F 21. The cost of credit is sometimes called interest and sometimes called carrying charges.

Questions such as number 15 were used to measure knowledge of principles.

- T F 15. Shopping for the best credit deal may save more money than shopping for the best bargain in merchandise.

The true-false section of the test was designed as a partial measurement of student achievement of Objective 7.

Multiple choice questions were constructed to measure student knowledge of the characteristics of various kinds of consumer credit and his ability to interpret credit documents. A sample question was

36. The statement, "My installment payments shall be applied as follows: in the case of items purchased on different dates, the first purchased shall be deemed the first paid for," in the credit contract means

- A. all goods must be paid for before the buyer receives title to any of the goods.
- B. payments will be applied to cost of purchases in the order purchased.
- C. the buyer may choose the goods he wants to finish paying for first.
- D. the seller may determine the order in which goods are paid for.

Questions thirty-eight through forty-five (See Appendix E, p. 166) were developed to test the student's ability to apply his knowledge of credit and money management to a simulated situation. The multiple choice items were designed to measure achievement of objectives 1, 2, 3, and 7.

A matching test of twenty-three terms (answers) to be used for matching with twenty definitions (questions) was the means for assessing student achievement of Objective 6. The number of terms exceeded the definitions to counteract somewhat the effects of guessing. The purpose for the achievement test was to assess student achievement of the objectives for the unit. The unit was so developed that the knowledge of these facts and principles and application of these learnings were some of the desired outcomes. This instrument, which would be

classified as a "teacher made" test, has many of the discrepancies found in such tests; however, it was deemed valid because it was developed specifically to measure the behavioral objectives listed on p. 63.

Objectives 4 and 5 were measured by performance of the student in using Forms F and G provided in the game materials. Teacher observation of student performance in the use of these forms provided the feedback for assessing the achievement of these objectives.

To collect data pertinent to the development of the game model, a second interview was scheduled with the banker, the two managers of retail businesses, the loan officer of a finance company, the manager of a small loan company, and the manager of the Credit Bureau to explain the proposed simulation game to teach consumer credit and management of money as it relates to the use of consumer credit. Because loans of insurance companies and savings and loan associations are not classified as consumer credit, a second interview was not necessary. Information was solicited in these areas: (1) regulations and procedures followed for making loans or extending consumer credit to young people; (2) the business forms used for making loans or extending credit; (3) ways and means of collecting delinquent payments and penalties assessed; (4) conditions affecting the rate of interest or carrying charges; (5) the role of the Credit Bureau in the credit business. Each business furnished forms used for consumer applications for credit and/or loans and loan contract forms used in their business with permission to use the form or an adaptation of the forms in the game. The data compiled from these interviews was used to simulate the environment of the model in the form of "Rules and Regulations for Obtaining

Consumer Credit" and business forms included in the game materials.

Simplicity of game construction is extremely important and can often make it difficult to satisfy all requirements of the model. Four facets of simplicity which must be considered are:

1. Simplicity of participation.

2. Simplicity of computation especially applicable to hand computed models.

3. Simplicity of administration--simple rules are desirable so that briefing may be short, but adequate.

4. Simplicity of construction--the tendency is to complicate games beyond the needs of instructional objectives (McKenney, 1967, p. 12; Kibbee, et al, 1961, Ch. 3).

Computation for the Family Finance Game was simplified by using whole numbers for all incomes and expenses, by including sales tax in the total price of the goods, and including line-by-line directions for filling out the game forms. The simplification of arithmetic procedures also simplified participation for the players.

The "Installment Sales Contract," and the "Application for Credit" were adopted with only minor changes; however, retyping the forms resulted in changed spacing and size of the forms creating a less complicated appearing form. The forms were also easier for the students to read and to fill out. A maximum of two "Application for Credit" forms and two "Installment Sale Contract" forms were filled out to speed the play procedure and to prevent the players from becoming mired in details.

Two kinds of directions for students were included in the game. Procedural directions such as "Collect your cash from the teacher at

the beginning of each month of play," were primarily concerned with the mechanics of the game. However, the direction "Use a minimum of two lending agencies," though procedural in nature, was included to promote participation in the use of credit. Zaltman (in Boocock and Schild, 1968, p. 205-214) found that learning from simulation game activity is dependent on participation in the activities.

"If a team is found to have more money than is rightfully theirs, the amount which does not belong to them will be subtracted from their net worth," is an example of police rules. Police rules were included to inhibit dishonest activity which might result from the players' desire to win.

The activity of the Family Finance Game centers around the financial activities of a young couple beginning to establish their household and the life style which they consider desirable. A description of their source of income, housing, furniture, and clothing was included in the "Profile of the Couple." All of the information necessary for completing the application for credit and other business forms was included. The "Financial Statement" furnished all of the information relative to their income and expenses. "Periodic Expenses" such as car insurance were included to encourage financial planning to meet these expenses. Also, pupils who had failed to make appropriate plans might realize the consequences with much less serious penalties than would be experienced in real life. The description of the couple and their financial status was based on the writer's knowledge of real life situations of young married couples. The encouragement of players to assume the roles of the couple was a goal of the writer, however, successful play of the game did not hinge on role play.



Merchandise for purchase was supplied in the form of "Merchandise Cards" (Figure 2). Alternative sets of credit terms were described on approximately half of the cards to create a situation for players to choose the more favorable terms. In all instances, players were allowed to pay cash for merchandise. This provision for choice and decision-making simulates the situation in which consumers shop for the most favorable way to make a purchase.

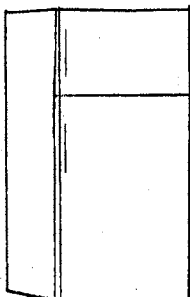
	REFRIGERATOR--Cash Price
	\$350.00
	Trade-in old refrigerator
	\$25.00
	I. Smith Furniture Company
	Easy Payment Plan:
Payments of \$20.00 per month for 30 months.	
II. Norman's Appliance Store	
Easy Payment Plan:	
Payments of \$15.00 per month for 30 months.	

Figure 2. Sample Merchandise Card

Decisions regarding the merchandise to include were based on the needs and desires expressed by four homemakers in their early twenties and on items selected by a gainful employment homemaking class which included tenth, eleventh, and twelfth grade pupils. Merchandise included recreation equipment such as a boat and ski rig, household durables such as a refrigerator, and miscellaneous items such as a French poodle.

YOU BACKED OUT OF YOUR DRIVEWAY AND HIT A  
 CAR PARKED ON THE OTHER SIDE OF THE STREET.  
 DAMAGE TO YOUR CAR WAS \$21.00; DAMAGE TO THE  
 OTHER CAR WAS \$72.00. YOUR CAR INSURANCE  
 WILL PAY FOR THE DAMAGE TO THE OTHER CAR.

Figure 3. Sample Unexpected Event

An element of chance was injected into the game in the form of "Unexpected Event" cards (Figure 3). "Unexpected Events" were included in the game to add realism to the financial planning of the game and to create interest which results from suspense created by the unknown. Unexpected happenings should create in the student an awareness that there are financial emergencies that must be met and that these emergencies occur in spite of the very best financial planning. The term "Unexpected Events" was used because both unexpected expenses and unexpected income were included.

"Unexpected Events" were introduced in the form of cards to be drawn by the team members. The directions for the players were: An "Unexpected Event" card must be drawn at the beginning of the fourth month of play. Thereafter, draw an "Unexpected Event" card each month. The unexpected event may be settled before or after monthly purchases and payments have been made.

The sequencing of tasks in the game was based on an analysis of tasks which are performed by consumers when purchasing goods. The players were directed to select merchandise and decide on the method of payment. If a cash purchase was made the players paid for the goods and recorded the purchase; if credit was used to make the purchase the players decided on the terms, filled out the appropriate application for credit (Form A or B), filled out the appropriate credit contract (Form C or D), and recorded the purchase.

Form E, "Record of Purchases," (Figure 4), was devised by the writer for two purposes. First, the record was to provide a means for the players and the teacher to keep track of each team's purchases. The second purpose, especially applicable to Column II, credit pur-

chases, was to create a situation that forced players to an awareness of the length of time that payments would have to be made.

FORM E

TEAM \_\_\_\_\_

## RECORD OF PURCHASES

I Mo.	Cash	II Sales Credit	III Cash Credit
1 Product	Product _____	Cash Price \$ _____	Amount of Loan _____
Cost \$ _____	Down Payment \$ _____	_____ mo. payments of \$ _____ per mo.	_____ mo. payments of \$ _____ per mo.
	Date of last payment _____	Date of last payment _____	OR Single payment of \$ _____ due _____

Figure 4. Record of Purchases

The purpose of the "Cash Flow Statement," Form F, (Figure 5) was to guide the players in summarizing their income and expenses. Hopefully, this would create an awareness on the part of the players of the manner in which they were managing their income and credit resources. Form F was also a means to help players evaluate their decisions and to gain insight into the cause-effect relationship which resulted from their decisions.

The "Cash Flow Statement" used the bank statement as a model. Besides the feedback in relation to their decisions, the players might become familiar with the style in which bank statements are written and thus facilitate their reading of them.

Provision for a summarization of the yearly financial status was supplied by the "Net Worth Statement," Form G (Figure 6). A portion of the "Comparative Analysis Statement" found in the Farm Management Game used for senior management classes in the Department of Agricul-

tural Economics, Oklahoma State University, was the model for Form G. (Schneeberger, 1968, p. 60). In essence, this form served the same purposes on a yearly basis as those served on a monthly basis by Form F. The total liabilities figured on a yearly basis were subtracted from the total assets. The concept of depreciation of durable goods was introduced. A simplified procedure for computing depreciation and its use in calculating net worth appear on page 123, Appendix A.

FORM F

TEAM \_\_\_\_\_

## CASH FLOW STATEMENT

Month _____			
1 - Income			
a. Balance Brought Forward	\$150.00	a. \$150.00	
b. Bob's Salary	_____	b. Deductions-Bob's Salary \$	_____
c. Other Income	_____	c. Deductions-Other Income	_____
_____	_____	_____	_____
_____	_____	d. Fixed Living Expenses	_____
		e. _____	_____
		f. _____	_____
		g. _____	_____
		h. _____	_____

Figure 5. Cash Flow Statement

In addition to the evaluation role, the "Net Worth Statement" provided the results which determined the winner(s) of the game.

Money improvised for the game was printed on green paper with the value indicated on each piece. To simplify the handling of money, only discretionary income (the money remaining after fixed monthly expenses were paid) was issued to the players. This breach of realism is perhaps not too great since that segment of income is already committed in real

life; however, it did prohibit players from experiencing lack of money to meet necessary expenses due to overspending for unnecessary merchandise.

### Manual for Teachers

The "Manual for Teachers" was written in two parts. The Introduction defined the target population and the purposes of the game. A brief explanation of the model for the Family Finance Game was followed by an explanation of the simplification of the game.

The second part, "Instructions," guided the teacher in the administration of the game. Some of the instructions were specific and concerned the mechanics of the game. "Supervise the drawing of 'Unexpected Events,' " was such a statement of directions. To prepare for game play the teacher was instructed to review the player's manual. The teachers were charged with promoting pupil discussion of questions and problems generated by playing the game. The post discussion or critique of the game play provided the opportunity for teachers to stimulate pupil analysis of financial decisions and, hopefully, to reach an understanding of the generalizations specified as basic to the unit.

Simulated game activity alters the role of the teacher in the classroom. Because Forms F and G serve to help the student evaluate his own activities, the teacher is relieved of the role of "judge" and may serve as a catalyst to student learning. He will find that he may discuss the problems resulting from game play with the pupils in an objective manner. The provisions for each team to work at its own pace with instructions and objectives to guide them, may free the

teacher for supervisory activities and to give individual attention to those who learn more slowly than other members of the class.

#### Resource Materials for Teachers Using the Family Finance Game

A packet of resource materials was furnished to the teachers using the Family Finance Game. To quote Popham, "The easiest course of action for a teacher to take in discharging his instructional responsibilities is to adopt the ready made structure provided by curricular materials (1969, p. 1)." Selected curricular materials were included to insure that references and media were conveniently available for teaching the content outlined for the unit and included in the Family Finance Game. Eight overhead transparencies thought by the writer and the homemaking teacher of the empirical tryout to be of most value to the teachers participating in the field test of the game were included in the resource materials. Masters for additional transparencies were included for the teacher's use if they so desired. For a list of resource materials included, see Appendix A, p. 148.

#### Empirical Tryout of the Family Finance Game

An empirical tryout of a simulation game is mandatory. The tryout should be limited in nature to allow close monitoring of the learners as they work with the model. If a formal classroom situation is not available, the game developer's colleagues may be utilized for the empirical testing.

Arrangements were made with the teacher of the gainful employment class of vocational homemaking in the local high school for the empiri-

cal tryout of the Family Finance Game in two classes. Students in both classes were described as non-achievers with poor attitudes toward school by the teacher and the school principal. Burns and Brooks (1970, p. 12), developers of programmed instruction, support the choice of such a class for testing new educational methods and materials.

They relate their experience thusly

In the development of PI, it was quickly discovered that the brighter student should not be used to test the adequacy and effectiveness of the materials being developed, for almost any method, any material, any sequence would "work" with these students. Rather, average and below average learners should be utilized to empirically test new methods and materials.

The investigator taught one class while the local homemaking teacher taught the other class. Each class contained both boys and girls from the tenth, eleventh, and twelfth grades.

Lesson plans formulated for a two weeks unit by the investigator included the concepts and generalizations to be taught, behavioral objectives for the unit and the Family Finance Game, illustrative and resource materials to be used for each lesson, and an achievement test. The Family Finance Game was scheduled to be played the third, fifth, seventh, and ninth days of the unit. An introduction to the unit and some background information preceded the game play. Game play which began as scheduled on the third day of the unit soon revealed that more directions were needed and that they should be more specific and concrete. The following day the investigator played the game along with the students. One cash purchase and one credit purchase were made. Procedures for game play were discussed. Transparencies were used to illustrate the use of game forms. As the play proceeded, the investigator noted areas of difficulty which were used as a basis for writing

directions that would help students to use the game with less direction from the teacher.

As the unit proceeded, both the investigator and the teacher observed that the lesson plans as developed by the investigator were not particularly fitted to the unit, since much of the content to be presented as formal lessons was presented during game play. Close monitoring of the problems, successes, and comments of students was undertaken by the investigator and the teacher. These ideas were discussed in a conference at the end of each class session and proposed changes in class activity and game structure were noted.

The achievement test was administered at the close of the unit. Raw scores on the achievement test of forty-five items ranged from one score of twenty-seven along the continuum to forty-three. Three items which all students marked correctly were deleted from the test; however, the major purpose of the test was to measure whether or not games do indeed teach subject matter rather than a test which discriminated between the able and less able students.

In addition to the achievement test students filled out a Likert-type scale to express their opinions of the Family Finance Game as a learning experience. Since this type instrument was somewhat confusing to the students, the form was changed before field testing the game. Two open-ended questions on the evaluation form solicited student opinion as to the additions to or deletions from the game that they felt would improve the quality of the game. Their suggestions of unexpected events, merchandise to be purchased, and improved directions were incorporated into the game before field testing.

Changes made in the unit and the Family Finance Game as a result



of the empirical tryout were:

1. Because of the differences in the speed with which teachers teach and classes learn, the specific lesson plan was changed to an outline form of content to be taught; however, it was suggested that there be at least four plays of the game with a time period of five years if possible. It was also suggested that two class periods of instruction precede game play to acquaint students with some basic learning with which to begin play.
2. The student evaluation of the Family Finance Game was completely rewritten in a form thought to be more compatible with teen-age thinking.
3. Some additions and deletions were made to the teacher evaluation of the game, however, the original form was maintained.
4. Some questions requiring application of knowledge of facts and principles were added to the achievement test.
5. A decision was made on which transparencies would be of most benefit to the teachers using the game materials.
6. Directions for the game forms were rewritten and other directions were clarified.
7. Game forms were developed to facilitate record keeping chores.
8. Simplification of arithmetical procedures by computing interest and stating terms on merchandise cards, including sales tax in the cost of the product, and rounding costs to whole dollars.

Orientation Workshop for Teachers Field Testing  
the Family Finance Game

Seven vocational homemaking teachers who agreed to field test the Family Finance Game, three state supervisors of Home Economics

Education, a consultant on simulation games, and the investigator met in the offices of the State Department of Home Economics Education to discuss and plan for the proposed field test of the Family Finance Game. The goals of the workshop were to:

1. Orient teachers to the concept of simulation games. The term "games" leads many to expect activity other than a serious educational experience.

2. Acquaint the teachers with the Family Finance Game, the reasoning behind some of the game forms and game activities, and the mechanics of administering the game.

3. Present the unit of study and the utilization of the game as a teaching tool in the unit.

4. Distribute resource materials for the unit, copies of the game for each student, and extra forms as necessary for playing the game.

Information related to the status of simulation games as a teaching method and the features which prompted the choice of this method for teaching consumer credit and money management were discussed by the investigator. The opportunity to teach consumer credit usage and money management in a realistic manner and the motivation of students were stressed as two benefits of using simulation games. The investigator related pertinent information collected from the interviews cited previously which prompted the aspiration to develop an innovative method for teaching the use of consumer credit and money management.

Utilizing the principle that we learn best what we experience, it was decided that actual play of the Family Finance Game would be the most efficient and impressive method for acquainting the teachers with

the technique. Both state supervisors and teachers participated in the game activity which centered around the purchase of a refrigerator on credit. The teachers learned from playing the game why the game forms were included, why simplification of some forms and procedures was necessary even at the sacrifice of some realism, the philosophy basic to the model, and that, though the activity was not "easy," it was interesting and a feasible method for teaching principles of consumer credit and management of money. There was some discussion of the arithmetic involved, but the consensus of the group was that the arithmetic processes included are basic to the management of credit and money.

An outline of "Content for Consumer Credit Unit" (Appendix A, p. 143) was prepared for teachers in lieu of day-to-day lesson plans. This decision resulted from finding in the empirical tryout of the game that flexibility in lesson plans to allow for adapting to a new kind of activity is highly desirable.

