AN EXPLORATORY STUDY OF CRITICAL THINKING PRACTICES IN NINTH GRADE HOMEMAKING CLASSES

By

BEULAH MARIE HIRSCHLEIN

Bachelor of Science

Oklahoma State University

Stillwater, Oklahoma

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Thesis Approved:

Millie Pearson
Thesis Adviser

June Coyne
Head of the Department

J. H. Boggs
Dean of the Graduate School

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CHAPTER I

AN OVERVIEW OF EDUCATIONAL PURPOSE

For the past few decades the United States has found itself in a period of much questioning and doubt as to the effectiveness of its educational system. However vigorous the questioning and doubts, some say there should be no concern, that the American educational system has proven itself worthy. It is the American man who has taken the peasantry out of farming, who has removed the drudgery from factories, who is surrounded by the world's best system of communications and transportation, and whose productivity per worker is higher than anywhere else in the world. These are recognized world-wide as tremendous accomplishments. All have made an impact upon society; all have been made possible by the quality of education in this country; but progress has created its problems. It is the American man of today who is faced with solving the problems that progress had bred, in addition to solving those that are existent because of lack of progress.

Today the American citizen is faced with solving the economic farm problem; with taking the monotony out of factory work; with settling labor-management disputes; with liquidation of surplus materials; with providing employment for the jobless; with providing for an exploding population; with eliminating racial disputes and prejudices; and with resisting "too much government." These are only

a few of the problems that are demanding solutions and the welfare of the nation is dependent upon how and when American citizens find ways of dealing with them.

As a nation, is the United States proving to be a bulwark of people with freedoms that can be used intelligently for the benefit of the individual and the nation? Because of technological advancements in communications, decisions made in this country are world information immediately. This creates an even greater pressure on the American people to make decisions that will be respected by world neighbors if the United States is to hold any place of influence in dissolving the cold war and preserving the peace.

Opinion polls conducted abroad reveal that the United States has suffered severe setbacks in international prestige in recent months. Reasons frequently given for this loss are the United States foreign policy, the failure of the nation to solve internal problems, and the conduct of United States citizens in foreign countries. How can the United States expect to be a world leader at the same time that it is losing prestige in the eyes of the average world citizen?

Some observers say the United States is taking far too long to solve some of the problems afflicting its people. The civil rights problem can be cited as an example as to why some share this belief. Does the answer to the civil rights problem and others lie in education? The writer believes that education is the answer. Education is developing young men and women who will shape the course of the nation's future. These young people can persuade the citizens of their nation and the world of the sincerity of American people and the worthiness of ideals inherent in a democracy. They can improve the

image that has been damaged, however the success with which they do so depends upon the effectiveness of the educational system in which they are prepared. The writer believes that this country, with responsible leadership and a reevaluated sense of direction, can approach its problems intelligently and can effectively accomplish the job which needs to be done.

How can an educational system be strong enough to enable a nation to overcome the seemingly overwhelming problems described? The answer to this question cannot be simply stated and it is certain that "instant solutions" will not prove adequate. Education is a slow process, inherent in its purposes as stated by Mort and Vincent are:

> ..... to develop each youngster to the highest degree which he is individually capable of attaining -- in body, mind, spirit, character, and feelings, and in personal, economic, home, and civic competence.
>
> ..... to replace our generation with a rising generation that is at least as competent to cope with the problems of community, state, nation and world as the older generation.[1]

Whereas these are worthwhile purposes, it would be wise to suggest that education should replace our generation with one that is more competent of coping with the problems of society than the previous one. Our society is becoming more complex each day. Change is much more rapid than ever before in the history of the nation or the world. Serious social and economic problems are increasing with the mobile and expanding population. Is it not dangerous to be satisfied with the same type and rate of problem solving that past generations have used? There are more problems to solve and they must be attacked immediately

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[1] Paul R. Mort and William S. Vincent, A Look at Our Schools (New York, 1946), p. 64.

if the social order is to be preserved or improved.

Because of technological advances, the aspirations of people are rising. Expectations of a higher standard of living and the compulsion of working frantically to bring it about are prevalent. Old cultural patterns are disintegrating. On the one hand, people are wanting change and reaching for it; on the other hand, they are slow in adapting to change when it arrives. This results in a serious time lag between the occurrence of major changes in society and the eventual adaptation of people to these changes. The fact that the nation has failed to deal constructively with the problems caused by automation can be cited as an example. As stated before, the plight of the jobless is a threat to society. A way of meeting this "crisis" and others must be found. Decisions must be made which will shorten the length of time between new developments and adjustments to them.

The changes which are occurring so rapidly in our society are quite naturally bringing about changes in the educational system. The objectives of education are changing to prepare the individual to live more fully in a changing world. In addition to providing opportunities for individual self-realization and educating for intelligent citizenship, American schools have become a major avenue for social advancement; a means of preparing young people for wage earning; and a means of preparing youth to make wise choices in personal, social, political, and economic realms.

The burdens on education in the problemed world are colossal, but the faith of the American people is comparable to the challenge. The values that Americans place on education, their constructive criticisms and their vision in recognizing the tremendous demands of the times

will effect eventual solutions. Most Americans know that the real challenge of education is to preserve democracy as a way of life in their country and to illustrate its advantages to other countries around the world. One author expresses the difficulty of this task as: "It is one thing to educate people to the end that control of them may be developed; it is quite another thing to educate to the end that control by people may be increased and perfected."[2] What kind of people are needed to govern themselves in a free democratic society? What traits must individuals have in order to keep the principles of democracy alive? The writer respects the recommendation of an author who outlines a need for citizens----

> Who will not want to make importance for themselves by pushing other people around; and who will profoundly and stubbornly resist being pushed around themselves;
> Who will see, with large and dependable humor, that those who strut are more ludricrous than impressive;
> Who will get more satisfaction out of working with people in give-and-take co-operation than out of always giving orders or, in a meek search for security, always taking orders;
> Who will enjoy grappling with mental and material problems, pitting against them the best ingenuity of their minds and the best impartial knowledge they can marshal;
> Who will recognize the hang-over of immaturity in grown-ups who feel tremendously dramatic and important if they can put on some sort of uniform and get together for secret orgies of hating;
> Who will be mentally and emotionally habituated to judging people as individuals, rather than to passing upon them label-judgments based upon property, ancestry, nationality, religion, or race;
> Who will have one dependable set of manners for all people, rich or poor, native or foreign, white or black or brown--- a set of manners based upon a respect for human dignity rather than upon a wish to gain some personal advantage;
> And who will so deeply feel the drama of society making that

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[2] A. V. Sayers, A First Course in the Philosophy of Education (New York, 1952), pp. 3-4.

> they will neither refuse nor forget their own share of responsibility for the right working out of that drama.[3]

In addition to the above traits the writer would suggest a need for people who will study the merits of free enterprise as compared to other economic systems; and who will assume individual responsibility for legislation affecting society. A collection of people possessing the characteristics outlined would closely facsimilate the IDEAL. Such a society has never been recorded in history, but a system of effective education could bring a nation closer to this IDEAL.