Teachers were asked to play the Family Finance Game the third class meeting of the unit. Two days were allowed for introduction of the unit and some familiarity with the language of credit. Game play on the third class meeting should create in the student an awareness of the need for further information necessary for playing the game successfully. Learning how to play (the mechanics) the game was also a part of the learning activity. The use of knowledge should serve to reinforce that knowledge and perhaps the realization that knowledge is insufficient will serve as motivation for students.

### Summary

A simulation game for teaching consumer credit seemed to afford several advantages over methods traditionally used for teaching consumer and homemaking education. The Family Finance Game was developed incorporating selected concepts and generalizations as the basic subject content.

Behavioral objectives were defined in student terms and included in the game material for the students. Criterion measures were developed at the time that behavioral objectives were developed.

Activities of the game centered around the financial activities of a young couple who were establishing a household. In addition to forms developed by the writer, forms furnished by businesses were used to add to the realism of the game. Records whereby students could evaluate their decisions were included.

An empirical tryout of the game pointed up weaknesses which were used as the basis for revising the game before it was field tested. Preparation of teachers for field testing the game was accomplished through a workshop. Resource materials for each teacher and her students were distributed.

## CHAPTER IV

### METHODOLOGY AND DESIGN

The primary purpose of this study was to develop a simulation game for use in teaching consumer education in high school vocational home-making classes. A secondary purpose was to field test the simulation game in vocational homemaking classes in Oklahoma with the regular home-making teacher using the simulation game as a part of her teaching methods for the money and credit management unit.

The purpose of this chapter is to describe the design of the study, the method by which the population for the field test was determined, instruments used for data collection, and statistical procedure for analysis of data.

#### Design of the Study

The posttest-only control group design was used to test the effectiveness of the simulation game for teaching consumer education in high school vocational homemaking classes. The selection of the posttest-only control group design for this study was based on: (1) the decision to use eight intact classes for the experimental group and eight intact classes for the control group; and (2) the experimental situation was of only two weeks duration, hence use of posttest-only would avoid the effects of taking a pretest on the scores of the posttest.

The posttest-only control group design is disturbing to many in-

investigators in education because the concept of the pretest has become firmly fixed in the thinking of many such workers; however, the pretest is not actually essential because randomization without the pretest is the most adequate all-purpose assurance of lack of initial bias between groups (Good, 1963, p. 457; Gage, 1963, pp. 195-196; Fisher, 1951).

A criticism of the posttest-only control group design is its vulnerability to selection bias, especially where random assignment is not possible. Good (1963, p. 457) suggests that, where naturally aggregated units such as classes are employed intact, these should be used in large numbers and assigned at random to the experimental and control conditions. The implication is that, if more than three or four intact classes are used for each group, the groups are large enough for using the posttest-only control group design. The posttest-only control group design has the advantage of avoiding an experimenter introduced pretest session which may result in the "giveaway" repetition of identical or highly similar content in the posttest.

#### The Population

The population for this study was sixteen vocational homemaking teachers and their eleventh and/or twelfth grade students enrolled in Homemaking III or IV. The provision to include eleventh and/or twelfth grade classes in Homemaking III or IV resulted from the practice of alternating Homemaking III and IV in several schools in Oklahoma; both eleventh and twelfth grade students may be enrolled in either Homemaking III or IV.

The population sample was made with the assistance of the state supervisory staff of the State Department of Home Economics Education

of Oklahoma. The state supervisor from each of the four supervisory districts furnished a list of teachers who had tentatively planned to teach a unit in consumer education in the spring semester of 1969-70 school year; from this selected group, sixteen teachers were randomly chosen to participate in the study. The selection was made by blindly drawing the names of four schools from a box containing the names of the schools in the district. This was repeated until four schools had been selected from each district. Prior to drawing the names it was arbitrarily decided to assign the first and third schools drawn to the group using the simulation game; the second and fourth names drawn were assigned to teach the money and credit management unit using methods, resources and materials, and learning experiences traditionally employed by vocational homemaking teachers to teach the unit. One of the teachers in the control group had already taught the unit, thus reducing the control group to seven schools and making a total of fifteen schools included in the study.

The teachers and their administrators were contacted by telephone to acquaint them with the study and its purposes and to secure their cooperation in the study. An expanded explanation followed by mail with return cards enclosed to confirm their willingness to participate in the study.

The population furnishing data for the study was further reduced to twelve schools by the failure of two experimental and one control group to furnish evaluation data; however, each of the four supervisory districts of Oklahoma was represented in the study--two districts by two schools each and two districts by one school each.

Students participating in the study were limited to eleventh and/or twelfth grade vocational homemaking classes. No attempt was made to equate the sizes of the schools or classes in either the experimental or control groups; neither were the intellectual abilities or the sex of the students considered. Teaching experience of the teachers was not considered important as acceptance of innovation in teaching is probably not a matter of length of teaching experience (Williams, 1968, pp. 12-21).

#### Data Collection

Data were collected in three areas: (1) teacher evaluation of the Family Finance Game as a teaching tool; (2) student evaluation of the Family Finance Game as a learning activity; and (3) student learning of the selected concept and generalizations and achievement of objectives for the unit. The instruments developed for evaluation were based on the teachers' and students' opinions of and attitudes toward the Family Finance Game.

An understanding of the methods for assessing attitudes is germane to the understanding of the instruments. An attitude is a predisposition to think, feel, perceive, and behave toward a cognitive object according to Kerlinger (1966, p. 483). Another definition found in the Educational Dictionary which agrees with that given by Kerlinger is:

Attitude: a readiness to react toward or against some situation, person or thing, in a particular manner, for example, with love or hate or fear or resentment, to a particular degree of intensity (Good, 1959, p. 48).

Two methods for evaluating attitudes of the individual are (1) direct observation and (2) attitude scales. Attitude scales, a type of self-report inventory, are designed to measure the extent to which an



individual has favorable or unfavorable feelings toward an object or an idea. It is feasible to use an attitude scale where the individual has little reason for distorting the results. A common research use is in the study of attitude changes or attitudes toward a particular experience (Gronlund, 1965, pp. 354-355).

Thurstone (1959, p. 216) defines opinion as a verbal expression of an attitude. Since an opinion symbolizes an attitude, we may use statements of opinion as a means of measuring attitude; however, it must be acknowledged that opinions are merely indexes of an attitude. Thurstone stated that "It must be recognized that there is a discrepancy, some error of measurement, as it were, between the opinion or the overt action that we use as an index and the attitude that we infer from such an index (1959, p. 217)."

Three types of attitude scales are: summated rating scales often called Likert-type scales, equal appearing interval scales, and cumulative (Guttman) scales. A summated rating scale is a set of attitude items, all of which are considered of equal "attitude value." Responses, usually made on a five point scale are summed and averaged to yield an individual's attitude score.

Thurstone's equal appearing interval scales are built so that each item is assigned a scale value and the scale value indicates the strength of attitude of an agreement response to the item. The items of the final scale to be used are so selected that the intervals between them are equal (Thurstone and Chave, 1929, pp. 61-63, 78).

The cumulative, or Guttman scale, consists of a relatively small set of homogenous items that are unidimensional which means that the scale measures only one variable. The cumulative scale is so named be-

cause of the cumulative relation between items and the total scores of individuals. If one knows a person's total score, he can predict his pattern of responses.

Of the three types of attitude scales, the summated rating scale seems to be the most useful in behavioral research. The summated rating scale, sometimes called the Likert technique, is a set of attitude items, all of which are considered of approximately equal attitude value, and to each of which subjects respond with agreement or disagreement, thus expressing the intensity of his feeling toward the object in question. The scores of the items are summed, or summed and averaged to yield an individual's attitude score. The purpose of the summated rating scale is to place an individual somewhere on a continuum of the attitude in question (Hall, 1967, p. 114; Kerlinger, 1966, p. 483-484).

Characteristics of the summated rating scale are:

1. The universe of items is considered to be a set of items of equal "attitude value." There is no scale value as such; one item is the same as any other in "attitude value."
2. Summated rating scales allow for intensity of expression.
3. They are relatively easy to construct.

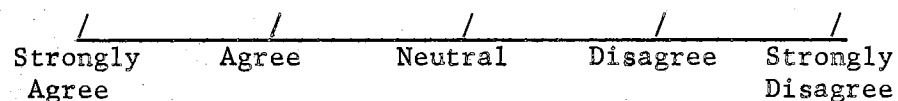
Disadvantages of the summated rating scale are: (1) the response set variance of respondents (tendency to respond to the extreme) and (2) the scale permits the use of attitude statements which may not be manifestly related to the object being examined.

Teacher Evaluation of the Family Finance Game. This evaluation instrument included twenty-two statements and two open-ended items for measuring the favorable and unfavorable feelings of six teachers toward

the Family Finance Game as a teaching tool. A survey of the literature did not disclose an attitude scale which could be used, therefore the writer developed a Likert-type scale which included seventeen positive statements and five negative statements. The response for each statement was assigned a numerical value. In scoring favorable statements the alternatives were weighted 5, 4, 3, 2, and 1, going from "strongly agree" to "strongly disagree." In scoring unfavorable statements, the weights were reversed. Each teacher's score on this scale is the sum of the scores on all items, with the higher score indicating a more favorable attitude toward the simulation game.

According to Abt (1967, p. 118) motivational qualities, operability, and relevance of the simulation game are areas to be evaluated. A number of statements were constructed, discussed with Hopkins (1970) an instructor who had had experience using simulation games to teach a senior course in farm management in the Department of Agricultural Economics, Oklahoma State University. An attempt was made to eliminate ambiguous and repetitious statements and those statements that failed to assess an attitude.

A diagrammatic representation of the Likert-type scale is presented below:



An example of the numerical values assigned to the positive and to the negative statements follows:

+	SA	A	N	D	SD	The <u>Family Finance Game</u> allows the student to experience over-extension of credit without having to suffer the consequences he would experience in real life.
	5	4	3	2	1	

SA A N D SD The Family Finance Game used time that I  
 1 2 3 4 5 could have spent using teaching methods  
 which I have found to be more effective.

As will be noted, the value of five for SA on the first (positive) statement reflected a positive attitude toward the Family Finance Game; the value of five for SD on the second statement (negative) also reflected a positive attitude toward the Family Finance Game. Scoring in this manner allowed the totaling of scores for all statements with the resulting score indicating the teacher's opinion of the value of the Family Finance Game as a teaching tool.

Two open-ended questions were included to allow teachers to make any remarks or suggestions to improve the simulation model or note difficulties which they or the students experienced in using the game.

Student Rating Scale for the Family Finance Game. This instrument was constructed on a Likert-type model using a three point scale. The scale was written in question form with three possible ranges of response to allow the student to express positive, sometimes, and negative feelings. An example of the questions and the possible responses used is given below:

Since completing the unit on money and credit management, would you feel more capable if you needed to use consumer credit?

- 3  Yes, I learned sufficient principles to feel capable when using consumer credit.  
 2  Sometimes, but I would still feel unsure of my ability to use consumer credit.  
 1  No, I still don't understand about using consumer credit.

The student was to place an X in the space provided before the statement that best described the way he felt about the Family Finance Game. Numerical values assigned to the responses were Yes = 3, Sometimes = 2, and No = 1. The responses to the statements may be totaled,

with the highest score indicating the most favorable attitude toward the game.

Three open-ended questions were provided for students to express any feelings or opinions of the simulation game that were not provided for in the list of statements.

After revising the rating scale the instrument was submitted to the writer's major adviser and colleagues. Their suggested revisions were incorporated in the evaluation scale before use in the experimental group of schools.

The Student Achievement Test. The achievement test was devised to measure the effectiveness of the Family Finance Game as a teaching tool. The purpose for this test was to determine whether or not the Family Finance Game as developed by the writer was an effective way to teach money and credit management concepts in high school vocational home-making classes. The test was administered to both the experimental and control groups. The achievement test scores of the students in the control group served as a point against which to check achievement of students in the experimental group. In other words, a comparison was made to determine if the students who experienced the simulation game achieved differently than those students who were taught by methods traditionally used by vocational homemaking teachers.

The test consisted of items developed by the writer and items adapted from Hawver, Burkhart, and Peterson (1963), National Consumer Finance Association (1962), and Anderson (1969, pp. 92-102). The first draft of the test was used to evaluate the learning of students in the classes which participated in the empirical tryout of the game. An indication by the students of the questions which they did not under-

stand helped locate ambiguity in the questions. The achievement test was revised before it was used in the final testing of the simulation game (Appendix E, p. 163).

#### Analysis of the Data

The Mann-Whitney U test, a non-parametric statistical procedure which may be used with ordinal data, was used to analyze the data collected from the student achievement tests. The U test is based on the notion that, if scores of two similar groups are ranked together, there will be a considerable intermingling of the two groups rankings; however, if one group significantly exceeds the other, then most of the superior groups' rankings will be higher than those of the inferior group. After the combined ranking of the two groups, the value of U is computed by concentrating on the lower grouped rank.

According to Siegel

The Mann-Whitney U test assumes that the scores represent a distribution which has an underlying continuity. With very precise measurement of a variable which has underlying continuity, the probability of a tie is zero. However, with the relatively crude measures which we typically employ in behavioral scientific research, ties may well occur. . . . When tied scores occur, we give each of the tied observations the average of the ranks they would have had if no ties had occurred (1956, pp. 123-124).

He enlarged on this statement by saying that the effect of tied ranks is to change the variability of the set of ranks, therefore he recommends that a correction factor be applied to the standard deviation of the sampling distribution of U.

When the correction factor is employed, it tends to increase the value of  $z$  slightly, thus making it more significant. It is especially important to correct for ties if the proportion of ties is quite large.

The following formulas were used in this study:

$$U = n_1 n_2 + \frac{n_2(n_2 + 1)}{2} - R_2$$

where  $n_1$  = number of students in the control group

$n_2$  = number of students in the experimental group

$R_2$  = sum of ranks assigned to group whose sample size is  $n_2$

For large samples ( $n_2$  larger than 20) significance of an observed value of  $U$  may be determined by calculating  $z$  which is possible because as the sample increases in size the sampling distribution rapidly approaches a normal distribution. Since there were a large number of ties the correction factor was applied. The formulas used for these calculations were:

$$z = \frac{U - \frac{n_1 n_2}{2}}{\sqrt{\left(\frac{n_1 n_2}{N(N-1)}\right) \left(\frac{N^3 - N}{12} - \sum T\right)}}$$

where  $N = n_1 + n_2$

$T = \frac{t^3 - t}{12}$  (Where  $t$  is the number of observations tied for a given rank.)

$T$  is found by summing the  $T$ 's over all groups of tied observations.

Numerical values assigned to the attitude scales were summed to measure the intensity of attitudes expressed by both teachers and students.

#### SUMMARY

Chapter III included a description of the design of the study, the procedure for selection of the population, instruments used for data collection, and the statistical procedure used for analyzing the data.

## CHAPTER V

### PRESENTATION AND ANALYSIS OF THE DATA

One aspect of the study was to evaluate the simulation game developed by the writer and used by the six teachers and eighty-five students who participated in the study. Results of the evaluation of the Family Finance Game are presented in Chapter V.

In order to evaluate the opinions of teachers and students about the value of the Family Finance Game developed in the study, two instruments were developed and sent to eight teachers and the students in their classes who used the Family Finance Game in the study. Three-fourths of the teachers returned the evaluation instruments along with the evaluations completed by their students. A third evaluation instrument in the form of an achievement test was developed and sent to eight teachers using the Family Finance Game to teach selected content in consumer credit and money management and to seven teachers who were to teach the same content using methods, resources, and materials traditionally used by vocational homemaking teachers. Six teachers of each group administered the achievement test at the close of the money and consumer credit management unit and forwarded the results to the writer.

#### Teacher Evaluation of the Family Finance Game

Teacher evaluation of the Family Finance Game as a teaching tool



was based on the reactions to twenty-two statements and two open-ended questions by six vocational homemaking teachers. The motivational value, the operability, the relevance, and the utility of the game were evaluated.

Table I is a summary of the response of the teachers to four statements pertinent to the motivational qualities of the Family Finance Game.

TABLE I  
SUMMARY OF OPINIONS OF SIX TEACHERS  
REGARDING THE MOTIVATIONAL QUALITIES  
OF THE FAMILY FINANCE GAME

Item from Questionnaire	Mean Response to Each Item
The unexpected events created interest in the Family Finance Game.	4.8
The Family Finance Game motivates students to learn about money and credit management.	4.7
Students of differing socio-economic and cultural backgrounds and differing levels of ability found the Family Finance Game an interesting way to study money and credit management.	4.0
The major value of the Family Finance Game is motivational.	3.8
Total Items	4
Mean Response to Total Items	4.3

In order to arrive at an average response for each statement, numerical values were assigned to the response categories as follows:

<u>Positive Statements</u>	<u>Negative Statements</u>
Strongly Agree = 5	Strongly Agree = 1
Agree = 4	Agree = 2
Neutral = 3	Neutral = 3
Disagree = 2	Disagree = 4
Strongly Disagree = 1	Strongly Disagree = 5

The numerical values of the negative statements were reversed to allow the investigator to sum all statements. A negative statement which receives a "strongly disagree" rating reflects a positive attitude. The numerical values of all teachers' responses to each statement were summed and averaged. Prior to analysis the investigator decided that the actual numerical value for each response category would be assigned as follows: strongly agree--4.6 to 5.0; agree--3.6 to 4.5; neutral--2.6 to 3.5; disagree--1.6 to 2.5; and strongly disagree--1.5 and below.

As shown in Table I, mean responses range from 3.8 to 4.8 with a total mean response of 4.3 indicating that the teachers generally agree that the Family Finance Game does have motivational qualities; however, the mean response of 4.6 to the statement "The Family Finance Game motivates students to learn about money and credit management" indicates that these teachers "strongly agree" that the Family Finance Game has motivational qualities. One source of the motivational potential is the "Unexpected Events" as indicated by the mean response of 4.8. Teachers agree that a major value of the Family Finance Game is motivational and that students of different socio-economic and cultural backgrounds and levels of ability found the Family Finance Game an

interesting way to study money and credit management.

The motivational potential of the Family Finance Game is borne out by this participating teacher's comment on her evaluation instrument:

Five students of one class were unfamiliar with reading any type of a bank statement. I spent a class period talking about writing checks, stubbing checks, and reading bank statements. These five girls had been exposed to this information last year, but I guess it didn't take! Perhaps it will be more meaningful this year because they wanted to know.

In a later informal interview this teacher remarked that the unit took more than the planned two weeks because playing the game raised questions or revealed deficiencies such as illustrated above that needed to be taught as the students realized their need for the information.

TABLE II

SUMMARY OF OPINIONS OF SIX TEACHERS  
REGARDING THE OPERABILITY OF THE  
FAMILY FINANCE GAME

Item from Questionnaire	Mean Response to Each Item
The Family Finance Game is too complicated for eleventh and/or twelfth grade Vocational Homemaking students.	4.5
The forms included in the game are too complicated for student use.	4.0
I found it hard to keep track of each team's activities.	3.3
Sufficient directions for playing the game are included.	3.0
Total Items	4
Mean Response to Total Items	3.9

The operability of a simulation game is concerned with the mechanics of the game such as the instructions, roles of players, rules, and scoring of outcomes. Teacher opinions of the operability of the Family Finance Game are summarized in Table II. The average response of 3.9 indicates that the teachers agree that the game is appropriate for use with the target population and that, in general, they found the directions, rules, and instructions satisfactory; however, the average response of 3.0 on the statement "Sufficient directions for playing the game are included" indicates the need for more directions that are stated more clearly.

The fact that teachers had some trouble keeping track of team activities as indicated by the mean response of 3.3 in Table II may be an indication of inoperability of the game or it may be due to the less restricted atmosphere of the classroom during game play. Students may not be in their regular places because of freer movement in the classroom. An alternate cause might be that the word "game" suggests a less serious learning activity and students fail to keep accurate records. The first play of the game should convince students that playing the game is a serious but "fun" type of learning activity.

Teachers strongly disagreed with the statement that the Family Finance Game is too complicated for eleventh and twelfth grade students; they disagreed that the forms included in the game are too complicated for student use. Strong disagreement with a negative statement reflects a positive attitude on the part of the teachers.

Teachers' opinions of the relevance of the Family Finance Game to the unit on consumer credit and money management as it relates to consumer credit and the needs of the students is summarized in Table III. The mean response for the entire list of statements was 4.4 which indicated agreement by the teachers that the Family Finance Game adds

relevance to the teaching of consumer credit and money management.

A survey of the individual statements reveals that teachers strongly agree that the Family Finance Game adds relevance to consumer credit and money management units. They also strongly agree that realistic situations are provided for students to apply principles of consumer credit and money management and that the "Unexpected Events" add realism to the game.

TABLE III

SUMMARY OF OPINIONS OF SIX TEACHERS REGARDING  
THE RELEVANCE OF THE FAMILY FINANCE GAME  
TO TEACHING CONSUMER CREDIT AND  
MONEY MANAGEMENT

Items from Questionnaire	Mean Response to Each Item
The use of the Family Finance Game adds relevance and meaning to the teaching of money and credit management.	4.7
The Family Finance Game provides realistic situations for students to apply the principles of money and credit management.	4.5
The simulation game technique would be one means of adding relevance to other areas of vocational homemaking in secondary schools.	4.5
The unexpected events add realism to the Family Finance Game.	4.5
Purchases provided for in the Family Finance Game are unrealistic for high school students.	4.3
The Family Finance Game allows the student to experience over-extension of credit without having to suffer the consequences that he would experience in real life.	4.2
Students were able to see the cause and effect relationship between their purchasing decisions and their financial situation in the game.	4.2
The game forms add a sense of realism to the game.	4.0
Total Items from Questionnaire	8
Mean Response to Total Items	4.4

The teachers agreed that the Family Finance Game allows the student to experience over-extension of credit without having to suffer the consequences of real life. One teacher explained that very few of the students in her classes over-extended their credit. She suggested that their study of credit prior to playing the game may have caused them to be more cautious in their use of credit. Another teacher from a rural area commented that the parents of the students in her classes use credit to make capital purchases such as land and machinery, but they do not use consumer credit for household durables and non-durables described in the game. These students were very cautious in their use of credit. Another related the incident of the student who assumed the role of the husband in the game who placed his "wife" on an unrealistically low allowance. When they had saved quite a sum of money they "went out" and bought everything they could pay cash for. The teacher felt that this was a reflection of the resource management habits of the home.

The teachers agreed that students were able to see the cause and effect relationship between their purchasing decisions and their financial situation in the game. Though the teachers agreed that the credit and record keeping forms add realism to the game their comments reveal that, because keeping records is tedious and the arithmetic involved adds to the difficulty of game play, some students became discouraged and bored, hence failed to participate fully in the game activities. Teachers felt that purchases provided for in the Family Finance Game were realistic for high school students.

The opinions of teachers regarding the utility of the Family Finance Game as a teaching method are summarized in Table IV. The mean response regarding the utility of the game was 4.3 indicating that the teachers believed that the Family Finance Game had utility as a teaching method for consumer credit and money management units. They strongly agreed that they would use the game again to teach money and consumer credit management. The negative statement "The Family Finance Game used time that I could have spent using teaching methods which I have found to be more effective," was an effort to assess the opinions of the teachers regarding the utility of the Family Finance Game as compared with methods they have traditionally used to teach. The mean response of 4.7 indicates that these teachers have favorable attitudes toward using the Family Finance Game for teaching consumer credit and money management.

The mean response of 4.3 indicates that teachers feel at ease using the Family Finance Game. Experiencing the new and different creates a sense of insecurity in any situation. In spite of the workshop orientation to the game, preparation on the part of the teachers for using the Family Finance Game would have been greater than had they used more familiar methods. It is the belief of the investigator that as the teachers become more familiar with the use of the Family Finance Game, they will feel more at ease using this method for teaching.

Although teachers agreed that the Family Finance Game is effective for teaching facts and principles related to money and credit management, they favored the teaching of principles slightly. The response to the statement "I would prefer to use the Family Finance Game as the culminating experience for the unit on money and credit management,"

concerns how the Family Finance Game could be used in a unit. The mean response of 3.8 indicates a low degree of agreement with the statement. Free response reactions indicated that the teachers preferred to use the game not later than the third day of the unit to motivate students. They said that students became aware of their need for further knowledge and skills necessary to play the game and that the students were more receptive to the content presented by other teaching methods. One teacher stressed that the Family Finance Game was especially useful for the evaluation of the teaching of credit and consumer buying. Another teacher described the game as a "painless evaluation device."

TABLE IV

SUMMARY OF OPINIONS OF SIX TEACHERS REGARDING  
THE UTILITY OF THE SIMULATION GAME AS  
A TEACHING METHOD

Item from Questionnaire	Mean Response to Each Item
I would use the Family Finance Game again to teach money and credit management.	4.8
The Family Finance Game used time that I could have spent using teaching methods which I have found to be more effective.	4.7
I feel at ease using the Family Finance Game to teach management of money and credit.	4.3
Played periodically, the Family Finance Game can be used to emphasize principles of money and credit management.	4.2
The Family Finance Game is an effective method for teaching facts.	4.0
I would prefer to use the Family Finance Game as the culminating experience for the unit on money and credit management.	3.8
Total Items	6
Mean Response to Total Items	4.3



Two open-ended statements were provided to solicit teacher opinions of additions to or improvements of the Family Finance Game and deletions from the game. Teachers expressed the opinion that all of the material in the game was needed.

The additions to the game are summarized in Table V. All of the teachers felt that additional unexpected events were needed. Students became bored and somewhat frustrated when they drew the same "Unexpected Event" several times.

Two thirds of the teachers believed that additional and more expensive merchandise should be included. One third of the teachers would like to see banking procedures added.

Additional directions included in the game materials for the teacher was a need expressed by one half of the teachers. One teacher stated that additional instructions would be needed to replace the orientation workshop held for the teachers using the Family Finance Game.

TABLE V

SUMMARY OF ADDITIONS TEACHERS WOULD MAKE TO  
THE FAMILY FINANCE GAME

Item	Teacher	
	N	%
Additional and more costly "Unexpected Events."	6	100
Additional and more expensive merchandise for purchase.	4	66.7
Additional directions.	3	50.0
Banking procedures.	2	33.3

N=6  
%=100

The overall mean response of 4.2 regarding the value of the Family Finance Game as a teaching method indicates that the teachers who used the game thought it to be an effective means for teaching consumer credit and money management.

#### Student Opinions of the Family Finance Game

A summary of student responses to the questions on the "Student Rating Scale for the Family Finance Game" appears in Table VI. Responses to the questions were the means used to arrive at student opinions of the game. Answers to the questions were categorized as follows with numerical values assigned to each:

Yes = 3 (Strongly favorable opinion of the game.)

Sometimes = 2 (Moderately favorable opinion of the game.)

No = 1 (Unfavorable opinion of the game.)

Numerical values were assigned to each response category to allow the investigator to arrive at a mean rating for each response. Prior to analysis, the investigator decided that the actual numerical value for each response category would be assigned thusly: no--1 to 1.5; sometimes--1.6 to 2.5; and yes--2.6 to 3.0.

The mean response to the Family Finance Game was 2.6 which indicates a strongly favorable opinion of the game (Appendix E, p.170). Table V presents a breakdown of opinion into three categories. Seventy-two and nine-tenths percent of the students indicated a strongly favorable opinion toward the game; 24.7% of the students held a moderately favorable opinion of the game while only 2.4% of the students viewed the game with disfavor.

TABLE VI

SUMMARY OF OPINIONS OF STUDENTS REGARDING  
SIMULATION GAME AS A LEARNING EXPERIENCE

Opinion	Students	
	N	%
Strongly Favorable	62	72.9
Moderately Favorable	21	24.7
Unfavorable	2	2.4
Total	85	100.0
N=85		
% = 100		

The students rated the game highest in the area of adding relevance to the unit on consumer credit and money management as indicated by the average response of 2.7 shown in Table VII. The mean response of 2.8 indicates that students developed an appreciation for the knowledge and skills necessary for management of family money and credit and that they believed that they would have occasion to use the knowledges and skills learned while playing the Family Finance Game. One student commented, "I liked best its (game) relationship with the actual game of living," while another student said, "This was really true to life. These experiences can very likely happen in real life because you don't know what will happen next." Another student's remarks concerning the reality of "Unexpected Events" was, "I don't like them for the game, though I know things like that happen in real life."

That students enjoyed playing the Family Finance Game is shown in Table VII. They felt that the "Unexpected Events" added to the interest of the game, but were only moderately favorable toward illustrations of

merchandise to be purchased. Remarks of students relative to the motivational qualities of the games were of interest. One student made this statement: "I think it (game) is an excellent way to learn money management and use of credit without a lot of memorizing and excessive testing." Other students expressed the opinion that the Family Finance Game was a more interesting way than books to learn about money and credit management. "I think that, in spite of the fact that you have to work hard in playing it, the game really was fun," was the opinion of another student.

TABLE VII

SUMMARY OF OPINIONS OF STUDENTS REGARDING  
THE RELEVANCE OF THE FAMILY  
FINANCE GAME

Item from Questionnaire	Mean Response to Each Item
Did the Family Finance Game give you an appreciation for the knowledge and skills needed to manage family money and credit?	2.8
Do you believe that you will have occasion to use the information learned while playing the Family Finance Game?	2.8
Do you think that the "Unexpected Events" are incidents that might occur in "real life?"	2.8
Since completing the unit on money and credit management, would you feel more capable if you needed to use consumer credit?	2.5
Total Items	4
Mean Response to Total Items	2.7

TABLE VIII  
OPINIONS OF STUDENTS REGARDING THE MOTIVATIONAL  
QUALITIES OF THE FAMILY FINANCE GAME

Item from Questionnaire	Mean Response to Each Item
Did you enjoy playing the Family Finance Game?	2.7
Did the "Unexpected Events" add interest to the game?	2.7
Did the drawings of the merchandise make the game more interesting?	2.4
Total Items	3
Mean Response to Total Items	2.6

"It was fun when I got the hang of it," was the remark of a student about the game and interpreted by the investigator to refer to the operability of the game (Table IX). The mean response of 2.5 regarding the operability of the Family Finance Game indicates that students had some difficulty in playing the game. Reference to Table XI, p.96, reveals some possible sources of difficulty. The parts of the game liked least by students were the arithmetic (41%), filling out the forms (22%) and insufficient directions (12%). All teachers pointed out that arithmetic was a problem; one teacher indicated that an improvement of the game would be to reduce the arithmetical procedures involved.

TABLE IX  
OPINIONS OF STUDENTS REGARDING THE OPERABILITY  
OF THE FAMILY FINANCE GAME

Item from Questionnaire	Mean Response to Each Item
Do you feel that the "Cash Flow Statement" is a practical way for the individual or the family to keep track of income and expenditures?	2.8
Was the Family Finance Game easy to play?	2.4
Were there sufficient directions for playing the game?	2.3
Total Items	3
Mean Response to Total Items	2.5

Students mean response of 2.8 indicated that a form such as the "Cash Flow Statement" would be a practical way for an individual or family to keep track of income and expenditures. The response to this statement possibly causes the rating of operability to be unrealistic.

The statement "If given the chance to choose the teaching methods for a money and credit management unit, would you choose the Family Finance Game over other teaching methods you have experienced?" was an attempt to discover student opinions of the value of the Family Finance Game as a teaching method as compared to teaching methods traditionally used. The strongly favorable mean response of 2.6 indicates that the students would prefer using the Family Finance Game to learn about consumer credit and money management.

#### Summary of Responses to the Open-Ended Questions on the Student Evaluation of Family Finance Game

A summary of student remarks concerning the part of the game that they liked best is presented in Table X. The statements were categorized under the headings of unexpected events, learning to use credit, planning use of money and buying merchandise, filling out the game forms, and balancing income and expenses. Seventy-nine students responded to the open-ended questions; however, the total number responses to the statement will total more than seventy-nine because some students specified two or more parts of the game that they liked best; the same situation resulted in percentage totals of more than 100%.

The Family Finance Game activity liked best by forty (47%) of the students was planning the use of money and buying merchandise. Other students (27%) liked the "Unexpected Events" best because, as they expressed it, they liked the excitement and suspense of drawing for the events. Both students and teachers expressed the need for a greater variety of "Unexpected Events."

TABLE X

SUMMARY OF STUDENT RESPONSES TO OPEN-ENDED  
STATEMENT, "THE PART I LIKED BEST ABOUT  
THE FAMILY FINANCE GAME WAS:"

	<u>Students</u>	
	N	%
Planning use of money and buying merchandise.	40	47
Unexpected events.	23	27
Learning to use credit.	12	14
Filling out the game forms.	5	6
Balancing income and expenses.	2	2

N=79

Note: Six students did not respond to the open-ended statements. Total exceeds total students because some students listed two "parts liked best." Percentages do not total 100 due to rounding and some students listed two "parts liked best."

Twelve of the students (14%) liked the part of the game about learning to use credit the best. In addition, two students commented that learning to use credit was "the most useful part of the game." Five (6%) of the students reported that they preferred the activity of filling out the business forms of the game, while two (2%) preferred the experience of balancing income and expenses.

The arithmetic was high on the list of least liked activities. Thirty-five students (41%) reported having problems with the arithmetic involved (Table XI). One student qualified her statement of dislike for the arithmetic in the game by the statement that though she disliked the math processes, she knew that understanding math was necessary for managing money and credit.

TABLE XI

SUMMARY OF STUDENT RESPONSES TO OPEN-ENDED  
STATEMENT, "THE PART I LIKED LEAST ABOUT  
THE FAMILY FINANCE GAME WAS:"

Liked Least	Students	
	N	%
Arithmetic.	35	41
Filling out forms.	19	22
Insufficient or confusing directions.	10	12
Unexpected events (their effect).	9	10.5
Lack of variety of merchandise to buy.	6	7
Keeping records.	5	6
Boring.	2	2
Having to pay for merchandise and unexpected events.	1	1

N=79

Note: Total exceeds total students because some students listed two "parts liked least." Percentages do not total 100 due to rounding and some students listed two "parts liked least."

Filling out the game forms was the activity least liked by nineteen (22%) of the students. Insufficient or confusing directions was disturbing to ten (12%) of the students, whereas, the effects of the unexpected events were most disliked by nine (10.5%) of the students. As one student said, "You just get started when you have two unlucky "Unexpected Events" and have to work yourself out of a hole."

Keeping records was disturbing to five (6%) of the students, while lack of variety in "Unexpected Events" and merchandise was the criticism of six (7%) of the students. Two students found the game quite



boring while one disliked having to spend her money for merchandise and, especially, "Unexpected Events." As in the case of the best liked parts of the game, six students failed to respond to the open-ended statements.

#### Identification of Teaching Methods Traditionally Used by Vocational Homemaking Teachers

To determine the effectiveness of the simulation game as a method of teaching as compared with teaching methods traditionally used in terms of student achievement of selected concepts and generalizations was the third objective of the study. Two types of activity were necessary to accomplish this goal:

1. Methods of teaching traditionally used were identified, and
2. An achievement test was developed to assess achievement of the concept and generalizations. The first topic to be considered is the identification of teaching methods traditionally used. An analysis of the results of the achievement test will follow.

Seven teachers who were assigned to the control group were asked to keep a record of teaching methods, learning experiences, and resources and materials used in teaching the selected concept and generalizations. Six teachers actually participated in the study by keeping records and administering the achievement test. Teaching methods used by the teachers assigned to the control group are summarized in Table XII.

Reading, teacher lecture, and discussion were the most frequently used teaching methods, being used by all six teachers. These methods were followed closely by student reports which were employed by five of the teachers. Four teachers used outside speakers, while role play and

skits were each used by three teachers. Two teachers used mock radio programs and two used panel discussions. Case studies, a field trip, and a pre-test were each used by one teacher. A total of eleven different methods of teaching were used. This seemed to the investigator to be a fair range of teaching methods with all teachers using some variation in their teaching methods.