A review of educational literature reveals that a widely accepted purpose of education in the United States today is the full development of the personality. Many educators agree that this can best be accomplished through:

1. teaching basic skills-- (the three R's) and imparting basic knowledge such as history, geqgraphy, literature; etc.;
2. teaching civic competence -- how to live in a democracy;
3. teaching vocational competence -- how to earn a living;
4. giving training in social development -- how to get along with people;
5. inculcating a deep sense of moral values;
6. affording protection of physical and mental health;
7. offering unlimited education -- freedom to attend and continue in public schools; and
8. teaching the skills of critical thinking for application in all of living.

Much has been written about the first seven of these purposes. They have been attacked singly and in combination. They are so closely

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[3]Bonaro W. Overstreet, Freedom's People: How We Qualify for a Democratic Society (New York, 1945), p. 11.

tied together, that it is difficult to separate them, even for discussion. The last purpose stated, that of teaching the skills of critical thinking, is newer to educational literature than the others. It is now frequently mentioned as the purpose that strengthens all other aims of education, and is in effect the central thread of education. Some refer to it as the overall umbrella of educational purposes. If its success is obtainable, achievement in all other purposes will be the result. It is the purpose in which the writer is most interested at this time, and about which this thesis was developed.

Many, yet similar, definitions have been used in describing the critical thinking process. Good defines critical thinking as:

> . . . . thinking that proceeds on the basis of careful evaluation of premises and evidence and comes to conclusions as objectively as possible through the consideration of all pertinent factors and the use of valid procedures from logic.[4]

Wellington clarifies the definition of critical thinking by borrowing from Dewey and others, "as feeling a need for an answer, defining the difficulty, discovering ideas and information necessary for a solution, forming a hypothesis, deciding where the findings apply to future learning."[5] In the writer's own opinion, the term, "critical thinking," can be used synonomously with the term, "problem solving," and such interchange will be common to the remainder of this paper.

"Problem solving" as a method of teaching and learning evolved from the philosophy of John Dewey. Believing that the realm of the classroom of the 1890's was totally set off from the experiences of

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[4]Carter V. Good, Dictionary of Education (New York, 1959), p. 570.

[5]C. Burleigh Wellington and Jean Wellington, Teaching for Critical Thinking (New York, 1960), p. 15.

the child who inhabited it, Dewey set out to narrow the distance between the classroom and the world outside it. He contended that subject matter could be so presented that it would have a positive value and a real significance in helping the child to solve problems in real life. Dewey believed in "learning through experiencing" and valued the laboratory as a means through which the pupil could learn by discovery or experimentation. He was opposed to the view that learning could be forced upon the person as "filling the bowl," but that learning is the result of the effort of the individual and starts with the feeling of a need or the recognizing of a problem to be solved.

The Dewey philosophy has been widely proclaimed and widely criticized. Although his theories were developed more than a half-century ago, the writer believes they have much importance in the achievement of the educational aims of the present. Further, it is believed that accurate interpretation and intelligent application of Dewey's principles of learning and problem solving would result in the development of the type of thinking citizens needed by society. The type of learners so developed could be characterized as those who would:

1. consider learning as an on-going process and assume full responsibility for personal development,
2. be dissatisfied with ready-made or pat answers,
3. be resentful of being denied the opportunity to solve their own problems,
4. take the time to study a situation before passing judgment or forming conclusions,
5. have the patience to try again after one or more attempts had failed,
6. approach situations with carefully raised questions in order to come to a better understanding,

7. have the courage to defend considered decisions which seem best at that particular time,

8. have the wisdom to see the interrelationships of a problem, and

9. use all available resources in an effort to reach the best solution obtainable at a given time.

Life is filled with decisions and problems. The above characteristics could not fail to help prepare a person to face decisions with courage and confidence.

Mouly identifies one of the primary purposes of the school in a democracy as "that of promoting problem solving and understanding that will enable its future citizens to deal effectively with the problems of a democratic society."[6] In a discussion of problem-solving as a teaching method, Mouly admits that it takes a great deal more intelligence, ingenuity, originality and competence on the teacher's behalf to use the problem-solving approach effectively than it does to rely on the "page-at-a-time" routine.

> If teachers are to be successful in fostering reasoning in the classroom they must break the child of his blind allegiance to the word of the book or of the teacher; they must come to realize that he gets more education in terms of both the present and future by solving one real problem than by repeating in a dozen situations, the solution given ready-made by the teacher. The child must gradually shed his dependence upon the teacher. The latter must, therefore, make it his responsibility to foster this independence on the part of the child by helping him only after it is clear that he cannot handle the problem.
>
> This is not to say that the teacher should do nothing but suggest to the student that he find his own answers. He should first see that the latter has a problem which is meaningful in terms of his needs, his experiences, and his abilities. Then he can, by means of well directed questions (rather than answers) help him clarify his problem and devise an effective approach

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[6] George J. Mouly, Psychology for Effective Teaching (New York, 1960), p. 317.

> to its solution. ..... the school should be more interested in creating problems for the student to solve and in providing him with the methods whereby he can get his own answers than in providing him with ready made solutions.[7]

Mouly, in defining the active role of the learner in the teaching-learning experience also defines the role of the teacher. He places much importance on the teacher's ability to promote learning and/or problem solving through the use of thought provoking questions. In other words, Mouly implies that learning occurs when a student becomes personally involved in the attempt to find the answers or solutions to pertinent problems.

Home economics teachers, because they deal with a practical and personal subject, are in a unique position to make outstanding contributions in helping youngsters develop the skills of critical thinking. Because home economics is usually taught in a home-like situation, it is simple for students to see how they can apply their learning to other problems. Home economics has been described as that field of knowledge and service primarily concerned with strengthening family life. Since every student enrolled in home economics is experiencing some type of family life, problems for study can be selected which need immediate solutions, which are of keen interest to the students, and about which the students have some degree of familiarity or acquaintance. All of these environmental conditions encourage the development of problem solving techniques and the development of basic concepts. One author agrees that familiarity or experience with a

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[7]Ibid., pp. 322-23.

concept must by necessity preceed thinking. Peterson says:

> Thinking is possible only with familiar concepts. Pupils will not, in general, be able to think about material to which they have been merely exposed. Because so little improvement in thinking ability is sometimes demonstrated by pupils in successive grades in school, there is strong implication that the experiences the child is led to undergo while he is in school should be carefully examined with a view to improving the rate at which he acquires skill in critical thinking and problem solving.
>
> Opportunity to think, it is generally agreed, should be an experience offered to every pupil. True, there will be individual differences in the achievement of thinking; as there are differences in any learning situation. In a democracy, however, where each citizen is expected to make decisions daily, it is important that every person be given opportunity to learn to think.[8]

Glaser reiterates that "The guiding purpose of education is to teach how to think. The school should give greater attention to the development of methods whereby children may be trained in habits of critical judgment."[9]

The various types of learning experiences selected by homemaking students require that much planning be done by both the teacher and the students. Through teacher-guided planning problems, the students can learn several steps in the process of critical thinking. They learn to pool their ideas or the product of their creative thinking; they learn the habit of assuming responsibility for their own education; they learn to be independent in selecting and using reference materials

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[8] Bernadine H. Peterson, Experimental Use of the Problem Solving Method in Teaching a Beginning Home Economics Class (Ph.D. dissertation, University of Wisconsin), p. 3.