TABLE XII

SUMMARY OF TEACHING METHODS TRADITIONALLY  
USED BY VOCATIONAL HOMEMAKING TEACHERS  
AS REPORTED BY SIX TEACHERS

Teaching Method	Teacher	
	N	%
Discussion	6	100
Reading	6	100
Lecture	6	100
Reports	5	83.3
Outside Speakers	4	67.7
Role Play	3	50.0
Skits	3	50.0
Mock Radio Program	2	33.3
Panel Discussion	2	33.3
Case Studies	1	16.6
Field Trip	1	16.6
Pre-Test	1	16.6
N=6		

Learning experiences for students as reported by the teachers and summarized in Table XIII shows greater variety than that of teaching methods used by the teachers. All six teachers employed reading and student discussion while five provided for students to give oral reports.

TABLE XIII

SUMMARY OF LEARNING EXPERIENCES TRADITIONALLY USED  
BY VOCATIONAL HOMEMAKING TEACHERS, AS REPORTED  
BY SIX TEACHERS

Learning Experiences	Teachers Using	
	N	%
Student discussion.	6	100
Reading	6	100
Student reports.	5	83.3
Compared interest rates charged by various sources of credit.	4	66.7
Checked local stores for types of credit and its cost.	4	66.7
Compared cost of credit and cash buying.	4	66.7
Filled out applications for credit.	3	50.0
Skits	3	50.0
Role Playing	3	50.0
Figured interest costs.	3	50.0
Study of advertisements of credit in newspapers.	2	33.3
Made a budget	2	33.3
Participated on panels.	1	16.6
Participated in mock radio program.	1	16.6

N=6

Approximately sixty-seven percent of the teachers employed learning activities such as comparison of interest rates charged by various sources of credit, checked the local stores for types and cost of credit, and compared the costs of credit and cash buying. One-half of the teachers reported learning activities such as filling out applications for credit, figuring interest costs, filling out credit contracts, student skits, and student role play activity.

Studying advertisements of credit in the newspaper, making a budget, and participation in mock radio programs were each used by two teachers. One teacher provided the opportunity for students to participate on a panel and another provided students with credit problems to solve.

The most popular resources used were the National Consumer Finance packet, transparencies, films and film strips, and businesses and businessmen of the community (Table XIV). All six teachers utilized these resources for their units on consumer credit and money management. Five of the teachers used the consumer education materials of the Household Finance Corporation and periodicals.

Textbooks, credit applications, and credit contracts were used by approximately sixty-seven percent of the teachers. The textbooks used were a general business text, The World of Work, a business law text, and the Handbook of Case Problems Related to Family Finance which was obtained from the State Department of Home Economics Education, Georgia. Consumer education materials available from the Institute of Life Insurance were used by one-half of the teachers; a crossword puzzle and Co-Ed magazine consumer education materials were each used by one teacher. "Department Store in the Classroom," consumer education

materials from Sears was reported by one teacher while two teachers reported asking two homemakers to participate in classroom activities.

TABLE XIV  
SUMMARY OF RESOURCES AND MATERIALS USED AS  
REPORTED BY TEACHERS USING METHODS  
TRADITIONALLY USED

Resources and Materials	Teachers	
	N	%
National Consumer Finance Packet.	6	100
Transparencies, Films, and Filmstrips.	6	100
Businesses and businessmen of the community.	6	100
Consumer education materials of the Household Finance Corporation.	5	83.3
Periodical literature.	5	83.3
Textbooks.	4	66.7
Credit applications and installment contracts.	4	66.7
Consumer education materials of the Institute of Life Insurance.	3	50.0
Homemakers.	2	33.3
Crossword puzzle, "Credit Cautions".	1	16.6
Case Studies.	1	16.6
Co-Ed magazine consumer education materials.	1	16.6
Department Store in the Classroom, Sears	1	16.6
Handbook of Case Problems Related to Family Finance, State Department of Home Economics Education, Georgia.	1	16.6

N=6

The six reporting vocational homemaking teachers used a variety of teaching methods, learning experiences, and resources and materials for teaching the consumer credit and money management unit. Although all of them reported using methods usually thought of as traditional, each used some rather innovative teaching techniques.

#### Analysis of Achievement Test Results

An achievement test was developed to use as a measure for determining the effectiveness of the Family Finance Game as a method of teaching as compared with teaching methods traditionally used. Items were developed to assess three areas: knowledge of facts and lower order principles, the application of facts and principles, and the knowledge of the vocabulary of credit. A description of the test and its development may be seen on pp. 63-64 of Chapter IV; the test appears in Appendix E, p. 163.

Return cards were mailed to the teachers using the Family Finance Game and to the teachers using methods that they traditionally use for teaching home economics asking for the completion date of the unit and the number of students in the class. Tests for each student were mailed to the teacher four days prior to the date indicated on the return card as the approximate closing date of the unit. Tests were distributed in this manner in an attempt to avoid the bias of teaching the test.

Scores for eighty-five students were returned by six teachers using the Family Finance Game while scores for eighty-three students were returned by the six teachers using methods traditionally used for teaching units in home economics.

The Mann-Whitney U statistical procedure was used to test whether or not one group scored significantly better than the other group. The U test is based on the notion that, if scores of two similar groups are ranked together, there will be considerable intermingling of the two group's rankings; however, if one group significantly exceeds the other, then most of the superior group's rankings will be higher than those of the inferior group.

TABLE XV

## MANN-WHITNEY U ANALYSIS OF ACHIEVEMENT SCORES

	Game Method	Traditional Method	z	p
Ranks	7401	6795		
$\bar{X}$ Rank	87.07	81.69	1.23	.22

The value of U was computed after the combined ranking of the two groups' scores. Because of a large number of ties, the correction factor was applied. The z was found to be significant at the .22 level for a two tailed test which, in essence, tells the investigator that the two groups came from the same population. In other words, the group using the Family Finance Game did not score significantly different on the achievement test than did the group taught by methods traditionally used.

A graphic representation of the scoring of the two groups of students is presented in Figures 6 and 7. Scores for students experiencing the simulation game ranged from 38 to 64, whereas scores for students who experienced traditional methods ranged from 26 to 62.

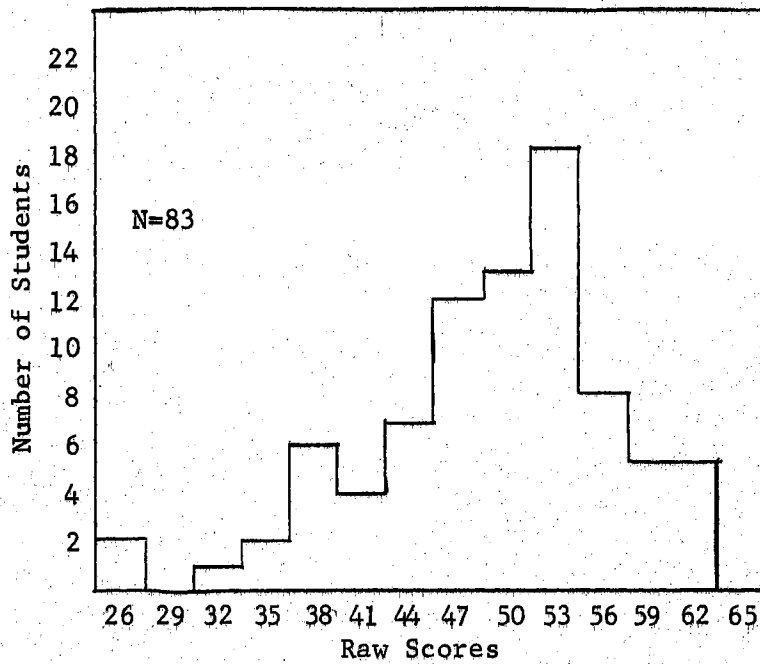


Figure 6. Traditional Method

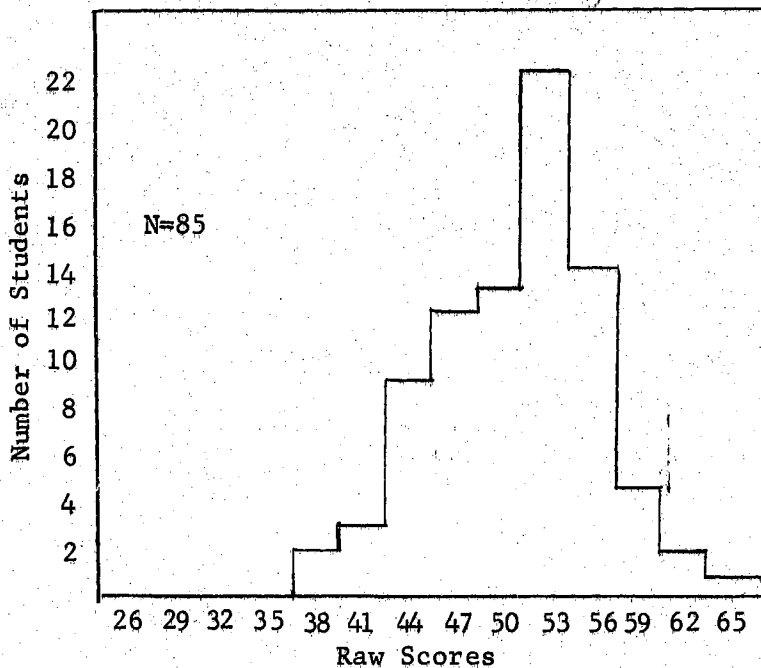


Figure 7. Game Method

### Summary

Chapter V has presented an evaluation of the Family Finance Game developed by the writer for use in teaching consumer credit and money



management units in vocational homemaking classes. Two instruments were developed to ascertain the opinions of teachers and students relative to the motivational qualities, relevance, operability, and utility of the game; a third instrument was developed to measure the achievement of students who experienced the game as a teaching method as compared with the achievement of students who were taught by methods traditionally used by vocational homemaking teachers.

The "Teacher Evaluation of the Family Finance Game" and the "Student Rating Scale for the Family Finance Game" were mailed to eight teachers and students in their classes who participated in the study. Six teachers returned their evaluation along with those of their students. Both teachers and students were favorable to the use of the Family Finance Game as a teaching-learning device. Both groups felt that there was a need for more instructions and that instructions should be more clearly stated.

An achievement test was used to determine the effectiveness of the Family Finance Game as a teaching method as compared with traditional teaching methods. The test was sent to eight teachers who used the Family Finance Game in consumer credit and money management units and seven teachers who used traditional teaching methods for teaching the same subject matter content. Six teachers of each group administered the test and forwarded the results to the investigator. The results showed that neither group scored differently than the other.

If given the chance to choose, students who experienced the Family Finance Game said that they would choose it over other learning activities for another unit. Teachers also expressed the desire to use the game again.

## CHAPTER VI

### SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

#### Summary of Findings

Recognizing the need for all aspects of consumer education, the authors of the Vocational Amendments of 1968 clearly expressed the intent that consumer education become the responsibility of the vocational homemaking teachers in the secondary schools of the nation. Consumer education should be as practical as possible so as to enable the individual to relate the materials directly to his own problem. Teachers seemed to experience difficulty in getting units under-way. Four areas in which teachers encountered problems were: (1) motivation of students, (2) teaching methods, (3) resources and materials, and (4) concepts to be included.

The writer interviewed seven businessmen concerned with the credit and money management practices of young people and four young homemakers to delineate the credit and money management problems of young people. Summarized the results of these interviews were: (1) Both businessmen and young homemakers agreed that the major financial problem of young people was the lack of money to finance the standard of living which they desired, and, in many cases, to which they had become accustomed in the parental home. (2) Bankers and retail businessmen do extend credit to teenagers using somewhat different regulations. (3) The most recurrent problem of those who extended credit to consumers is the

failure of people to think through their financial decisions. (4) Both businessmen and young homemakers suggested teaching financial management in such a way that students could see the results of poor management of financial resources.

A simulation game to teach consumer credit and money management seemed to afford several advantages over methods traditionally used to teach consumer and homemaking education. The use of a simulation game was thought to be no more costly in time and money than traditional methods and the possibility of presenting information in an innovative and meaningful way was considered to outweigh the fact that more information might be presented in less time by traditional means of instruction.

Specific objectives of the study were:

1. To write a simulation game incorporating selected concepts and generalizations for use in teaching money and credit management at the eleventh and/or twelfth grade level of vocational homemaking in the secondary schools.

2. To determine the effectiveness of the simulation game as a method of teaching as compared with teaching methods traditionally used in terms of student achievement of the selected concepts and generalizations.

3. To determine student attitudes and opinions of the simulation game as a learning experience,

4. To determine teacher attitudes and opinions of the simulation game as a teaching tool.

5. To recommend areas for revision and improvement of the simulation game and recommend areas for further study.

The Family Finance Game was developed for use in Homemaking III and IV to teach consumer credit and money management. Generalizations selected from the consumer education curriculum guide of the Oklahoma State Department of Home Economics Education served as a framework for the subject matter to be taught.

Six teachers and their students field tested the game. Teachers evaluated the game as to its motivational qualities, relevance to the needs of students, operability, and utility as a teaching method. Students rated the game in the areas of motivational qualities, relevance, and operability. A comparison of the effectiveness of the Family Finance Game as a teaching method with teaching methods traditionally used was tested by comparing the scores of two groups of students on an achievement test.

### Conclusions

On the basis of the findings of this study, the following conclusions are drawn in relation to the sample of teachers and students testing the simulation game developed for this study:

1. Teachers held generally favorable opinions of the value of the Family Finance Game for teaching consumer credit and money management units. They were especially appreciative of the motivational qualities and relevance of the game materials. They felt that operability and utility of the game could be improved by adding instructions that were more clearly stated.

2. A majority of the students valued the Family Finance Game as a way of learning about consumer credit and money management. The students deemed the motivational qualities and the relevance of the

materials to be above average; however, they recommended a reduction in the amount of arithmetic procedures and simplification of the game forms to reduce the tediousness of the game.

3. The Family Finance Game is probably best used with other methods of instructions. If nothing else, the game can convey to the players a feeling for the complexity of consumer credit and money management in family finance.

4. Statistical analysis showed that the group of students experiencing the Family Finance Game scored no differently than those experiencing traditional methods of teaching. A comparison of the learning experiences of students in classes taught by methods traditionally used with those taught by learning experiences incorporated into the Family Finance Game revealed many of the same characteristics which might explain the similarity in achievement. For instance, the control group of students filled out credit applications and contracts in class which may be as effective for learning about these forms as when the activity is incorporated into a game situation.

#### Recommendations

The results of this study suggest a need for further investigation into the development and testing of simulation games.

The following recommendations are offered by the writer for further investigation of the educational value of simulation games and revision of the Family Finance Game:

1. The testing of the value of simulation games for reaching students with a variety of ability levels is recommended. Results of the achievement test showed less variation in the scores of students

experiencing the gaming technique than in the scores of students taught in the traditional manner. The question arises as to whether the gaming technique reaches a wider range of students than the traditional methods.

2. The development and evaluation of simulation games for other areas of homemaking education might be explored.

3. The development of an instrument to measure whether or not playing the Family Finance Game does develop competencies for using credit is an area to be investigated.

4. Recommended changes and additions to the Family Finance Game are:

A. To color code the game forms.

B. To review the arithmetic and game forms for identification of possible ways to simplify them.

C. To change the format of the game so as to reduce the inconvenience of shuffling through papers.

D. To review the student instructions for purposes of clarification and possible additions.

5. It is further recommended that a teacher's manual be developed to include an explanation of simulation games, their advantages and disadvantages as a teaching method, several ideas for incorporating the simulation games in appropriate units, examples of the procedures and arithmetic problems included in the game, and additional and more clearly stated directions for administration of the game.

6. A final recommendation, in light of student and teacher evaluation, is that other areas of family finance such as banking procedures might be added to the game. These areas would be added in such a way

that the teacher could use portions of the game for a particular purpose or use the complete game for an expanded unit in family finance and consumer education.

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APPENDIX A

THE FAMILY FINANCE GAME

## INTRODUCTION TO FAMILY FINANCE GAME FOR STUDENTS

Within the last few years consumer credit has become widely accepted as a part of family financial planning. There was a time when credit was used only in the case of extreme emergency. Today the use of credit is so common that it is a rare family or individual that does not owe somebody something, even if it is no more than the price of last month's telephone bill.

Credit may be a blessing or a burden, depending on how it is used. When used wisely, credit allows families to meet financial emergencies, to take advantage of special prices by using cash credit, and to use a much needed article or service while paying for it. An important reason for the use of consumer credit is that the needs of a family usually reach their peak while the income of the family is still relatively low.

Credit can be a burden when the family pays too much for credit because the cost of credit is not considered and/or when the family buys too much on credit, thus finding themselves in a tidal wave of bills.

The Family Finance Game is a simulation activity designed to give you realistic experience in the use of credit as a part of family financial management. Simulation is the reproduction or imitation of certain features of an object or a process. An example of a simulation experience is the training of astronauts for space flight in the imitation model of the space craft.

Because the management of money and credit is presently important and will increase in importance to you, we are studying family financial management with particular emphasis on the use of credit. Playing the

Family Finance Game will be a part of the learning experiences. As a result of this unit, it is hoped that you will learn:

- A. The use of credit involves definite responsibilities and obligations.
- B. The use of credit increases the cost of the product.
- C. The ease of obtaining credit encourages spending which may not always be advisable.
- D. The acquisition of goods and services may be limited in the future (including emergencies) if credit is over-extended.
- E. Credit is a valuable tool for individuals who are able to control it and use it cautiously.
- F. A good credit rating is a valuable asset for the consumer.

When you have completed this unit you should be able to:

1. Compare costs of cash and credit buying by computing the total cost of goods bought on credit and comparing the total credit price with the cash price of the same goods.
2. Compare interest costs by computing the dollar costs and the annual percentage rates of interest.
3. Identify the terms and conditions of an installment contract in order to sign a contract with terms and conditions most beneficial to you.
4. Specify your financial situation by referring to your records kept on the Cash Flow Statement.
5. Figure your net worth at the end of each year.
6. Demonstrate an understanding of terms used in money management by scoring 80% on an achievement test.
7. Determine your credit rating by using the form which is furnished.

8. Demonstrate an understanding of the principles of money and credit management included in this unit by a minimum score of 70% on an achievement test.

The Family Finance Game is a simulation of financial decisions which might confront you as a young married couple. Before beginning play of the game, read the profile of Betty and Bob Jones and review their financial statement. Familiarize yourself with the directions for playing Family Finance. Acquaint yourself with the forms that are to be used and the goods that are available for purchase.

Your goal for playing the game is to maximize your net worth and maintain a good credit rating. This will necessitate that you purchase goods, using your cash and credit with care. Money saved on finance charges for credit purchases will help you to increase your net worth.



## DIRECTIONS FOR PLAYING

General Directions:

1. Collect your cash from the teacher at the beginning of each month of play. Your discretionary income is \$77.00 (the difference between Bob's take home pay and fixed living expenses).
2. Use a minimum of two lending agencies (retail stores, bank, finance company, etc.).
3. An unexpected event card must be drawn at the beginning of the fourth month of play. Thereafter, draw an unexpected event card each month. The unexpected event may be settled before or after purchases are made.
4. Installment contract terms are given on each merchandise card. Use these terms for filling out the credit contract.
5. Terms of the contract must be decided upon by both members of the team.
6. The team must sign the contract for both Bob and Betty because both are responsible for the debt.
7. You may play the game at your own speed. When purchases are made, all forms completed, and the unexpected event settled, you are ready to proceed to the next month. Begin by collecting your cash (discretionary income of \$77.00) from the coordinator.
8. Only one application for credit, one promissory note, and one installment contract will be filled out by each team. The assumption is made that this has been done when additional purchases are made. You will have filled out one with the class as a group, also.
9. If a team is found to have more money than is rightfully theirs, the amount which is not theirs will be subtracted from their net worth.
10. Do not borrow money from other players.

Specific Directions:

- A. To make a cash purchase after money has been collected at the beginning of the month:
  1. Select merchandise.
  2. Pay coordinator for merchandise.

3. Enter product and cost on Form E, Column I.
- B. To make sales credit purchases after money has been collected at the beginning of the month:
1. Select merchandise.
  2. Decide on credit terms, if there is a choice.
  3. Fill out application for credit (this step is unnecessary if the team has filled out one already).
  4. Fill out the installment contract (this step is unnecessary if the team has filled out one already).
  5. Make cash down payment, if any, to the coordinator.
  6. Enter your purchase on Form E, Record of Purchases, in Column II. Fill in all information applicable to your purchase. Remember to include date of final payment.
  7. Open charge accounts will be entered as having one monthly payment which is the total bill.
  8. A revolving charge account will be entered as an open charge account until the buyer decides to use the revolving charge method for paying for the goods. At this time the number of payments and the amount of each payment should be entered in the appropriate spaces.
  9. Durable goods will be entered as assets on the Annual Net Worth Statement, Form G. Non-durable goods will not be listed. The balance of payments due on both durable and non-durable goods will be listed under liabilities
  10. Only the amount of cash spent for down payments and payments on credit purchases is listed under expenses on the Cash Flow Statement, Form F.
  11. Payments on credit purchases will be made each month by giving the cash to the coordinator.
  12. Credit card entries should be handled in the same manner as the open charge accounts. If the option for monthly payments is used, the entries should be handled in the same manner as the revolving charge accounts.
- C. To use cash credit after money has been collected at the beginning of the month:
1. Decide on the amount of money needed for purchases.
  2. Check the "Regulations and Terms for Obtaining Credit," page 10, to find the type of loan for which you will qualify.

3. Decide on the institution from which to obtain the loan.
4. Fill out the promissory note (this step unnecessary if the team has filled out one already).
5. Enter the amount of the loan and terms on Form E, Record of Purchases, Column III, Cash Credit.
6. Enter the principal of the cash loan under Other Income on Form F, Cash Flow Statement. Enter product or products purchased under Expenses on Form F, Cash Flow Statement.
7. If durable goods are purchased with cash credit, enter the cash price under assets on Form G, Annual Net Worth. The loan, principal plus interest, will be entered under Liabilities on Form G, Annual Net Worth.

Repossession:

1. Goods will be repossessed if the buyer is delinquent with two monthly payments.
2. Repossessed goods must be removed from the assets on Form G, Annual Net Worth.
3. Money spent for payments on repossessed goods will remain as a part of the expenses.

Depreciation:

Depreciation on durable goods is set up on a five year, straight-line basis. The salvage value of durable household goods is set at \$25.00.

- I. Steps to determine the depreciation of durable purchases are:
  - a. Subtract salvage value from original cash price of the goods.
  - b. Divide your answer from step one by five years to obtain the amount of depreciation each year.
- II. The first four years of depreciation for the car have been subtracted before the car was listed on the financial statement. The remaining year must be subtracted the first year of the game. Salvage value of the car is \$600.00.

The television had one year depreciation subtracted before it was listed on the financial statement. There are four more years

depreciation at \$25.00 each. Salvage value of the television is \$25.00.

Because the home furnishings listed on the Financial Statement are used, it is assumed that no more depreciation should be subtracted from the \$500.00 listed. Home Furnishings value will remain at \$500.00 for use on the Net Worth Statement, Form G.

## REGULATIONS AND TERMS FOR OBTAINING CREDIT

1. Service Credit:

No Credit application necessary.  
 User of this credit needs acceptable credit rating.  
 Utility bills are due the tenth of the month.  
 There are no service charges.

2. Sales Credit:

Must fill out application for credit.  
 Must have an acceptable credit rating.

a. Regular or 30-Day Charge Account:

No down payment required.  
 No finance or service charges.  
 Entire bill due by the tenth of the month.  
 Limit on charge account for this game is \$25.00 or less each month.

b. Option or Revolving Charge Account:

No down payment required.  
 If total bill paid by tenth of the month, there are no service charges.  
 If you decide to make monthly payments, there is a finance charge of  $1\frac{1}{2}\%$  per month on the unpaid balance.\*  
 You may pay your entire balance in full at any time without incurring subsequent finance charges.  
 Limit on revolving charge account for this game is \$50.00.  
 Penalty--at option of creditor--full balance will become due.

c. Installment Credit (Easy Payment Plan):

No down payment required.  
 Minimum purchase of \$20.00 necessary to use easy payment plan.  
 Service charges are 25% on credit sales of \$300.00 or less.  
 Service charges are 20% on credit sales of \$301.00 or more.  
 Title to goods purchased remains with the seller until final payment is made on the contract.  
 Goods may not be used as collateral to obtain a loan.  
 If goods are damaged or destroyed, buyer must finish paying the contract.  
 Penalty--\$2.00 late charge--repossession of goods.

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\* For purposes of this game, most revolving charge accounts have already been figured on the merchandise cards. If the option to use revolving charge to pay credit card purchases is exercised, finance charges will have to be calculated by the team.

d. Credit Card:

Used to charge gas, oil, battery, tires, minor repairs, and food and lodging when traveling.

Total bill due by the tenth of the month.

A finance charge is made only if bill is not paid on time.

The credit card may be used for sixty days without incurring a finance charge.

Interest is charged at the rate of  $1\frac{1}{2}\%$  per month on the unpaid balance on overdue bills.

There is no limit to the amount that may be charged on the credit card.

Eligibility for a credit card includes a steady source of income and a good credit rating.

Penalty for late payment (late charge)--5% of the unpaid balance, not to exceed \$5.00 and/or loss of credit card.

3. Cash Loans:

Must fill out credit application.

May have co-signers to get credit or to get more favorable terms.

Collateral (security) may be used to get more favorable terms.

Collateral must be specified, if it is used.

a. Banks:

Single payment loan at 8% interest equal to the amount of money in the bank.

Single payment loan at 10% interest and principal \$300.00 if car used as collateral.

Add-on loan at 10% interest to be paid back in twelve equal payments. May get one six month extension.

Discount loan at 10% interest to be paid back in twelve equal payments. May get one six month extension.

A late fee of 5% of the unpaid balance or \$5.00 (whichever is less) is charged for delinquent payment.

Any unpaid balance may be prepaid in full at any time, in which event rebate will be made upon the finance charge at the rate of 75%. No rebate on prepayment in full will be made which will reduce the earned finance charge below \$5.00.

b. Credit Union:

Must pay \$5.00 to join credit union.

Interest charge on loan is 1% per month on the unpaid balance.

Loan may be no more than \$100.00 at any time.

Usually no collateral needed.

c. Finance Company:

Will loan to high risk applicants, therefore rates are higher, Thirty percent interest on loans plus \$20.00 handling charges for processing the loan.

Penalty for late payment is 5% of the unpaid amount of the installment, not to exceed \$5.00.

## PROFILE OF COUPLE

Bob and Betty Jones were married June 15, 1969. Bob is twenty years old and Betty is 19. Both have finished high school. Bob works as a postal clerk for the local post office under the supervision of John J. White, postmaster. He has been working there for fifteen months. Federal and state income tax, hospitalization insurance, and retirement payments are withheld from his gross income.

Betty worked for one year as a secretary for the Fidelity Life Insurance Company. She and Bob have decided against her working outside the home, at least for the present.

Bob and Betty rent an apartment at 1114½ Ash Street, Anytown, Oklahoma, from W. O. Houston, who lives next door at 1112 Ash Street. Their telephone number is 313-0718.

Bob and Betty have \$100.00 in their checking account and \$50.00 in their savings account with the First National Bank in Anytown.

Bob's parents, Mr. and Mrs. J. C. Jones, live at 1021 Elm Street in Anytown. Betty's parents live at 1314 North Street in Elmtown.

Bob's social security number is 441-20-6810; Betty's social security number is 441-22-5160.

Bob and Betty's home furnishings consist of used appliances and other furnishings given to them by their parents, relatives, and friends. They have purchased a few items at the local used furniture auction. They have spent considerable time refinishing some of the furniture. Cooking utensils, linens, table ware, and almost all essential small equipment were received at wedding showers. Bob owned a portable television, black and white, with a 19-inch screen. The television gives good service; however, they do need a new refrigerator.

Both Bob and Betty have an adequate supply of clothing for this year, therefore, the clothing allowance is principally for upkeep. The clothing allowance may have to be increased for the second year, especially for Bob. If Betty does not work outside the home, her clothing supply will be adequate.

Stores with whom Bob and Betty trade are:

Stephens Department Store (for clothing, etc.)

Moore Marine and Sporting Goods Company

Norman's Appliance Store

Anderson Motor Company

Smith Furniture Company

Jones Camera Shop

Boles Pet Shop

Rogers Sewing Machine Company

Gass Service Station

Personality Beauty Salon

Sawyer Crafts

Horne's Shoe Store



## FINANCIAL STATEMENT

GROSS INCOME (yearly)		\$5328.00	
Pay Check (one each month)		444.00	
Deductions: (monthly)			
Federal tax	\$72.00		
State tax	6.00		
Hospitalization (\$25 deduct.)	17.00		
Retirement	18.00		
Total Deductions		<u>113.00</u>	
TAKE HOME PAY (monthly)			
Monthly income minus monthly deductions		\$ 331.00	
EXPENSES: (monthly)			
Rent-Apartment		\$75.00	
Utilities (Telephone-6.50, Gas-4.50, Electricity-8.00, Water, Garbage, etc.-5.00)		24.00	
Food		70.00	
Clothing Upkeep		15.00	
Medical Costs		5.00	
Contributions		5.00	
Transportation		40.00	
Special Interests (Hobbies, Recreation, etc.)		<u>20.00</u>	
TOTAL MONTHLY FIXED EXPENSES			\$254.00
PERIODIC EXPENSES: (fixed)			
Car tag--Payable January 31 of each year		40.00	
Car insurance--\$39.00 Payable May 30 and November 30 (\$25 deduct.)		78.00	
Life insurance--\$21.00 Payable Jan. 15, April 15, July 15, and October 15 or \$78.00 payable October 15		78.00	
ASSETS:			
Checking account		\$ 100.00	
Savings account		50.00	
U.S. Savings Bonds		125.00	
Life Insurance (Ordinary life, 2 years paid)		5000.00	
Automobile (1966 medium-priced, 2-door hardtop, vinyl upholstery, high performance engine, 75,000 miles)		1200.00	
Home furnishings (estimated value)		500.00	
Television (one year old)		125.00	
DISCRETIONARY INCOME (Income not committed to fixed expenses may be used for cash purchases or placed in the bank checking account.)			\$77.00

FORM A

## APPLICATION FOR CREDIT

Name of Store \_\_\_\_\_

Mr.  
Mrs.  
NAME Miss \_\_\_\_\_  
(Please Print) (First Name) (Middle Initial) (Last Name)

ADDRESS \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_

Married \_\_\_\_\_ Widowed \_\_\_\_\_ Wife's  
Phone No. \_\_\_\_\_ Age \_\_\_\_\_ Single \_\_\_\_\_ Divorced \_\_\_\_\_ First Name \_\_\_\_\_

Number of Dependents \_\_\_\_\_ How Long at Present Address \_\_\_\_\_ Own \_\_\_\_\_ Rent \_\_\_\_\_ Unfurnished \_\_\_\_\_ Board \_\_\_\_\_

Monthly Rent or Mortgage Payments \_\_\_\_\_

Name of Landlord \_\_\_\_\_ Street Address \_\_\_\_\_ City and State \_\_\_\_\_

Former Address if Less Than 2 Years at Present Address \_\_\_\_\_ How Long \_\_\_\_\_

Employer \_\_\_\_\_ Street Address \_\_\_\_\_ City and State \_\_\_\_\_

How Long \_\_\_\_\_ Occupation \_\_\_\_\_ Social Security No. \_\_\_\_\_ Time Card or Badge No. \_\_\_\_\_

Earnings \$ \_\_\_\_\_ Monthly \$ \_\_\_\_\_ Weekly \$ \_\_\_\_\_

Name of Wife's Employer \_\_\_\_\_ Address of Wife's Employer \_\_\_\_\_ Wife's Weekly Income \_\_\_\_\_

Name of Your Bank \_\_\_\_\_ Savings \_\_\_\_\_ Checking \_\_\_\_\_ Loan Acc't No. \_\_\_\_\_

Name \_\_\_\_\_ Street \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_

Explain other income, if any \_\_\_\_\_

Previous Account With this Store Yes \_\_\_\_\_ No \_\_\_\_\_ Account No. \_\_\_\_\_ Is Account Paid in Full Yes \_\_\_\_\_ No \_\_\_\_\_ Date Final Payment Made \_\_\_\_\_

Account at Other Stores 1. \_\_\_\_\_  
or (Name of Firm) (Street Address) (City and State) Acc't No.

Bank Loans, Finance, Etc. 2. \_\_\_\_\_  
(Name of Firm) (Street Address) (City and State) Acc't No.

Relative or Personal Reference \_\_\_\_\_  
(Name) (Street Address) (City and State)

FORM B

To **FIRST NATIONAL BANK**  
**ANYTOWN, OKLAHOMA**

Date \_\_\_\_\_

For the purpose of securing credit from you, we hereby represent that the following information is true and correct.

NET AMOUNT

NUMBER

CREDIT REQUIRED \$ \_\_\_\_\_

MONTHS \_\_\_\_\_

Name of applicant \_\_\_\_\_ How long at present address? \_\_\_\_\_ years.

Address \_\_\_\_\_ Telephone \_\_\_\_\_

Previous Address \_\_\_\_\_

Age \_\_\_\_\_ Single \_\_\_\_\_ Married \_\_\_\_\_ Name of wife (or husband) \_\_\_\_\_ Number of Other dependents \_\_\_\_\_

Name and address of nearest relative not living with you \_\_\_\_\_

Wife's or Husband's Parents \_\_\_\_\_

**EMPLOYMENT**  
 Employed by  or business if self-employed  \_\_\_\_\_ for past \_\_\_\_\_ years.  
 Address \_\_\_\_\_ Phone \_\_\_\_\_ Kind of business \_\_\_\_\_ Your position \_\_\_\_\_  
 Present salary or net income from business, \$ \_\_\_\_\_ per month \_\_\_\_\_ per year Date received \_\_\_\_\_  
 Wife's Salary \$ \_\_\_\_\_ per month Employed By \_\_\_\_\_ How Long \_\_\_\_\_  
 Other Income (net), \$ \_\_\_\_\_ per month \_\_\_\_\_ per year Source of other income \_\_\_\_\_  
 Previous employer \_\_\_\_\_ For \_\_\_\_\_ years.

Give name and address of banks, finance companies and stores which have extended credit to you and furnish information on present indebtedness.

**DEBTS AND REFERENCES**

DESCRIBE DEBT	TO WHOM OWED	DATE INCURRED	PRESENT BALANCE	MONTHLY PAYMENTS	REMARKS
Home Mortgage					
Auto Loan					

Where do you bank? \_\_\_\_\_

Make and Model of car owned \_\_\_\_\_ Amount of Life Insurance \_\_\_\_\_

Have you ever been bankrupt, sued for debt, or garnisheed? \_\_\_\_\_

NAME \_\_\_\_\_

IF CAR LOAN - Will vehicle be used 50% or more in business? \_\_\_\_\_

PROCEEDS OF LOAN FOR FOLLOWING:

INSTALLMENT SALE CONTRACT

FORM C

Date \_\_\_\_\_

Sold to \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Quantity	Articles	Price Each	Amount

Cash Price(1)	_____		
Sales Tax(2)	_____		
Total Cash Price(3)	_____		
Cash Down Payment(4)	_____		XXX
Trade-In(5)	_____		XXX
Less Total Down Payment(6)	_____		
Unpaid Balance of Cash Price(7)	_____		
Amount Financed on this Purchase(7)	_____		
Finance Charge on this Purchase(8)	_____		
Total Payments on this Purchase(9)	_____		
Present Balance on Existing Account(10)	_____		
Total of Payments(11)	_____		

Total of Payments payable in \_\_\_\_\_ monthly installments of \$ \_\_\_\_\_ beginning \_\_\_\_\_  
 Deferred Payment Price of this Purchase (3 + 8) \_\_\_\_\_  
 Annual Percentage Rate \_\_\_\_\_

This agreement provides for a series of credit sales by Seller of merchandise and services for my personal, family or household use. In accordance with Seller's established terms, finance charge will be computed only on each new purchase and the amount financed plus the finance charge of each new purchase will be added to my existing outstanding balance. Ownership of the merchandise remains in Seller until paid for in full. My installment payments shall be applied as follows: in the case of items purchased on different dates, the first purchased shall be deemed first paid for. Until each item is fully paid for, I agree that: I have risk of loss or damage; I will not sell, transfer possession of, remove or encumber the property without your written consent; upon default of the terms of this agreement, you may declare my existing outstanding balance due and payable and you may repossess the property.