[9] E. M. Glaser, "An Experiment in the Development of Critical Thinking," Contributions to Education, 1941, No. 843, p. 43.

pertinent to the problem; they learn to consider their resources (both human and material) and ways to facilitate the solutions of problems; they learn to clarify and limit the scope of their problems so that they can be solved within the amount of time and with the facilities available; they learn to project the consequences of their planning and action; and to recognize variables which affect possible solutions.

In helping students to carry out plans of work, opportunity is provided for testing the validity of information; for adjusting plans to meet changing conditions; for applying relevant facts to the solutions of problems; and for acknowledging the emerging interrelationships involved in the problem. The development and use of evaluative devices common to most home economics classes encourages students to participate in the establishment of criteria for work to be done and then to measure progress accordingly; to identify strengths and weaknesses of the plan and the work evolved from it; to make recommendations for improving the quality of learning experiences; to make generalizations in terms of the experience completed; to explore ways that information, ideas, or experience gained may be applied in other situations or other experiences; and to compare views of personal opinions on the processes affecting success or failure. All of the processes described above are each a part of the technique of problem solving or critical thinking. The skillful teacher of any subject will find ways of developing these processes in the classroom.

Proof is not available that any school subject is remarkably superior to others in its ability to strengthen mental powers. Teachers have the responsibility of seeing that subjects being taught become an avenue for providing information which will help students to

live better in a free society; at the same time give them a clear example of a method or approach that can be used successfully in solving problems of importance to them, solutions to which will make living more enjoyable.

A review of literature supports the writer's belief that all subject matter can and should be taught with an emphasis on mastery of thinking skills. It is also pointed out that students do not tend to develop skills in critical thinking simply as a result of having studied a subject; rather they develop these skills when instruction emphasizes definite aspects of critical thinking such as inquiry, reasoning, and evaluating. Students should be challenged to want evidences to support their beliefs and should be purposefully guided in methods of arriving at well founded solutions to problems.

The ability to think is a skill with a built in promise of life-long value. Because of the nature of the learning experiences inherent in a home economics curriculum and because of the universality of the need for instruction which will contribute to better family living, the opportunities for home economics teachers to make progress in teaching for critical thinking are unlimited. Home economists have responded to the increased emphasis on this educational objective through strong efforts in teacher education programs (pre-service and in-service). Evidences of this effort may be found in course outlines, reading lists, themes for educational conferences, professional literature, and approaches to curriculum development. Hence this study, which has for its purpose the provision or stimulation of student thinking and the location of evidences that progress is made when students are urged

to practice good thinking habits, is also an effort to stay in stride with the improvements that are being made in home economics education.

CHAPTER II

PLANS FOR STUDYING CLASS PROCEDURES AND PRACTICES

The writer's basic beliefs about education, how people learn, and the overall purposes of education, prompted this study which was undertaken to determine if students will make progress in their ability to do critical thinking when classroom opportunities are provided which continually encourage exploring, planning, reasoning, observing, comparing, experimenting, organizing, and evaluating. Learning experiences evaluated for the study were planned to implement the writer's beliefs about education and learning. Those beliefs considered foremost in the planning of the learning experiences were:

1. Students are more likely to wholeheartedly involve themselves in any learning project when they have participated in the selection of the project.

2. All learning occurs through attempts to satisfy needs.

3. Learning is more efficient and longer lasting when the conditions for it are real and lifelike.

4. Emotions and attitudes play an influential part in learning.

5. A pupil will be motivated to learn in a classroom situation where every student is encouraged to express his own ideas freely and where these ideas are acknowledged as being worthwhile by his classmates and the teacher. Pupils will work hard and become interested in applying themselves if they feel that they really have something to offer to the class.

6. Transfer of learning is possible in proportion to the degree that generalizations are made, understood, and applied.

7. Each individual learns at his own speed and according to his own interests and purposes.

8. Each must do his own learning, no one else can do it for him. The implementation of these beliefs would, to the writer, create an atmosphere where individuals are encouraged to think for themselves, to make decisions, and to formulate judgments. That students become more able to think critically was the ultimate goal for which the teacher was working.

Teachers, like students, must understand where they are going before they can successfully guide a class in any direction. Such an understanding may be obtained through a study of the achievements of others; continued study and comparison of the relationships between techniques and procedures and resulting behavior; and a continued study of cause and effect. An extensive review of educational literature was undertaken to determine and/or analyze the kinds and types of evidences which might be expected as an indication of critical thinking.[1] It was expected that this detailed analysis of the steps in the thinking processes would enable the teacher to recognize evidences readily but the use of the device proved to be too time-consuming a task for a busy teacher to use and was abandoned after only short term use. However, the formulation of the device was an invaluable process because it helped to clarify the types of behaviors which, according to noted authors, were indicative of self-direction and independence in responsible thought and action. The study from which the device evolved provided much understanding of the progression or rate of growth that could be reasonably expected.

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[1] See Comprehensive Evaluation Device for Measuring Student Growth In Critical Thinking, Appendix A, page 78.

Since it was decided that the device could not be used to determine amount of growth of critical thinking, the writer undertook to determine if critical thinking was, in fact, a part of the students' behavior in the classroom. An overview of the writer's teaching methods and the units in homemaking education taught will explain the atmosphere or conditions under which data were collected.

In general the approach to all units of homemaking education analyzed for this study had the following common practices:

1. All started with a discussion of past learning experiences related to the unit being planned and present desires and needs as a means of establishing class goals.
2. All suggestions were discussed by the class as a whole and evaluated according to group interpretation of immediate need or urgency.
3. From the combined suggestions of all students; additions, subtractions, and revisions were made until the whole class could agree upon goals.
4. Following the selection of goals specific learning experiences were discussed and planned.
5. Class procedures selected involved some whole class, some individual, and some small group effort toward solving the problems.
6. Criteria for the various types of work were developed.
7. Methods of sharing learnings were planned.
8. In many instances learning experiences were organized in such a way that students were attacking the problems from several angles simultaneously, thus giving variety and depth to the learning situation.
9. Ways of evaluating individual and group progress were discussed and agreed upon.
10. Methods for collecting evidences for this study were planned.