NOTICE TO BUYER: DO NOT SIGN THIS CONTRACT BEFORE YOU READ IT OR IF IT CONTAINS BLANKS. YOU ARE ENTITLED TO A COPY OF THIS CONTRACT. IF YOU PAY IN FULL IN ADVANCE, ANY UNEARNED FINANCE CHARGE WILL BE REBATED BASED ON "THE RULE OF 78." RECEIPT OF A COPY OF THIS SECURITY AGREEMENT IS ACKNOWLEDGED:

Customers Signature x \_\_\_\_\_

Salesman \_\_\_\_\_ Approved \_\_\_\_\_

Manager

DIRECTIONS FOR THE USE OF THE INSTALLMENT  
SALES CONTRACT, FORM C

To reduce the number of forms required for playing the Family Finance Game, only two Installment Sales Contract forms are included. A space is provided in the heading to fill in the name of the store from which the purchase is made.

To complete the Installment Contract:

Line 1 - Enter the price of the merchandise.

Line 2 - Sales Tax differs with the locality. To simplify the arithmetic of the game, Sales Tax has been included in the "Cash Price" as shown on the merchandise cards.

Line 3 - Total Cash Price is Line 1 plus Line 2. (Not necessary-- See Line 2.)

Line 4 - Enter the Cash Down Payment, if any was made.

Line 5 - Enter the Trade-In Allowance. In some instances, the Trade-In Allowance will be the down payment.

Line 6 - Total Lines 4 and 5 and subtract from Line 3. Enter on Line 6 and on both Lines numbered 7.

Line 8 - Enter Finance Charges. This will include interest, service charges, and/or any other charges which may be made.

Line 9 - Add Lines 7 and 8 to obtain Total Payments on this purchase.

Line 10 - If you have other credit purchases at this store that are not fully paid for, enter balance on this line.

Line 11 - Line 9 plus Line 10.

The next step is to fill in the number of monthly payments, the amount in dollars of each payment, and date first payment is to be made.

Enter deferred payment price which is obtained by adding Line 3 and Line 8. Find the annual percentage rate of interest by using the method given on page 135.

PROMISSORY NOTE

Anytown, Oklahoma \_\_\_\_\_, 19\_\_

\_\_\_\_\_ after date, the undersigned (jointly and severally if more than one) promise to pay to the order of

SECURITY NATIONAL BANK

at its office in Anytown, Oklahoma, the sum of \_\_\_\_\_ DOLLARS (\$ \_\_\_\_\_).

If this note be not paid in full within ten (10) days after the maturity date, the holder shall be entitled to receive a delinquency charge in an amount not exceeding \$5.00 or 5% of the balance (whichever is lesser) or a deferral charge upon the amount of the balance for the period of delinquency computed at the rate of loan FINANCE CHARGE for the indebtedness evidenced hereby as shown herein. This provision is not an automatic grace period and shall not preclude the holder hereof from declaring the note to be in default or from exercising any other right or remedy consequent upon any default.

- 1. Amount Financed . . . . . \$ \_\_\_\_\_
- 2. FINANCE CHARGE . . . . . \$ \_\_\_\_\_
- 3. Less: Prepaid Finance Charge . . . . . \$ \_\_\_\_\_
- to be paid in \_\_\_\_\_ monthly payments of . . . . \$ \_\_\_\_\_

or

- 1. Amount Financed . . . . . \$ \_\_\_\_\_
- 2. Plus FINANCE CHARGES . . . . . \$ \_\_\_\_\_
- Total to be repaid in \_\_\_\_\_ monthly payments of \$ \_\_\_\_\_ each
- ANNUAL PERCENTAGE RATE . . . . . \$ \_\_\_\_\_

Any unpaid balance may be prepaid in full at any time, in which event rebate will be made upon the FINANCE CHARGE based upon the "Rule of 78" (but no rebate on prepayment in full will be made which will reduce the earned FINANCE CHARGE below \$5.00 if the amount financed is \$75.00 or less or below \$7.50 if the amount financed exceeds \$75.00).

This note is secured by a security interest in the following collateral, and the security agreement will secure future and other indebtedness and will cover after-acquired property:

Motor Vehicle(s): Make \_\_\_\_\_ Serial No. \_\_\_\_\_  
Household Goods and appliances of the following description:

\_\_\_\_\_  
Other: \_\_\_\_\_

The undersigned hereby acknowledges receipt of a copy of this promissory note, the disclosures contained herein and in the security agreement and separate statement if any, referred to herein.

Addresses: \_\_\_\_\_  
\_\_\_\_\_

Signatures: \_\_\_\_\_  
\_\_\_\_\_

### FIGURING THE COST OF CREDIT

Since Bob and Betty are paying money for credit just as they are paying for the merchandise that they purchase, they need to shop for credit just as they shop for merchandise. Below is a form for Bob and Betty to use for figuring the dollar cost of credit:

1. \_\_\_\_\_ Monthly Payments times \$ \_\_\_\_\_ each. = \$ \_\_\_\_\_  
(Number) (Dollars)
2. Add down payment, if any (Cash and/or Trade-In). = \$ \_\_\_\_\_
3. Total installment price ("on time," easy payment) = \$ \_\_\_\_\_  
(Add Lines 1 and 2).
4. Subtract cash price. = \$ \_\_\_\_\_
5. How much it costs in dollars to use credit. = \$ \_\_\_\_\_

### FIGURING PERCENTAGE RATES OF CREDIT

Another aid that Bob and Betty may use for comparing the costs of credit is the Annual Percentage Rate of Credit. Since the number of monthly payments differ, the Annual Percentage Rate provides a more precise way of comparing credit costs.

The steps for figuring the Annual Percentage Rate of Credit are:

- Step 1. Figure the dollar cost of credit as shown above.
- Step 2. Multiply two times the dollar cost of credit.
- Step 3. Multiply the results of Step 2 by the number of monthly payments in one year (12).
- Step 4. Multiply the amount of credit needed by the total number of payments plus one.
- Step 5. Divide the results in Step 3 by the results in Step 4. The answer is your true annual percentage credit rate. (Don't forget to move your decimal point two places to the right to state your answer as percentage!)

DIRECTIONS FOR USING FORM F, CASH  
FLOW STATEMENT

The Cash Flow Statement is designed to help Bob and Betty keep track of their income and expenses. At the end of each month Bob and Betty should be able to find the amount of cash on hand by looking at the final entry in Column 3--Balance. This form will also show them where their income has been spent. The steps listed below will help you to use this form.

1. Enter the name of the month in the space provided.
2. The entry for Line 1-a, "Balance Brought Forward," has been made for you. Bob and Betty have \$100.00 in their checking account and \$50.00 in their savings account. This \$150.00 is the amount of cash which they have available or the "Balance Brought Forward." For the remaining months, the "Balance Brought Forward" will be the final entry of the preceding month in Column 3--Balance.
3. Income is primarily Bob's salary from his job as postal clerk. Enter Bob's salary on Line b, Column 1. You may receive gifts of money or income from other sources. This income will be listed in the space provided under Line c, Column 1.
4. Deductions of Federal and state tax, retirement, and hospitalization from Bob's salary are entered on Line b, Column 2--Expenses.
5. Deductions from "Other Income," Line c, Column 1, are listed on Line c, Column 2--Expenses.
6. Fixed living expenses are listed on Line d, Column 2. Additional lines are provided for listing other expenses. Other expenses include cash paid for merchandise or bills and cash spent for down payments and monthly payments on credit purchases.



7. Entries in Column 3--Balance, are figured by:
  - a. Adding each entry of income, Column 1, to the last entry in Column 3--Balance.
  - b. Subtracting each entry of expense, Column 2, from the last entry in Column 3--Balance.

FORM G

## NET WORTH STATEMENT

	1970	1971	1972	1973	1974
<b>I. ASSETS</b>					
a. Cash	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____
b. Bonds	_____	_____	_____	_____	_____
c. Car	_____	_____	_____	_____	_____
d. Home Furnishings	_____	_____	_____	_____	_____
e. Television	_____	_____	_____	_____	_____
f. _____	_____	_____	_____	_____	_____
g. _____	_____	_____	_____	_____	_____
h. _____	_____	_____	_____	_____	_____
A. TOTAL	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____
<b>II. LIABILITIES</b>					
a. _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____
b. _____	_____	_____	_____	_____	_____
c. _____	_____	_____	_____	_____	_____
d. _____	_____	_____	_____	_____	_____
e. _____	_____	_____	_____	_____	_____
B. TOTAL	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____
<b>III. NEW WORTH</b> (Line I-A - Line II-B)	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____

DIRECTIONS FOR COMPLETING NET WORTH  
STATEMENT - FORM G

I. Enter value of all assets.

Line I-a - Enter cash on hand. Find this amount on Form F, the final figure in Column 3--Balance.

Line I-b - Enter maturity value of government bonds.

Line I-c - Etc.--enter value of durable goods after depreciation has been subtracted. See "Directions for Filing" to determine amount of depreciation to subtract.

Line I-A - Total all assets.

II. Enter balance of all loans. List loans on lines provided (a, b, c, d, etc.). Balance is determined by subtracting total of monthly payments paid from the original loan.

Line II-B - Total all liabilities.

III. Enter Net Worth. Determine Net Worth by subtracting total of Line II-B from total of Line I-A.

**APPENDIX B**

**TEACHER MATERIALS FOR FAMILY FINANCE GAME**

## MANUAL FOR TEACHERS

## INTRODUCTION

The Family Finance Game has been developed for use by Homemaking III and IV classes. It affords simulated opportunities for students to make some of the financial decisions faced by a young couple with many unsatisfied needs and wants and a limited amount of resources for satisfying these needs and wants. The purposes of the game are to give students some understanding of the responsibilities and obligations of using consumer credit and a feeling of efficacy when borrowing money.

The Family Finance Game is designed to emphasize experience in using consumer credit and the effects on the family financial situation when one obligates future earnings to pay for goods purchased now. The profile of Bob and Betty Jones, their financial statement, and the rules for playing the game define the simulated environment in which the students make their decisions. The merchandise cards and the forms for use in the game have been simplified for the game. As an example, all prices of merchandise are stated in dollars only to simplify the mathematical calculations involved. The credit application, the credit contract, and the promissory note have been simplified to reduce routine and allow more time for other learning activities.

The winner(s) of the Family Finance Game is (are) the team(s) with the highest net worth and the best credit rating.

## INSTRUCTIONS

The teacher will act as coordinator. She will:

1. Distribute the discretionary income (\$77.00) to each team the

first of each month.

2. Receive payments for cash purchases and down payments and monthly payments on credit purchases.

3. Supervise drawing of the unexpected events.

Preparation for playing the game will include:

1. Review "Introduction to Family Finance Game for Students" and "Directions for Playing the Game" (for students).

2. Introduce the game to the students.

3. Hand the game to the students for their study.

4. Take the class as a group through the procedure for one credit purchase and one unexpected event. Fill out all of the forms. Some pre-calculation may be done if a thorough explanation is given so that students understand where the figures come from.

5. Pay each team \$77.00 at the first of each month. Teams will play at different speeds, hence "pay day" will come at different times. The speed with which the team makes decisions and completes the calculations will determine the speed of play. Each team should be allowed to proceed at its own speed.

6. Supervise the drawing for unexpected events. Beginning with the fourth month draw an unexpected event card and draw one some time during the month each month thereafter.

7. Promote a discussion of the financial situations of the teams after each play of the game. Encourage students to analyze the situations. Why is one team in good financial condition while another did not do so well? What alternative decisions might have brought about different financial conditions? What was the effect of the unexpected events? How does one prepare for the unexpected? What determines the cost of credit?

## CONTENT FOR CONSUMER CREDIT UNIT

## INTRODUCTION

## I. What is Consumer Credit?

- A. Definition of credit--to trust the truth of; believe; Credit is derivation of "Credo" which means "I believe."
- B. Determine definition of consumer credit.
- C. Three C's of credit.

## II. Who uses Consumer Credit?

- A. Use of Consumer Credit by ages--why?
- B. Use of Consumer Credit by income levels--why?

## III. Kinds of Credit:

- A. Service credit--form of credit used when we use utilities and pay for them at the end of the month.
- B. Sales credit--offered by department stores, appliance dealers, etc.

## 1. Forms of sales credit:

- a. Regular, open, or 30-day charge account. Goods charged for during the month are paid for when the buyer is billed. Billing date depends on the seller; a customary due date for bills is the tenth of the month. No finance or service charge is made if bills are paid within the allotted time.
- b. Ninety-day account. This is a variation of the thirty-day charge account. This kind of account may be divided into three equal payments. Usually there is no service charge. Dictionaries and slacks which are sold through the mails are variations of this type of credit. The difference in single payment of the bill and paying in three installments may be only ten or fifteen cents; however, the goods may be shipped prepaid if payment accompanies the order. This may amount to as much as \$1.00 on a \$15.00 order.
- c. Option or revolving account. The buyer has the option of paying the entire balance with no finance charge when billed or converting the account to an installment plan with the usual finance charge of  $1\frac{1}{2}\%$  on the unpaid balance. The entire balance of the account may be made at any time.
- d. Credit cards or retail bank cards. These operate similarly to the revolving charge account.

- e. Installment plan (easy payment plan, budget plan, "on time," can you think of other names?). This is used for large purchases such as household appliances and cars.
- f. Lawaway plan. This is not really credit because the merchandise remains in the store until paid for.

C. Cash loans or credit.

- 1. Term or single payment loans. The interest and principal are paid in one lump sum at the end of the period for which the money is borrowed.
- 2. Installment loans. There are two types:
  - a. Add-on loan--interest added to the principal and repaid in a specified number of payments.
  - b. Discount loans--interest is subtracted from principal of the loan. The principal is paid back in a specified number of equal payments. For instance, the loan is for \$100.00 at 9% interest. Nine dollars interest is subtracted from \$100.00. The borrower receives \$91.00, but pays back \$100.00 in a specified number of equal payments.

IV. Where to get credit:

- A. Stores
- B. Banks
- C. Credit Unions
- D. Personal or Consumer Finance
- E. Companies
- F. Small Loan Companies
- G. Pawnshops
- H. Illegal Lenders
- I. Friends or Relatives

V. Kinds of credit which may be obtained from the above sources of credit.

VI. The advantages and disadvantages of the various sources of credit.

### CREDIT CONTRACTS

I. Contracts are legal documents.

- A. Responsibilities of borrower.
- B. Sales credit contracts take different forms, but should always include the following information:
  - 1. Price of what you are buying.
  - 2. Trade-in allowance, if any.
  - 3. Interest or carrying charges in dollars.



4. Insurance costs.
5. Any other cost, such as service charges or installment charges.
6. Total you must pay.
7. Down payment.
8. Total money you owe after down payment and trade-in allowance.
9. Amount of each payment (is the last payment different from the other payments? why? balloon payments).
10. Number of payments.
11. When each payment is due.
12. What happens if you pay late or miss a payment.

C. Be sure you understand everything in a contract and that there are no blanks before you sign the contract.

II. When you borrow money, be sure that your contract includes these things:

- A. Total amount of money you will get.
- B. Amount of each payment.
- C. Number of payments.
- D. Insurance costs.
- E. Any other cost such as service charges.
- F. Interest in dollars.
- G. Annual percentage rate.
- H. When payment is due.
- I. What happens if you pay late or miss a payment.
- J. What happens if you can't pay.
- K. Description of any security taken.
- L. Method for computing refund for prepayment.

III. Assignment of credit contracts.

### SHOPPING FOR CREDIT

I. Costs of credit depend on:

- A. Lender.
- B. Amount borrowed.
- C. Length of time you borrow it.
- D. Your ability to repay.
- E. Risk creditor takes.
- F. Collateral of security.
- G. Your credit rating.

II. Charges are stated as:

- A. Dollars and cents.
- B. Annual percentage rate.

### III. How to figure credit costs:

- A. Dollars and cents.
- B. Annual percentage rate.

### IV. Shop for credit as you shop for merchandise.

### V. How to cut costs of credit:

- A. Make a large down payment.
- B. Borrow for shortest length of time possible.
- C. Shop for best credit deal.
- D. Pay promptly.
- E. Take advantage of rebate privileges.

## SHOULD YOU USE CREDIT?

### I. Reasons for using credit:

- A. Buy things when you need them, but do not have enough cash to pay for them.
- B. You can use things while you pay for them.
- C. If you still owe money on something that needs repairs, you may get better service.
- D. You establish a credit rating.
- E. Convenient to pay bills once each month.

### II. Reasons for not using credit:

- A. Credit costs more than paying cash.
- B. You may buy things you do not need.
- C. You may over-extend your ability to pay.
- D. If you cannot pay for goods, you lose them and the money you have paid on them.

### III. Can you afford to use credit?

- A. Ask yourself these questions before you decide to buy on credit or borrow money:

1. Do I need the merchandise?
2. Do I need it now?
3. Is having it now worth the extra money I must pay for credit?
4. Can I make the payments?
5. Will I pay too much interest?
6. What good will it do me?
7. What will I go without to pay for it?
8. Is it worth the risk of losing the money I have put into it if I can't finish paying for it?
9. Am I buying (or borrowing) from a fair and honest person?

10. Should I risk owing so much money that I won't be able to get more if I get sick or have an accident?

#### CREDIT RATING

- I. Value of good credit rating.
- II. How to establish a good credit rating.

## RESOURCE MATERIALS FOR CONSUMER EDUCATION UNIT

Resource Materials for Teachers:

National Consumer Finance Association "Family Money Management Counseling Kit," prepared by Carl F. Hawver.

National Consumer Finance Association Teacher's Kit, "A One-Week Teaching Unit on Consumer Finance," prepared by Carl F. Hawver.

Fenstermaker, J. Van and Keith K. Cox, "The Impact of Consumer Knowledge on Installment Credit," reprinted from Business Perspectives, Vol. 2, No. 4, 1966.

Kerr, John R., "The Expanding Market for Installment Credit--A Look Toward the Future," Washington, reprinted from the Consumer Finance News from the following issues: December, 1966; February, May, July, August, and September, 1967.

Resource Materials for Students:

Better Business Bureau, "Facts You Should Know About Borrowing," 1957.

Better Business Bureau, "Facts You Should Know About Your Credit," 1968.

Federal Reserve Bank of Chicago, "The Two Faces of Debt," February, 1968.

Cooley, John L. "How Banks Help," New York, The American Bankers Association, 1962.

Savings Division of The American Bankers Association, "Personal Money Management," 1967.

Institute of Life Insurance, "Making the Most of Your Money," New York, 1969.

Student Handouts:

National Consumer Finance Association, "Consumer Credit and You," 1960.

National Consumer Finance Association, "Family Budget Plan," 1969.

National Consumer Finance Association, "Slide Guide," 1968.

National Consumer Finance Association, "Basic Principles in Family Money and Credit Management," 1968.

National Consumer Finance Association, "It's Your Money," 1967.

APPENDIX C  
FORMS FOR CONTROL TEACHERS

Concept: Borrowing (Consumer Credit)

Generalizations:

- A. The use of credit involves definite responsibilities and obligations.
- B. The use of credit increases the cost of the product.
- C. The ease of obtaining credit encourages spending which may not always be advisable.
- D. The acquisition of goods and services may be limited in the future (including emergencies) if credit is over-extended.
- E. Credit is a valuable tool for individuals who are able to control it and use it cautiously.
- F. A good credit rating is a valuable asset for the consumer.

RECORD OF TEACHING METHODS, LEARNING EXPERIENCES,  
AND MATERIALS AND RESOURCES USED

GENERALIZATION	TEACHING METHODS	LEARNING EXPERIENCES	MATERIALS AND RESOURCES USED
The use of credit involves definite responsibilities and obligations.			
The use of credit increases the cost of the product.			

RECORD OF TEACHING METHODS, LEARNING EXPERIENCES,  
AND MATERIALS AND RESOURCES USED

GENERALIZATION	TEACHING METHODS	LEARNING EXPERIENCES	MATERIALS AND RESOURCES USED
<p>The ease of obtaining credit encourages spending which may not always be advisable.</p>			
<p>The acquisition of goods and services may be limited in the future (including emergencies) if credit is over extended.</p>			



RECORD OF TEACHING METHODS, LEARNING EXPERIENCES,  
AND MATERIALS AND RESOURCES USED

GENERALIZATION	TEACHING METHODS	LEARNING EXPERIENCES	MATERIALS AND RESOURCES USED
Credit is a valuable tool for individuals who are able to control it and use it cautiously.			
A good credit rating is a valuable asset for the consumer.			

APPENDIX D

SUMMARY OF THE TEACHER EVALUATION OF THE  
FAMILY FINANCE GAME

TEACHER EVALUATION OF THE FAMILY  
FINANCE GAME

Name \_\_\_\_\_ School \_\_\_\_\_

Years Teaching Experience:

Vocational Homemaking \_\_\_\_\_ Other (Please List) \_\_\_\_\_

**DIRECTIONS:** Below are some statements related to the Family Finance Game and its use in the classroom. Indicate how you feel about the game and its value as a teaching method by circling the appropriate symbols.

SA = Strongly Agree

A = Agree

N = Neutral

D = Disagree

SD = Strongly Disagree

- SA A N D SD 1. The use of the Family Finance Game adds relevance and meaning to the teaching of money and credit management.
- SA A N D SD 2. The Family Finance Game is too complicated for eleventh and/or twelfth grade Vocational Homemaking students.
- SA A N D SD 3. The Family Finance Game provides realistic situations for students to apply the principles of money and credit management.
- SA A N D SD 4. The Family Finance Game allows the student to experience over extension of credit without having to suffer the consequences that he would experience in real life.
- SA A N D SD 5. The Family Finance Game is an effective method for teaching facts.
- SA A N D SD 6. The Family Finance Game motivates students to learn about money and credit management.
- SA A N D SD 7. The simulation game technique would be one means of adding relevance to other areas of Vocational Homemaking in the secondary schools.
- SA A N D SD 8. Students of differing socio-economic and cultural backgrounds and differing levels of ability found the Family Finance Game an interesting way to study money and credit management.
- SA A N D SD 9. The forms included in the game are too complicated for student use.
- SA A N D SD 10. The game forms add a sense of realism to the game.
- SA A N D SD 11. Sufficient directions for playing the game are included.
- SA A N D SD 12. The unexpected events create interest in the Family Finance Game.
- SA A N D SD 13. Played periodically, the Family Finance Game can be used to emphasize principles of money and credit management.

- SA A N D SD 14. The major value of the Family Finance Game is motivational.
- SA A N D SD 15. Purchases provided for in the Family Finance Game are unrealistic for high school students.
- SA A N D SD 16. The unexpected events add realism to the Family Finance Game.
- SA A N D SD 17. Students were able to see the cause and effect relationship between their purchasing decisions and their financial situation in the game.
- SA A N D SD 18. The Family Finance Game used time that I could have spent using teaching methods which I have found to be more effective.
- SA A N D SD 19. I feel at ease using the Family Finance Game to teach management of money and credit.
- SA A N D SD 20. I would use the Family Finance Game again to teach money and credit management.
- SA A N D SD 21. I would prefer to use the Family Finance Game as the culminating experience for the unit on money and credit management.
- SA A N D SD 22. I found it hard to keep track of each team's activities.

If I were to use the Family Finance Game again, I would add: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

If I were to use the Family Finance Game again, I would leave out: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

SUMMARY OF THE TEACHER EVALUATION OF THE  
FAMILY FINANCE GAME

Statements	Mean Response
The unexpected events created interest in the Family Finance Game.	4.8
I would use the Family Finance Game again to teach money and credit management.	4.8
The Family Finance Game motivates students to learn about money and credit management.	4.7
The use of the Family Finance Game adds relevance and meaning to the teaching of money and credit management.	4.7
The Family Finance Game used time that I could have spent using teaching methods which I have found to be more effective.	4.7
The Family Finance Game is too complicated for eleventh and/or twelfth grade vocational homemaking students.	4.5
The Family Finance Game provides realistic situations for students to apply the principles of money and credit management.	4.5
The simulation game technique would be one means of adding relevance to other areas of vocational homemaking in secondary schools.	4.5
The unexpected events add realism to the Family Finance Game.	4.5
Purchases provided for in the Family Finance Game are unrealistic for high school students.	4.3
I feel at ease using the Family Finance Game to teach management of money and credit.	4.3
Played periodically, the Family Finance Game can be used to emphasize principles of money and credit management.	4.2
The Family Finance Game allows the student to experience over extension of credit without having to suffer the consequences that he would experience in real life.	4.2
Students were able to see the cause and effect relationship between their purchasing decisions and their financial situation in the game.	4.2

Statements	Mean Response
Students of differing socio-economic and cultural backgrounds and differing levels of ability found the Family Finance Game an interesting way to study money and credit management.	4.0
The game forms add a sense of realism to the Game.	4.0
The Family Finance Game is an effective method for teaching facts.	4.0
The forms included in the Game are too complicated for student use.	4.0
I would prefer to use the Family Finance Game as the culminating experience for the unit on money and credit management.	3.8
The major value of the Family Finance Game is motivational.	3.8
I found it hard to keep track of each team's activities.	3.3
Sufficient directions for playing the Game are included.	3.0
Mean Response to All Statements	4.2
Perfect Response was . . .	5.0
Total Items in Questionnaire	22

APPENDIX E

STUDENT RATING SCALE FOR FAMILY FINANCE GAME,  
ACHIEVEMENT TEST, AND SUMMARY OF RESULTS

STUDENT RATING SCALE  
for  
FAMILY FINANCE GAME

Name \_\_\_\_\_ Grade Level \_\_\_\_\_ Date \_\_\_\_\_

Number of years of Homemaking you have taken \_\_\_\_\_.

Are you married? \_\_\_\_\_

This is not a test, but a means of gathering information about the Family Finance Game which you have been using. The answers you give will have no effect on your grade.

The purpose of the rating scale is to help the developer of the Family Finance Game to:

1. Find areas of the game which need clarification.
2. Determine whether or not the Family Finance Game adds meaning to the study of money and credit management.
3. Decide if the Family Finance Game is a practicable way to study money and credit management.

If it is decided that the Family Finance Game is a feasible method for studying money and credit management, your answers will be used as a guide for revising and rewriting the game.

**DIRECTIONS:** Read each question carefully and then place an X in the space before the statement that best describes the way you feel about the Family Finance Game.



1. Was the Family Finance Game easy to play?

- Yes, the game was easy to play.  
 Sometimes, but it was sometimes tedious.  
 No, the game was hard to play.

2. Did you enjoy playing the Family Finance Game?

- Yes, the game was an interesting way to learn about money and credit.  
 Sometimes, there were times when it was boring.  
 No, it was too much trouble to play.

3. Were there sufficient directions for playing the game?

- Yes, the amount of directions was about right.  
 Sometimes a few more directions would have helped me.  
 No, I was often confused about what I was supposed to be doing.

4. Since completing the unit on money and credit management, would you feel more capable if you needed to use consumer credit?

- Yes, I learned sufficient principles to feel capable when using consumer credit.  
 Sometimes, but I would still feel unsure of my ability to use consumer credit.  
 No, I still don't understand about using consumer credit.

5. Did the drawings of the merchandise make the game more interesting?

- Yes, the pictures made me want to buy the merchandise.  
 Sometimes, the pictures helped me decide what to purchase.  
 No, the drawings of the merchandise were of little use to me.

6. Did the Family Finance Game give you an appreciation for the knowledge and skills needed to manage family money and credit?

- Yes, the game helped me to see that you need to know what you are doing when you spend your money and use credit.  
 Some, I know a little more about using money and credit.  
 No, I still don't think that one can learn how to use money and credit.

7. How much help did you need from others to play the Family Finance Game?

- It was easy to understand what to do without help from others.  
 Sometimes I needed help from others.  
 I needed much help from others.

8. Do you believe that you will have occasion to use the information learned while playing the Family Finance Game?

- Yes, I think it will help me to use my money and credit more wisely.
- Some of it may be helpful.
- No, I don't think that I will need to know how to borrow money and I know how to manage my money.

9. Did the unexpected events add interest to the game?

- Yes, not knowing what to expect added interest to the game.
- Part of the time; part of the time they were discouraging.
- No, the unexpected events added nothing to the game.

10. If given the chance to choose the teaching methods for a money and credit management unit, would you choose the Family Finance Game over other teaching methods that you have experienced?

- Yes, I think the game helped me learn more about management of money and credit than other methods would have.
- I am not sure as there were some parts of the game that I did not understand.
- No, the game used too much time. I think that I could have learned more if other teaching methods had been used.

11. Do you feel that the Cash Flow Statement is a practical way for the individual or the family to keep track of income and expenditures?

- Yes, I think that a method similar to this would be helpful for keeping track of income and expenditures.
- Maybe, but it really seems too complicated.
- No, it would be too much trouble.

12. Do you think that the "unexpected events" are incidents that might occur in real life?

- Yes, the "unexpected events" were "real life" incidents.
- Some of the "unexpected events" might really happen.
- No, incidents like that don't really happen.

13. The part that I liked best about the Family Finance Game was: \_\_\_\_\_

\_\_\_\_\_

14. The part that I liked least about the Family Finance Game was: \_\_\_\_\_

\_\_\_\_\_

15. The last thing that I would like to say about the Family Finance Game is: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

NAME \_\_\_\_\_ GRADE \_\_\_\_\_ DATE \_\_\_\_\_

DIRECTIONS: Read each statement carefully. Decide whether or not the statement is "true" or "false." If the statement is "true," circle the "T"; if the statement is "false," circle the "F". (T and F).

- T F 1. One of the advantages of using credit is that you can use things while paying for them.
- T F 2. Buying on the installment plan is more expensive than paying cash.
- T F 3. Interest rates are often quoted by the month instead of the year.
- T F 4. The longer that you take to pay for an item the cheaper it will be.
- T F 5. Banks, loan companies, and credit unions charge the same interest rate in Oklahoma.
- T F 6. Credit is best used for everyday expenses such as food and clothing.
- T F 7. Only a few people use credit.
- T F 8. Most installment contracts indicate that the buyer "owns" the item as soon as he makes a down payment.
- T F 9. On a revolving charge account you are usually charged  $1\frac{1}{2}\%$  interest per month on the unpaid balance.
- T F 10. The use of credit may be an aid in budgeting.
- T F 11. It is wise to borrow the most money that you can get.
- T F 12. The size of the down payment on goods purchased reduced the amount of dollars of interest which an individual pays.
- T F 13. Paying bills promptly will safeguard your credit rating.
- T F 14. Retail businesses do not usually make any service charge on 30-day open accounts.
- T F 15. Shopping for the best credit deal may save more money than shopping for the best bargain in merchandise.
- T F 16. Credit card accounts are similar to revolving charge accounts.
- T F 17. Credit is an acceptable way to buy large durable goods.

- T F 18. If you buy a car on time and you have a wreck you are not responsible for the remaining payments due on the car.
- T F 19. Some people find that the best way for them to increase family assets is through the discipline of regular monthly payments.
- T F 20. A revolving charge account allows the individual the choice of paying a bill in full with no interest or paying a part of the bill and paying a specified amount of interest on the unpaid balance.
- T F 21. The cost of credit is sometimes called interest and sometimes called "carrying charges."
- T F 22. If you are not able to make a payment on a television set you have bought on the installment plan, the seller will pick up the set and return to you the payments you have made.

DIRECTIONS: Read each question carefully and place an "x" in the blank before the best answer.

23. "Deferred Payment Price" is:

- A. the dollar cost of credit.
- B. cash price plus finance charges.
- C. total amount of interest paid.
- D. another name for Annual Percentage Rate.

24. In which of the following types of credit is the credit cost reflected in the cost of the merchandise:

- A. revolving charge account.
- B. credit cards.
- C. 30-day charge account.
- D. BankAmericard.

25. "Ownership of the merchandise remains in the Seller until paid for in full," in a contract means:

- A. the lender has legal title to the goods purchased.
- B. the borrower has legal title to the goods purchased.
- C. goods purchased are left in the store until final payment is made.
- D. seller may demand full payment at any time.

26. The money remaining from income after essential living costs have been met is

- A. discretionary income.
- B. gross income.

- C. take-home pay.  
 D. income after taxes.
27. A person has over-extended his credit if
- A. he fails to pay his bills.  
 B. his expenses are more than his income.  
 C. his payments are delinquent.  
 D. he has to pay late charges.
28. The telephone bill is a form of
- A. cash credit.  
 B. sales credit.  
 C. service credit.  
 D. revolving credit.
29. An add-on cash loan
- A. has the interest added to the principal and is repaid in monthly installments.  
 B. has the interest subtracted from the principal and repaid in monthly installments.  
 C. has the interest added to the principal and is repaid in a single payment.  
 D. has the interest subtracted from the principal and the remainder is repaid in a single payment.
30. If the buyer fails to make his payments, the seller may
- A. assign the loan to another company.  
 B. declare the buyer bankrupt.  
 C. raise the finance charge.  
 D. repossess the merchandise.
31. The age group who makes the most extensive use of credit is
- A. 18-24 years.  
 B. 35-44 years.  
 C. over 50 years.  
 D. 25-34 years.
32. The lowest cost interest rate on \$200.00 for one year is
- A.  $1\frac{1}{2}\%$  per month on the unpaid balance.  
 B. 8% single pay loan.  
 C. 8% add-on loan.  
 D. 8% discounted loan.
33. Which of the following usually charges the lowest rate for credit?
- A. Dealers or stores offering installment plans.  
 B. Banks.  
 C. Loan companies.

D. Pawnshops.

34. If you borrow \$400.00 at a bank and at the end of one year pay the bank \$424.00, you have paid interest at the annual rate of

- A. 6%.  
       B. 12%.  
       C. 4%.  
       D. 24%.

35. Suppose you buy a television for \$100.00 "On Time" with no down payment. You pay a "Carrying Charge" of \$9.00, making a total of \$109.00 which you pay in twelve equal monthly payments. What annual interest rate are you paying?

- A. 6%.  
       B. 9%.  
       C. 12%.  
       D. 18%.

36. The statement, "My installment payments shall be applied as follows: in the case of items purchased on different dates, the first purchased shall be deemed the first paid for," in the credit contract means

- A. all goods must be paid for before the buyer receives title to any of the goods.  
       B. payments will be applied to cost of purchases in the order purchased.  
       C. the buyer may choose the goods he wants to finish paying for first.  
       D. the seller may determine the order in which goods are paid for.

37. When the buyer of goods signs the credit contract he gives the seller

- A. the right to repossess goods if he fails to pay for them as stated in the contract.  
       B. the right to check on the condition of the goods at any time.  
       C. the right to demand full payment at any time.  
       D. the right to revise the terms of the contract at any time.

QUESTIONS 38-45 are concerned with the information given below about Ann and Joe. Figure the Dollar Cost of Credit and the Annual Percentage Rate of Credit for each set of terms (Plan I and Plan II.)

Ann and Joe Smith found that they could not get a picture on their television. The repairman told them that the picture tube would have to be replaced at a cost of \$45.00. Since they had been wanting a colored television set, they decided to shop for a set. They are concerned about terms since the purchase would have to be made on credit. Following are the terms for two sets of equal value:

Plan I - Colored Television Set                      Cash Price \$400.00  
           Down Payment     25.00  
           Amount to be Financed    375.00  
 Terms - Payments of \$13.00 for 36 months.

Plan II - Colored Television Set                      Cash Price \$400.00  
           Down Payment     50.00  
           Amount to be Financed    350.00  
 Terms - Payments of \$18.00 per month for 24 months.