As mentioned earlier, many of the problems chosen by the whole class were attacked from several angles simultaneously by small groups of

students working together and pooling their accomplishments. When working with this type of class organization, students were continually involved in cooperatively selecting goals and developing plans of work; finding answers to selected problems through various activities such as reading, observing, experimenting, etc.; reporting to class on what was learned about a problem; developing and using evaluation devices to judge the quality of work done; summarizing and generalizing on the basis of work done; and discussing ways information or principles learned could be applied in other situations. It was believed that when learning experiences were developed to employ the above practices there would be ample opportunity for students to develop skills in critical thinking. The task of the teacher in pursuing this study was to guide students in the planning of learning experiences that would bring about the desired student behavior or development. The basic assumptions were:

1. The development of skill in critical thinking will be a result of planned experiences which are meaningful to the students.

2. Classroom methods which contribute to critical thinking will be those where students freely participate in planning and selecting goals, formulating and carrying out detailed plans of work, and developing and using evaluative materials and procedures.

The major hypotheses were:

1. Classroom organization which involves students working together in small groups to solve common problems will promote critical thinking by students, resulting in behaviors which can be easily identified.

2. Evidences of student ability in critical thinking will appear as follows:

    a. ability to recognize and state goals,

    b. planning independently for work to be done,

    c. self-directed study,

d. judgments based on collected facts and evaluations,

e. ability to adjust to new situations,

f. careful evaluation of learning experiences,

g. application of principles learned to new experiences.

The writer attempted to collect specific evidences of critical thinking in only three areas:

1. planning and selecting goals,

2. formulating and carrying out plans of work, and

3. developing and using evaluative materials and procedures.

Detailed records of all class activities were retained and data were collected from all students enrolled in Homemaking I classes at Stillwater Junior High School for the five semesters beginning September, 1962, through January, 1965. Approximately 100 students were enrolled each year making a total of 300 students participating in the two and one-half year study. Since time did not permit a detailed study of each of the 300 students, certain students were selected for study by random sampling technique and others were selected because they represented different levels of student ability.

Sources of data were case studies and anecdotal records kept by the teacher and teacher and student interpretations of progress as recorded on various evaluation instruments. The writer hoped that the data collected could be used to determine if the skills of critical thinking were being developed in the classroom selected and to determine what types of learning experiences are influential in the development of skills in critical thinking.

Educational terms used frequently throughout this study and their

meanings as interpreted by the writer are:

1. Belief - an acceptance of a proposition as true of a situation.

2. Conclusion - the result that is reached through inferences drawn from reasoned judgment.

3. Critical thinking - thinking that proceeds on the basis of careful evaluation of evidences and comes to conclusions as objectively as possible through the consideration of all pertinent factors.

4. Generalization - a complete thought which expresses an underlying truth, applies to many situations, and usually states existing relationships.

5. Goal - the objective or end to be attained in any behavior situation.

6. Small group - two or more people working toward a specific goal or goals.

7. Homemaking education - that area of knowledge which helps youth and adults to understand the relationships, behaviors, activities, and material things which determine and maintain satisfactory personal, home, and family living.

8. Judgment - the mental act of judging; the operation of the mind, involving comparison and discrimination by which knowledge of values and relations is mentally formulated.

9. Learning experience - participation or involvement of an organism in an activity (physical or mental) which results in a behavioral change of that organism.

10. Principle - a generalized statement through which otherwise unrelated data are systematized and interpreted.

11. Problem solving - the process of recognizing a problem, defining the difficulty, selecting relevant data from past experiences, collecting further pertinent information, and reorganizing all the essential factors into a new pattern or behavior which meets the demands of the problem situation.

CHAPTER III

INFORMATION GLEANED FROM STUDY OF STUDENT BEHAVIORS

Professional education textbooks do not present specific techniques and procedures for use in promoting thinking. Each individual teacher must try out and develop techniques in an actual teaching situation. This of necessity, prolongs any study, because if at first an idea is not as successful as desired, the plan must be revised and tested again. This study was a developmental process of working on an idea, planning and improving procedures, and devising means of collecting information. The study conducted in a two and one-half year period at Stillwater Junior High School, Stillwater, Oklahoma, includes information collected from classes of ninth grade girls within three school years: 1962-63, 1963-64, and 1964-65. Information was collected from students in four major home economics subject matter areas: housing and related art; food and nutrition; selection, care, and construction of clothing; and family relationships. Although units of each were taught each year, only those considered to be most successful are reported in this thesis. Data were also collected from students' plans and reports of selected home projects (home experiences). The primary sources of data were the results of:

1. paper and pencil devices uded by the students to evaluate ability in planning and formulating goals, developing and carrying out plans of work, and developing and using evaluative materials and procedures;

2. anecdotal records kept by the teacher; and

3. evaluative instruments developed and used by the teacher.

Specific sources of data, procedures used in collecting and results obtained will be discussed in the detailed descriptions of the four subject matter units reported.

In striving for objectivity, information was collected from all students and those devices evaluated were not selected until the unit of work was completed. Data reported were selected by various methods. In some cases the random sampling technique was used. In other instances information was selected for use because it appeared to be a unique, average, above average, or below average example of a particular skill or ability.

The eleven Homemaking I classes who participated in the study ranged in size from twelve to thirty-seven. The average class size was twenty-five. Four units of homemaking education were included each year. They were: (1) Housing and Related Art, (2) Food and Nutrition, (3) Selection, Construction, and Care of Clothing, and (4) Relationships. Although the unit titles are stated simply, the interrelationships are broad. For example, the study of food and nutrition included a study of household equipment; management of time, energy, money, and other resources; the influence of personality on food selection; application of design principles to the aesthetic preparation and arrangement of foods and table appointments; food selection for optimal nutrition; and the application of scientific principles to methods of food preparation and storage. Although the problems selected for study were not identical for each of the two and one-half years reported, they were similar. Those selected by students within each broad area or unit of work

included:

1. Housing and Related Art

   a. How can I learn and apply the principles of design in my own home?

   b. How can I arrange my room to best advantage?

   c. How can I improve the use of storage space in my room?

   d. How can I manage to keep my room comfortable, neat, and attractive?

   e. How can I learn to assume my share of responsibility for keeping the home comfortable and happy?

   f. How can I learn to appreciate beauty and orderliness in my surroundings?

2. Food and Nutritition

   a. What do I need to learn in order to select foods that will promote and maintain nutritional fitness?

   b. How can I improve my techniques to be more efficient in the use of time, energy, and work space?

   c. How can I plan and prepare simple foods for family meals?

   d. What do I need to learn about equipment in order to use and care for it properly?

   e. How can I learn to serve foods attractively for my family and friends?

   f. How can I learn to use food money to a better advantage?

   g. How can I learn to work cooperatively with others?

3. Selection, Construction and Care of Clothing

   a. How can I manage resources such as time, energy, and equipment, wisely?

   b. How can I learn to be a better manager of my share of the family clothing allowance?

   c. How can I learn to select clothing that is complementary to me in size, style, color, and texture; that is in harmony with my personality; and of a quality comparable to expected uses?

d. How can I improve my sewing techniques?

e. How can I learn to share and cooperate with others?

f. How can I learn to care for my clothing in order to get longer wear and greater satisfaction from each garment?

g. How can I learn to wear my clothing in order to get the best visual effect possible?