Plan I 38. Dollar cost of credit \_\_\_\_\_ . 39. Annual % Rate \_\_\_\_\_

Plan II 40. Dollar cost of credit \_\_\_\_\_ 41. Annual % Rate \_\_\_\_\_

42. Using the Annual Percentage Rate as a guide, which of the two plans is most advantageous?

- \_\_\_\_\_ A. Plan I  
 \_\_\_\_\_ B. Plan II  
 \_\_\_\_\_ C. Neither

43. If a fire destroys the television along with other possessions of Ann and Joe before the television is paid for

- \_\_\_\_\_ A. the seller must cancel their installment payments.  
 \_\_\_\_\_ B. Ann and Joe are responsible for the remainder of the installment payments.  
 \_\_\_\_\_ C. Ann and Joe will receive a rebate based on the "Rule of 78" for payments made after the television set was burned.  
 \_\_\_\_\_ D. the seller must furnish Ann and Joe another set.

44. To determine whether or not they are financially able to buy the television on credit, Ann and Joe need to

- \_\_\_\_\_ A. compare their debt load with that of a family of two with similar income.  
 \_\_\_\_\_ B. look at all possible sources of income when determining their ability to pay.  
 \_\_\_\_\_ C. look at the difference between present income and expenses to determine their ability to pay.  
 \_\_\_\_\_ D. buy the television set and let tomorrow take care of it-self.

45. Ann and Joe received \$100.00 as an anniversary gift from their parents. They decided to pay off their television set. They will:

- \_\_\_\_\_ A. receive a rebate of finance charges based on the "Rule of 78".  
 \_\_\_\_\_ B. receive no rebate of finance charges.  
 \_\_\_\_\_ C. receive a rebate of finance charges as provided for in their installment contract.  
 \_\_\_\_\_ D. receive a rebate of finance charges if the seller decides to give them one.

**DIRECTIONS:** From the answers in Column II choose the word or phrase which is best defined by the statements in Column I. Place the letter which identifies your answer in the space provided to the left of the definition, Column I. All words or phrases in Column II will not be used; none of the words or phrases in Column II will be used more than once.

COLUMN ICOLUMN II

- |  |                             |
|--|-----------------------------|
| ___ 1. What a family or an individual owes subtracted from what is owned.  | A. Net Worth                |
| ___ 2. The durable goods and cash on hand which a family owns.   | B. Credit Contract          |
| ___ 3. The interest is added to the principal and the total is paid back in equal monthly installments.                                | C. Delinquent Payment       |
| ___ 4. Character, Capacity, and Collateral (Capital).  | D. Assets                   |
| ___ 5. Cash, goods, or services provided on a promise to pay at a later date.  | E. Add-On Loan              |
| ___ 6. Commodities which are useful to the consumer over an extended period of time.   | F. Non-Installment Credit   |
| ___ 7. Single payment credit used to pay for such items as utility bills.  | G. Title                    |
| ___ 8. Credit through which an item of durable goods is bought and paid for through periodic payments over a specified length of time. | H. Durable Goods            |
| ___ 9. A cash sum of money or a trade-in required at the outset of an installment credit transaction.                                  | I. Service Credit           |
| ___ 10. To reclaim durable goods which have been purchased through installment sales credit and for which payments are overdue.        | J. Mortgage                 |
| ___ 11. A sum of money earned before any deductions are made.  | K. Installment Sales Credit |
| ___ 12. Obligations which an individual is committed to pay.   | L. Take Home Pay            |
| ___ 13. An evaluation of a person's qualifications to receive credit.  | M. "Rule of 78"             |
| ___ 14. A form the consumer must fill out when he wants to use consumer credit.  | N. Credit Application       |
| ___ 15. The right of a consumer to change his mind about a credit purchase within 3 days.  | O. Gross Income             |
|  | P. Recession.               |
|  | Q. Balloon Payment          |
|  | R. Repossess                |
|  | S. Down Payment             |
|  | T. Three C's of Credit      |
|  | U. Liabilities              |
|  | V. Credit                   |



- \_\_\_ 16. Large payment, usually the last in a series W. Credit Rating of installment payments.
- \_\_\_ 17. A method for figuring the rebate on prepayment of an installment contract
- \_\_\_ 18. Installment payment that is overdue.
- \_\_\_ 19. Income after Federal and state income tax, social security, and other items have been deducted.
- \_\_\_ 20. Legal ownership.

RESULTS OF THE STUDENT RATING SCALE FOR THE  
FAMILY FINANCE GAME

Evaluation Item	Mean Response
Do you feel that the "Cash Flow Statement" is a practical way for the individual or the family to keep track of income and expenditures?	2.8
Do you think that the "Unexpected Events" are incidents that might occur in "real life?"	2.8
Did the Family Finance Game give you an appreciation for the knowledge and skills needed to manage family money and credit?	2.8
Do you believe that you will have occasion to use the information learned while playing the Family Finance Game?	2.8
If given the chance to choose the teaching methods for a money and credit management unit, would you choose the Family Finance Game over other teaching methods that you have experienced?	2.7
Did you enjoy playing the Family Finance Game?	2.7
Did the "Unexpected Events" add interest to the game?	2.7
Since completing the unit on money and credit management, would you feel more capable if you needed to use consumer credit?	2.5
Was the Family Finance Game easy to play?	2.4
Did the drawings of the merchandise make the game more interesting?	2.4
Were there sufficient directions for playing the game?	2.3
How much help did you need from others to play the Family Finance Game?	1.9
Mean Response to All Items	2.6
Based on Perfect Rating of	3.0

SUMMARY OF STUDENT ACHIEVEMENT SCORES AND  
OPINIONS OF THE FAMILY  
FINANCE GAME

Student I.D. Number	Achieve- ment Test Scores	Grade Level	Years of Home- making	Opinions of Students Regarding Family Finance Game		
				Favorable	Moderately Favorable	Unfavorable
011	47	12	4		2.33	
012	57	12	4		2.33	
013	53	12	4	2.58		
014	49	12	4		2.00	
015	54	12	4		2.42	
016	57	12	4		2.42	
017	62	11	2	2.58		
018	52	12	4		2.50	
019	45	12	4		2.33	
021	52	12	4		2.33	
022	49	12	3		2.50	
023	45	12	4	2.58		
024	57	12	5		2.25	
025	45	12	4	2.58		
026	51	12	4		2.42	
027	52	12	3	2.58		
028	59	12	6	2.83		
029	55	12	4		2.42	
0210	57	12	4		2.00	
0211	47	12	4		2.08	
0212	53	12	4			1.83
0213	59	12	3			1.58
031	52	12	4	2.66		
032	55	12	4	2.66		
033	59	12	4	2.66		
034	52	12	4	2.66		
035	45	11	4		2.50	
036	53	11	4	2.66		
037	48	11	3		2.50	
038	53	11	3		2.33	
039	52	12	5	2.83		
0310	51	11	3	2.66		
0311	48	11	4	2.83		
0312	59	12	4	2.75		
041	47	12	3	2.83		
042	52	11	3	2.58		
043	52	11	3	2.75		

Student I.D. Number	Achievement Test Scores	Grade Level	Years of Home- making	Opinions of Students Regarding Family Finance Game		
				Favorable	Moderately Favorable	Unfavorable
043	52	11	3	2.75		
044	52	11	3		2.17	
045	53	11	3	2.83		
046	55	12	3	2.83		
047	57	12	5		2.50	
048	60	11	3	2.83		
049	57	11	3	3.00		
0410	56	11	3		2.50	
0411	54	11	3	3.00		
0412	53	12	3	2.83		
0413	54	11	3	2.58		
051	45	11	3	2.66		
052	46	11	3		2.50	
053	58	11	3	2.66		
054	54	11	3	2.83		
055	55	11	3	2.92		
056	50	11	3	2.66		
057	54	11	3		2.08	
058	50	11	3	2.66		
059	56	11	3	2.83		
0510	48	11	3		2.25	
0511	58	11	3	2.83		
0512	53	11	3		2.42	
0513	46	11	3		2.50	
0514	55	11	3	2.83		
0515	55	11	3	2.92		
0516	53	11	3	2.75		
0517	49	11	3	2.58		
0518	49	11	3	2.58		
0519	64	11	3	2.58		
0520	56	11	4	2.58		
061	56	11	3	2.66		
062	57	12	5	2.66		
063	44	12	4	2.75		
064	38	11	3		2.08	
065	48	12	3	2.66		
066	62	12	4	2.66		
067	54	11	3	2.58		
068	48	11	3	2.83		
069	52	11	4	2.66		
0610	38	11	4	2.83		
0611	49	11	3		2.42	
0612	41	11	4	2.75		

Student I.D. Number	Achieve- ment Test Scores	Grade Level	Years of Home- making	Opinions of Students Regarding Family Finance Game		
				Favorable	Moderately Favorable	Unfavorable
0613	42	11	3		2.42	
0614	46	11	4		2.08	
0615	50	11	4	2.92		
0616	55	11	3	2.66		
0617	41	11	3		2.50	
0618	53	11	4	3.00		

APPENDIX F  
CORRESPONDENCE RELATED TO STUDY

**VOCATIONAL RESEARCH  
COORDINATING UNIT**

Oklahoma State University  
Stillwater, Oklahoma 74074  
Classroom Building 402  
AC 405, 372-6211  
Extension 6204

*Office of the Director*

February 12, 1970

Thank you for agreeing to cooperate with me in my research in Consumer Education. I hope that the experience will benefit both of us, the students, and Home Economics Education in general. I am in the process of pilot testing the unit in the Stillwater Schools. Mrs. Alberta LeGrand is also using the unit.

Revisions will be made after the pilot test and the unit will be ready for your use and evaluation.

Our conference for orientation to the use of simulation games has been set for March 7, 1970, in the offices of the State Department of Home Economics Education, located in the Will Rogers Office Building at the State Capitol. Dr. Charles Hopkins will be helping conduct the conference.

Both travel and noon meal expenses will be reimbursed. You will need the following information to complete the Travel Expense Voucher:

1. Speedometer reading when you leave home.
2. Speedometer reading when you arrive in Oklahoma City (at the offices of the State Department of Home Economics).
3. Dinner expense (please keep ticket).
4. Social Security Number.

I am looking forward to working with you and believe that the conference will be an interesting experience. A schedule of activities is enclosed.

Please check the information on the enclosed postal card and return as soon as possible.

Thank you very much.

Sincerely,

*Irene Clements*

(Mrs.) Irene Clements  
Research Assistant

IC:cb

cc: Mr. Kenneth Cronkhite

Enclosures

Enclosure:

There are \_\_\_\_\_ girls and \_\_\_\_\_ boys in the class in which the consumer credit unit will be taught.

I will need \_\_\_\_\_ (Number) of evaluation forms for the consumer credit unit on \_\_\_\_\_ last of April \_\_\_\_\_, 1970. It is understood that this is an approximate date.

Signed \_\_\_\_\_





VOCATIONAL RESEARCH  
COORDINATING UNIT

Oklahoma State University  
Stillwater, Oklahoma 74074  
Classroom Building 402  
AC 405, 372-6211  
Extension 6204

Office of the Director

February 12, 1970

My research is concerned with methods of teaching Consumer Education in the eleventh and/or twelfth grade classes of Vocational Homemaking in the secondary schools. In a recent telephone conversation Mrs. Selmat agreed to cooperate in this research.

Teachers are asked to teach a two weeks' unit on Consumer Credit using generalizations selected from the Consumer Education Curriculum Guide published by the State Department of Home Economics Education. A part of the teaching methods for this unit is a simulation game which creates realistic situations in which teams of students make decisions about the use of credit.

It is hoped that the simulation game will prove to be a motivating factor and that students will learn to use credit in a realistic setting.

I would appreciate it if you would indicate your willingness for Mrs. Selmat to participate in this project by signing and returning the enclosed postal card.

Thank you very much.

Very truly yours,

A handwritten signature in cursive script that reads 'Irene Clements'.

(Mrs.) Irene Clements  
Research Assistant

IC:cb

cc: Mrs. Nevaleen Selmat

Enclosures

Enclosure:

TO WHOM IT MAY CONCERN:

Mrs. \_\_\_\_\_ has my permission to participate in the research on Consumer Education for secondary school students being conducted by Mrs. Irene Clements.

Signed \_\_\_\_\_

## Enclosure:

I have \_\_\_\_\_ girls and \_\_\_\_\_ boys in the class in which the Consumer Credit Unit will be taught.

I will need \_\_\_\_\_ (number) of evaluation forms for the Consumer Credit Unit on \_\_\_\_\_, 1970. It is understood that this will be an approximate date.

Signed \_\_\_\_\_



VOCATIONAL RESEARCH  
COORDINATING UNIT

Oklahoma State University  
Stillwater, Oklahoma 74074  
Classroom Building 402  
AC 405, 372-6211  
Extension 6204

Office of the Director

April 20, 1970

Enclosed are the forms for teacher and student evaluation of the Family Finance Game as a classroom experience for learning about the management of money and credit.

You will find:

- 14 instruments for student evaluation of the Family Finance Game as a learning experience,
- 14 achievement tests for the evaluation of student attainment of objectives for the unit, and
- 1 instrument for teacher evaluation of the Family Finance Game as a method of teaching.

Upon completion of the unit, please fill out the evaluation forms and return to me using the enclosed mailing label. You will note that I have also enclosed postage stamps for your convenience.

Sincerely,

A handwritten signature in cursive script that reads 'Irene Clements'.

(Mrs.) Irene Clements  
Research Assistant

Enclosures



VOCATIONAL RESEARCH  
COORDINATING UNIT

Oklahoma State University  
Stillwater, Oklahoma 74074  
Classroom Building 402  
AC 405, 372-6211  
Extension 6204

Office of the Director

February 11, 1970

Thank you for agreeing to cooperate with my research in Consumer Education. I would like for you to serve as one of the control teachers for the experiment. Enclosed are the concept and generalizations selected as a basis for this particular study.

Will you please do the following:

1. Teach a unit in consumer credit using these generalizations, using any teaching methods, materials, resources, and learning experiences that you wish to use.
2. Keep a record of methods used on the enclosed form.
3. Administer the evaluation instrument which will be mailed to you.

Please indicate on the enclosed postal card the number of evaluation forms you will need and the approximate date that you will need them.

Thank you very much.

Sincerely,

A handwritten signature in cursive script that reads 'Irene Clements'.

(Mrs.) Irene Clements  
Research Assistant

IC:cb

cc:

Enclosures



VOCATIONAL RESEARCH  
COORDINATING UNIT

Oklahoma State University

Stillwater, Oklahoma 74074

Classroom Building 402

AC 405, 372-6211

Extension 6204

Office of the Director

March 20, 1970

Enclosed are the evaluation forms for the unit on Borrowing. I certainly appreciate your taking part in this study.

I am enclosing a key for checking the tests because I think that you and your students would like to know their scores. However, if you do not wish to check the papers, I will be happy to check them.

Postage is enclosed for returning the "Record of Teaching Methods, Learning Experiences, and Materials and Resources Used," and the tests.

Thank you very much.

Sincerely,

A handwritten signature in cursive script that reads "Irene Clements".

(Mrs.) Irene Clements  
Research Assistant

IC:cb

Enclosures

**VOCATIONAL RESEARCH  
COORDINATING UNIT**

Oklahoma State University  
Stillwater, Oklahoma 74074  
Classroom Building 402  
AC 405, 372-6211  
Extension 6204

Office of the Director

February 11, 1970

My research is concerned with methods of teaching Consumer Education in the eleventh and/or twelfth grade classes of Vocational Homemaking in secondary schools. In a recent telephone conversation, Mrs. Seymour agreed to cooperate in this research.

I am asking Mrs. Seymour to serve as a member of the control group of the research project.

As a member of the control group she is asked to do the following:

1. Teach a consumer credit unit based on six generalizations selected from the Consumer Education Curriculum Guide published by the State Department of Home Economics Education.
2. Keep a record of teaching methods, learning experiences, resources, and materials used to teach the unit.
3. Administer the evaluation instrument which will be mailed to her.

I would appreciate it if you would indicate your willingness for Mrs. Seymour to participate in this project by signing and returning the enclosed postal card.

Thank you very much.

Very truly yours,

(Mrs.) Irene Clements  
Research Assistant

IC:cb

cc:

Enclosure:

TO WHOM IT MAY CONCERN:

Mrs. \_\_\_\_\_ has my permission to participate in the research on Consumer Education for secondary school students being conducted by Mrs. Irene Clements.

Signed \_\_\_\_\_



VITA

Irene Zachry Clements

Candidate for the Degree of

Doctor of Education

Thesis: THE DEVELOPMENT OF A SIMULATION GAME FOR TEACHING A UNIT ON THE USE OF CONSUMER CREDIT

Major Field: Home Economics Education

Biographical:

Personal Data: Born in Caddo, Oklahoma, June 15, 1920, the daughter of W. O. and Adelle Zachry.

Education: Attended rural grade schools in Bryan County and Cotton County, Oklahoma; graduated from Temple High School in 1937; attended Cameron State Agricultural College, Lawton, Oklahoma, 1937-39; received the Bachelor of Science degree from Oklahoma State University, with a major in Home Economics Education, January, 1946; received the Master of Teaching degree with a major in Guidance and Counseling from Southwestern State College, Weatherford, Oklahoma, in July, 1961; received the Master of Science degree from Oklahoma State University, July 1968.

Professional Experience: Vocational Home Economics Teacher, Fairview High School, Fairview, Oklahoma, 1946; Vocational Home Economics Teacher, Medford High School, Medford, Oklahoma, 1948-52; Teacher of Science and Literature for Eighth Grade, Claremont School, Claremore, Oklahoma, 1952-53; Vocational Home Economics Teacher, Clinton High School, Clinton, Oklahoma, 1953-66; Graduate Assistant in Home Economics, Oklahoma State University, 1966-67; Vocational Home Economics Teacher, Stillwater Junior High School, Stillwater, Oklahoma, 1967-68; Research Assistant, Research Coordinating Unit, State Department of Vocational and Technical Education, Stillwater, Oklahoma, 1968-70.

Professional Organizations: American Home Economics Association; Oklahoma Home Economics Association; American Vocational Association; Oklahoma Vocational Association; National Education Association; Oklahoma Education Association; American Association of University Women; Phi Kappa Phi; Omicron Nu; Phi Upsilon Omicron.