4. Relationships

a. How can I learn to understand myself and others?

b. How may I be a benefit to my family and community?

c. How can I improve my relationships with boys and girls of my own age?

d. How can I improve myself as a person?

The major types of learning experiences for the food and nutrition, clothing, and housing units were individual reading and study, oral reports, field trips, laboratory experiences, class discussions, and demonstrations. For the relationships unit, learning experiences included reading and study, oral reports of outside readings and observations, panel discussions, hearing outside speakers, participating in debates, and whole class discussions. As stated earlier, the students participated in selecting the goals, formulating and carrying out plans of work, and developing and using evaluative devices for each unit studied. The order in which the units are presented follows the planned schedule for the year and in no way indicates that the data from one unit were considered more important than that from another. The units will be presented as follows: (1) Housing and Related Art, (2) Food and Nutrition, (3) Selection, Construction, and Care of Clothing, and (4) Relationships. The home project (experience) phase of the curriculum which was correlated with all units taught each year

will be discussed last.

Housing and Related Art Unit

Since the basic art principles which are usually taught in the housing unit can be applied in other areas of homemaking as well, the housing unit is traditionally the first unit taught to ninth grade homemaking students at Stillwater Junior High. The unit was begun with lecture and discussion type lessons dealing with the elements and principles of design. Laboratory periods were used to locate and identify the applications of the principles. After the students had furnished evidences that they understood the design principles and could recognize examples of their use, the teacher believed they were then able to participate in the formulation of intelligent plans for the remainder of the unit. The specific problems selected were:

1. How can accessories be used to create beauty in home decorating?
2. How can we learn to use colors wisely in decorating or improving our bedrooms?
3. How can room arrangements and storage space be planned and/or arranged to provide for comfort and convenience?

The students agreed that if they were resourceful and creative in planning learning experiences related to the three specific problems, their learning opportunities would be very broad. For example they recognized that a greater appreciation for beauty and orderliness; a more positive attitude about sharing home responsibilities; and a limited idea of furniture costs etc.; could also be learned through a study of the problems selected. The order in which the problems were studied was determined by each class depending upon their wishes and interests.

After discussing the various possibilities for learning, each of the four classes selected three types of learning activities and decided to organize themselves accordingly. The activities selected were:

1. research or investigation - to study what others have done about the problem, to collect new ideas and approaches to the solution of the problem;
2. observation - to visit other places such as businesses, residences, etc., to see what has been done by others in the community in attempting to solve the problem; and
3. production - to apply what has been learned about the problem in an actual situation.

After the responsibilities of each activity group were defined and carefully discussed, the students were guided in learning to use a filing system which included supplementary materials pertinent to the unit plus devices to assist groups in planning, carrying out plans, and evaluating work completed. Some time was also spent developing familiarity with reference books and magazines which were available and in learning efficient and cooperative methods for their use.

Small groupings within the class were determined by the number enrolled and the arrangement of the classroom. The teacher suggested the need for groups to be divided evenly as to number in order to simplify the division of responsibilities. Other considerations were suggested by the students before they organized themselves into the small groups.

Since three major problems were selected by the classes, a rotation of responsibilities was planned so that each small group would be attacking the different problems through different means. An

explanation of the rotation plan may be more clearly described in the table below. Usually the groups were given four days to work in a given activity. However the amount of time varied some with the interest shown in the problem. A typical four-day period was divided as follows: one day to plan the attack of the problem, two days to carry out plans, and one day to summarize work and prepare a report and evaluation of the results for the class. At the end of the four-day period the class was brought together so that small groups could report to each other what had been learned. Reports were given in a number of ways, but the most popular were illustrated talks, demonstrations, and panel discussions.

TABLE I

GROUP ROTATION PLAN

Small Group Numbers	Number of Students	Problem I	Problem II	Problem III
IA	4	Research	Observation	Production
IB	4			
IIA	4	Observation	Production	Research
IIB	5			
IIIA	4	Production	Research	Observation
IIIB	5			

Although for more than eighty per cent of the class members it was a first experience with class organization of this type, they seemed to readily identify several underlying principles of good group procedures. Because the students were basically unfamiliar with this type of class

organization they recognized the need for clear-cut guidelines. In the early stages of their work, standards were reviewed and selected to guide progress. Some of the standards were those used by previous classes in similar situations, others were suggested by the students resulting in lists that were uniquely theirs. The standards were not only used as a guide for work to be done, but for the evaluation of work completed, as well. An evaluation device developed from the standards approved and suggested by the students was used three times by each of the small groups during the housing unit.[1] The instrument, although simple, included a list of questions which enabled the students to determine if they had done the things they thought were important in carrying out the activities for reaching their goals. Spaces were allowed on the device for checking yes or no answers to pertinent questions and for making additional or qualifying comments. A summary of the information collected from the evaluations completed by the students appears in Tables II and III on pages 29 and 30. Practices indicated by "no" responses and recognized as most needing improvement were:

1. referring to books and other references before making final plans,
2. reaching group decisions without waste of time, and
3. limiting group discussion to the problem being studied.

That the student groups would be least successful in developing practices requiring a high level of self-discipline was anticipated by the writer for several reasons, chiefly; the students were novices at this type of

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[1] See Appendix B, page 82.

TABLE II

RESPONSES MADE BY 18 STUDENT GROUPS WHEN EVALUATING GROUP PRACTICES AND PROCEDURES

Questionnaire for Students

	Points Considered	Problem I		Problem II		Problem III	
		yes	no	yes	no	yes	no
1.	Did all members assist the chairman in planning the work?	17	1	17	1	17	1
2.	Did each member assume her share of responsibility willingly?	17	1	17	1	18	0
3.	Did members study books and references before making final plans?	14	4	16	2	14	4
4.	Were plans presented to the teacher for approval at the scheduled time?	15	3	15	3	17	1
5.	Was the group able to reach decisions without waste of time?	11	7	14	4	15	3
6.	Was the group chairman selected democratically?	15	3	16	2	15	3
7.	Were materials and references used left in an orderly condition?	18	0	17	1	18	0
8.	Did the group cooperate by limiting discussion to the problem being studied?	10	8	15	3	13	5
9.	Was it easy to follow the plans that were made for working on the problem?	17	1	17	1	18	0
10.	Did all members of the group see a real need for studying the problem?	15	3	14	4	17	1
11.	Was a suitable method for recording needed information adopted?	15	3	16	2	17	1
12.	Did the work provide for new learning experiences?	18	0	18	0	18	0

class organization and since it was still early in the school year they were involved in establishing social relationships within the groups. In a normal situation students would be expected to improve in such habits within the school year, and whereas the writer observed that such improvement was made, it was not the intent of this study to find evidences of such growth; but simply to find evidences that students were using skills of critical thinking in planning and selecting goals, developing and carrying out plans of work, and developing and using evaluative devices.

TABLE III

SUMMARY OF ADDITIONAL COMMENTS AND OVERALL RATINGS MADE BY 18 GROUPS WHEN EVALUATING WORK COMPLETED

Student Evaluations	Problem I	Problem II	Problem III
Voluntary Additional Comments	45	42	57
Overall Ratings:			
FAIR	2	2	0
GOOD	15	15	13
EXCELLENT	1	1	5

Practices checked as those accomplished best as indicated by the largest number of "yes" responses were:

1. planning work to provide for new learning experiences.
2. developing plans that were easy to follow, and
3. assuming individual responsibilities willingly.

The reader is reminded that the students evaluated their own practices using a criteria which they had previously studied, revised and approved;

and judged themselves to be using several of the skills of critical thinking as discussed above.

Students also recognized improvement in the quality of their work between checkings. Two of eighteen groups (representing four classes) rated the quality of their work as "FAIR" for Problem I. Fifteen groups rated themselves "GOOD" and one group rated themselves as "EXCELLENT." Ratings for Problem III included no "FAIR" ratings, thirteen "GOOD" ratings and five "EXCELLENT" ratings. Another evidence of their recognition of their improving work habits was the forty-four per cent decrease in the total number of "no" responses to questions concerning work habits. Although the study was not intended to show growth or amount of growth, it should not be overlooked that the desire or motivation to improve and to recognize evidences of growth is an integral part of the critical thinking process.

The increase in the total number of personal comments written on the evaluation devices indicates that the evaluation became more meaningful with increasing use. The types of additional statements or comments made generally varied from simple agreement or reiteration of the answers selected for Problem I to more carefully stated qualifying statements or comments for Problem III. For example, in response to the question, "Did the group cooperate by limiting discussion to the problem being studied?", one group answered as follows:

Problem I - "No, we didn't."

Problem II - "We improved some."

Problem III - "We were better this time than before, but we could still be better."

Since the ability to look at one's work, to recognize where improvement

is possible and to assess growth is considered an essential part of the critical thinking process, the progressively more inclusive statements would indicate that there was some improvement in the depth of thinking.

During the housing unit, principles of furniture arrangement were presented to the class by a small group after a brief study of the problem. In discussion, a student suggested that the principles would be of little value to them unless they could see them applied or have some actual supervised experience in applying them. The whole class agreed and an exercise was developed to test their ability to apply information or principles. Individual problems were given to the students in which they were asked to use the principles studied by arranging furniture cutouts on a scaled floor plan prepared by the teacher.[2] The students agreed that each application should be accompanied by a written explanation of how and why. In one class of twenty-four students, an average of nine statements per student were recorded. Realizing that certain variables affect the ability to apply principles, students were also given the opportunity to identify structural changes within the scaled room plan that would have made the application of principles simpler. One student commented:

> I think the window on the longest wall should have been placed farther down to one side instead of directly in the middle of the wall. Furniture arrangement is easier when large amounts of unbroken wall space are available.

Another student described her experimental approach to arriving at

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[2]See Appendix C, page 84.

desirable structural changes as follows:

> I tried arranging the room to see how it would turn out if I pretended the windows, the door, and the closet were relocated. One plan which was easier to work with was when the door and south window were interchanged. Also, if you take the two windows and place them together where the closet is, then place the closet on the southeast wall, space will be saved and arrangement will be easier. I also tried a few more changes of the closet, door, and windows. Some other changes made it even more difficult to arrange the furniture. The problem always seemed to be a lack of unbroken wall space at the right place.

The above student's comments were selected because they outlined her "problem solving" technique in arriving at an answer. Other students may have attacked the problem in a similar manner, but the one cited was more descriptive in the procedure used.

Previous to the exercise just described, a majority of the students had expressed some dissatisfactions with the arrangement of furniture in their own rooms. The results of the exercise described and subsequent changes made in their rooms seem to indicate that students can and will readily apply information when it relates to a problem of concern to them. This support for the belief that students must be able to see the practical value of information or ideas before they can develop skills of critical thinking, was a continuous challenge to the teacher in guiding class activities. Students and teacher were constantly involved in the effort to convert facts into working principles, guides for action, or evaluative criteria.

Much has been said about the types of planning and evaluative materials used by the students for the housing unit. The instruments used by the eighteen student groups while working on the three major problems selected varied somewhat, but in general were very similar. A set of materials selected and used by a typical group when planning,

carrying out plans, and evaluating work relating to Problem III is included as Appendix D, page 90. The reader will notice that some of the summarizing statements show lack of understanding or complete synthesis of an idea, others show the relationship of one idea to another. Some are merely statements of fact and some are principles which can be broadly applied. Since the housing unit was the writer's first attempt at developing critical thinking skills with this group of students, any evidences of ability were encouraging. Better and improved statements, of course, were desirable, but the fact that they could make some clean-cut, thoughtful statements in the first unit studied should and did influence ability in other areas. This growth as assessed by both students and teacher can be partially attributed to the desire to capably answer the many questions which were raised during student reports to class on what had been learned. Some of the questions which were typical of all classes were: "How can this information help us individually?" "What principles were applied in what you saw?" "Could you state that again in simpler terms?" "What is the basic idea you are trying to get across?" "What do you want us to remember about your report?" Questions such as these indicated that students were evaluating the usefulness of information and were involved in the effort to transform information or facts into meaningful interrelated ideas or principles. Students also seemed to pride themselves in being able to recognize lack of clarity in another's report. This enthusiasm for "getting to the point" seemed to promote good thinking in the classroom.

At the end of the housing unit, the students were asked to fill out an informal evaluation sheet, the information from which could be used in planning for similar units. It was hoped their comments would

provide information regarding their interest in and their use of the information brought out. A series of four questions were asked and space was also provided for unstructured additional comments. Because the types of comments were similar for all classes, the ideas from only one class of twenty-one students were analyzed and presented in Table IV, page 36.

The students seemed happy to have the opportunity to comment on the unit completed. Some expressed dissatisfaction, however at being limited to a small space in which to write their remarks. Much could be said about the ideas found on the evaluation sheets. The writer was most encouraged to find that the one thing the students enjoyed most about the class was the organization or way of working they had chosen. They had placed a high value on the manner in which they were attempting to reach their goals. That they would reach this value judgment so early in the year was surprising but seems to support the idea that students will involve themselves wholeheartedly in a learning situation when they have had an opportunity to participate in selecting the goals, formulating and carrying out the plans of work, and developing and using evaluative devices.

The principles judged most helpful to the students were those for which they had the most freedom for immediate application in their own homes. This seems to lend further support to the idea that students will be more interested in studying an idea they can apply in a real situation. The possibility of developing critical thinking skills is more likely when students recognize the need or value of studying a given subject.

TABLE IV

A SUMMARY OF THE RESPONSES MADE BY 21 STUDENTS ON THE HOUSING UNIT EVALUATION SHEETS

Types of Comments Made	No. Times Reported
A. Values of Studying Home Decorating	
1. Help with general home decorating jobs	9
2. Will be helpful in becoming a capable homemaker	8
3. Help with keeping own room neat and attractive	7
4. Help with selecting and arranging furniture	7
5. Help with planning and using storage space	4
6. Help with assuming home responsibilities	1
7. Help with creating a nicer home in which to live	1
8. Help with creating beauty	1
9. Help in appreciating the home better	1
10. Help with choosing a career	1
Total Comments Made	40
B. Class Activities Enjoyed Most	
1. Working in small groups to solve problems	16
2. Selecting and arranging accessories	7
3. Studying principles of furniture arrangement	6
4. Working with colors	5
5. Learning and using principles of design	4
6. Studying principles of storage	3
7. Enjoyed everything	3
8. Giving reports to class	2
Total Comments Made	45
C. Principles Judged Most Helpful Now or Later	
1. Furniture arrangement principles	13
2. Design principles	12
3. Storage principles	9
4. Principles of selecting and using accessories	3
5. Principles of selecting and using colors	1
Total Comments Made	38

TABLE IV (Continued)

Types of Comments Made	No. Times Reported
D. Recent Changes or Improvements Made in Own Room As Result of Class Study	
1. Rearranged storage space	8
2. Better effort and care to keep it neat	8
3. Rearranged furniture to better advantage	7
4. Made or purchased new curtains or bedspreads	6
5. Selected accessories to accent room	3
6. Discarded or stored articles no longer in use	3
7. Purchased or made closet accessories	2
8. Purchased a new chair for room	1
9. Painted room a new color	1
Total Comments Made.	39
E. Voluntary Additional Comments	
1. Information interesting and helpful	10
2. Enjoyed working in unit	9
3. Learned a lot	4
4. Hope future units will be as interesting	4
5. Created an awareness	2
6. Like working in groups	1
7. Learned to get along with other people better	1
8. Want to continue applying information	1
9. Wanted to study subject longer	1
10. Glad to be enrolled in class	1
Total Comments Made.	34

In reporting the housing unit an effort has been made to show the type of framework in which learning experiences were developed. The students were guided in selecting class goals, developing plans of work for achieving these goals, and developing criteria for guiding progress and evaluating results. This problem-solving approach to planning and developing learning experiences was believed to be a desirable environment in which the skills of critical thinking could be developed or practiced. Primary sources of data were evaluation instruments completed by the students and case studies and anecdotal records kept by the teacher. Throughout this study the same type of organization of subject matter units will be reported.

FOOD AND NUTRITION UNIT

After much teacher pre-planning to have ample suggestions for planning with students, goals for the food and nutrition unit were selected and a class organization for their accomplishment was developed. The steps of teacher-pupil planning which led to the eventual adoption of a way of working are as follows:

1. statement of the problems to be studied,
2. identification of learning experiences needed to accomplish goals,
3. recognition of responsibilities involved in proposed learning experiences,
4. grouping of responsibilities according to type, and
5. dividing the class to carry out the various types of responsibilities simultaneously.

When grouping responsibilities according to type, it developed that there were three major groupings: planning, preparation, and special

study. Since it had already been decided to divide the class into six groups because of physical facilities this meant that at least two small groups would be attacking a given problem through planning activities, while two more small groups would be attempting to solve the problem through food preparation activities, and the remaining two groups would be attempting to solve the problem through special study or investigation. Responsibilities were rotated until every small group had completed all three types of activities. Then through whole class discussion, the groups shared the learnings from their experiences. A clearer idea of how this plan worked in practice can be shown by the following example: In a given week, the laboratory problem was preparing simple family lunches emphasizing the selection, nutrition, preparation, and storage of fresh vegetables. The rotation of responsibilities in order that all six groups would have the opportunity to actually participate in the same type of meal was as follows:

TABLE V

ROTATION OF RESPONSIBILITIES PLAN

Group No.	1st Day	2nd Day	3rd Day	4th Day	5th Day	6th Day
1 & 2	Whole class discussion	Plan the meal	Prepare the meal	Special Study	Special Study	Whole class evaluation
3 & 4	Whole class discussion	Special Study	Plan the meal	Prepare the meal	Special Study	Whole class evaluation
5 & 6	Whole class discussion	Special Study	Special Study	Plan the meal	Prepare the meal	Whole class evaluation

The above schedule represents a rotation of responsibilities in the simplest form. Several variations of this type of organization were used during the food and nutrition unit. With increasing complexity of the meal pattern, more time for study, planning, and preparation were sometimes needed. The type of class organization selected was flexible and provided much opportunity for student participation in:

1. planning their own learning experiences,
2. formulating detailed plans of work and evaluating their effectiveness after they had been tried,
3. making and justifying choices,
4. using resource materials for finding information to be applied,
5. putting plans of work into practice through laboratory experiences,
6. developing and using written evaluation instruments,
7. verbalizing what had been learned, and
8. working together democratically.

An example of the type of subject matter guide which was developed by the students in planning the foods unit can be found in Appendix E, page 95. Although the sample was planned by an eighth grade class, similar planning was done by the ninth grade classes. The ninth grade developed and used posters in the classroom to supplement individual notebook records. They did not see the need for duplicated copies of the plans as they had more confidence in their ability to accurately record plans as they were being developed.

The subject matter outline or guide was developed to furnish direction for the laboratory work and related activities. It was a method of keeping the whole class informed about what was coming and

was beneficial in holding the class together in accomplishing the goals selected. The students relied on the guide for direction in their planning and choice making with each new laboratory experience. It placed responsibility on the students to keep informed as to next procedures and reduced the necessity of referring to the teacher for directions; thus enabling students to become more independent in carrying out their educational experiences.

After going through the steps of planning guides and procedures, the classes were dedicated to their decisions. In one instance where several schedule interruptions had resulted in much loss of time for a class, they were given the opportunity to make a choice as to whether or not to stop short of completing the learning experiences planned in order to move ahead into another subject matter unit. After several minutes of discussion the class voted by a large majority to complete the plans they had made for the foods unit. In making this decision, class members referred to individual and group goals that could not be accomplished unless the foods unit was completed as planned. The fact that students are willing and able to participate in the type of planning described and assume leadership in carrying plans to completion is evidence that processes of critical thinking were used. Further proof of this was shown in the many kinds of planning activities completed by the students. Not only did they devise the overall plans for the unit, but they developed plans for attacking the smaller problems involved as well.

A detailed planning form was used to assist students in planning

for the laboratory preparation of family meals.[3] Although the class members did not develop the form themselves, they selected the one which was used after studying several variations of planning forms used by previous classes. The students readily recognized the necessity of detailed planning in order to make best use of laboratory time. The manner in which they attacked the planning activities is an indication that they considered planning to be a means to an end. Some groups planned in more detail than others within the same class. For example, in one class the meal preparation problem was to prepare a family lunch consisting of soup, sandwiches, and a relish plate. In assigning the responsibilities to individual group members, one group identified only twenty-one steps involved in preparing the meal whereas two other groups identified as many as forty-nine necessary steps for preparing similar meals. The average number of steps identified by all six groups in the class was thirty-eight. In meeting the time schedules planned for the meals, groups who had outlined the largest number of steps were able to stay closer to their time schedules than those who had not been able to identify as many in their planning of the meal. Therefore since they had not recognized the steps, they had not planned to meet them and when this became known during the preparation of the meal, unexpected adjustments had to be made. Situations of this type made a strong point for the value of planning.

As students became more accustomed to work areas and group procedures, they were able to make plans more quickly. Even though the preparation of meals became increasingly more complex, the length of time

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[3]See Appendix F, page 97.

needed for making job assignments did not vary greatly. It is assumed that added experience in job analysis contributed to greater efficiency in thinking and planning. The process of analyzing the logical steps of meal preparation, assigning those steps to the various members of a group and coordinating all jobs so that a meal is prepared and ready to serve at the right temperature at the appointed time involves highly detailed planning and thinking.

Laboratory experiences provided the opportunity for students to put plans of work into action. During laboratory sessions, the detailed plans of work were posted and referred to occasionally; although by this time, they were so well understood by students that groups were able to function rather well with infrequent checking. Girls were usually so familiar with the other members' jobs that they could assist if necessary or fill in when absences occurred. Each girl did not have the manipulative experience of preparing every complete meal, but she was still held responsible for learning certain things about all meals prepared. Knowing what was coming and why held the students' interest. The goal was not to perfect skills in food preparation, but instead to open the door to increased understanding and independence of thought and action. Students were learning by doing, seeing, hearing, and evaluating.

Groups were always eager to check the work of other groups. As soon as meals were prepared and ready to be served, all groups converged on the scene to briefly discuss and evaluate. Through this type of activity it was learned that many students were copying recipes for home use and numerous reports were made that students were applying their learnings at home.

Throughout all laboratory experiences students were asked to justify activities and procedures by citing reliable references. The habit of describing procedures by stating reasons and citing a reference or authority was being developed. There was a good variety of references for student use, but in some instances copies were limited. Each group rather zealously guarded their right to use the references and resented any inclination toward unequal sharing by another group. Students developed such a familiarity with the books that they could use them very quickly. Frequent referrals to indexes and tables of contents increased their efficiency in use of resources. Books in a more plentiful supply were checked out by the students for home use although no homework assignments had been made.

The fact that almost all laboratory plans made by the students were carried through to completion is evidence that an attitude of intellectual responsibility existed in the class. Laboratory experiences provided some evidences that thinking did not stop with the actual completion of class work. Also provided were evidences that students were involved in the act of searching, hunting, and inquiring to find materials that would help them in attempting to solve problems.

Planning and developing the many activities and procedures created the necessity of much choice or decision making by the students. They not only had to make choices in establishing the class outline, deciding upon suggested emphasis, and formulating classroom procedures, but they had the added responsibility of group and individual decisions in selecting menus; using money, equipment, and other resources; choosing laboratory procedures; and developing, selecting, and using evaluative

devices. In all cases their decision making was made easier when they learned to rely on goals and criteria already established. A constant checking of action against plans and goals was noticeable as students carried out their class activities. The ability to make intelligent choices is necessary to the skill of critical thinking. To consider several alternatives and to choose those which are helpful in solving problems is an evidence that critical thinking was a part of the students' approach to learning.

The development and use of many kinds of evaluation devices was an important part of the learning experiences in all subject matter units. In the ninth grade food unit many devices were selected for use from those developed by other classes and four new evaluation devices were developed to meet the needs of the group as they attempted to accomplish their goals. The students enjoyed a relaxed attitude toward self evaluation. They were eager to rate themselves upon completion of learning experiences. When planning each new laboratory experience or meal preparation, the class reviewed their goals and suggested emphases, revised when necessary, and made decisions as to the types of evaluation devices most suitable for determining their progress. Upon completion of the experience the evaluation forms were discussed and filled out promptly by each group. Since the students had studied the evaluation forms prior to the laboratory experience, they also served as standard-setting devices. Students recognized this function of the evaluation instruments by suggesting that forms be developed to cover phases of their work which they considered unsatisfactory or sub-standard.

After students became able to interpret their goals in terms of

behavioral outcomes they were able to follow through by identifying standards which would help them achieve their goals. An example of this type of thinking is found in the "Meal Management" evaluation form.[4] Records kept by the teacher and self-evaluations revealed that most of the problems in meal preparation could be attributed to poor management practices rather than lack of understanding of preparation principles or procedures. As students knew that meal preparations were becoming more complex, they voiced a need for improved managerial competencies. In discussions that followed the classes determined what was involved in being a good meal manager and identified obstacles they had faced. Suggested standards of good meal management were approved by the classes and an evaluation form consisting of the approved standards was mimeographed for use upon completion of the next meal preparation experience.

A similar device was developed when the groups recognized there was disagreement or misunderstanding in the way the tables were being set for various meals. After discussion and study they agreed that standards could be identified for helping them to set the table so that it would be aesthetically pleasing and functional. The discussion and development of the evaluation device accomplished results that had not otherwise been obtainable.[5] Prior to the development of the evaluation device students had referred to references and class notebooks for ideas on table setting, but progress had not been as evident as it was after they had recognized their own problems and outlined corrective and

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[4]See Appendix G, page 102.

[5]See Appendix H, page 104.

evaluative procedures.

Another evaluation device was constructed to help solve some of the planning problems. After planning for the first laboratory problem the students concluded that they would like to become more efficient in use of planning time. The division of responsibilities within the groups had not been clearly understood by some members and it was suggested that an emphasis on individual planning for the group project was needed. The questions selected for the "Evaluation of Individual Planning"[6] form were purposefully chosen to encourage every person to take more responsibility for group and individual planning. Each small group had a copy of the evaluation sheet to use as a guide for developing the plans for their next group work. Upon completion of the learning experience the evaluation sheet was filled in to denote the achievement of each group member. The groups elected to use the "Evaluation of Individual Planning" forms for subsequent experiences in the foods unit and later, questions were raised regarding the development of similar forms for use in other units.

A fourth evaluation device developed during the foods unit was not subject matter related. It dealt instead with the value of keeping a useful class notebook. Acknowledging that their long range educational plans could be better realized through the development of good study habits, the classes tackled the problem of deciding upon criteria for a useful notebook. After criteria were developed and mimeographed, the students suggested that the form be revised to allow many spaces for checking or evaluating. The revised "Evaluation of Student's

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[6] See Appendix I, page 106.

Notebook" form can be found in Appendix J, page 108.

The evaluation devices described here are those developed by the students as an integral part of their learning experiences. Many other types of evaluation materials were used as learning experiences in the food and nutrition unit, but space does not allow their discussion or display. Evaluation as a part of the food unit provided for selecting and developing standards for evaluation instruments; studying evidences to determine progress made; identifying procedures which contributed to progress as well as those which were responsible for lack of progress or difficulty; developing clues and directions for further learning; and assuming individual responsibility for intellectual growth. All of these procedures may be considered a part of the critical thinking process.

CLOTHING UNIT

As stated earlier all units were planned cooperatively with the students after much teacher pre-planning.

Plans for the clothing unit as those of other units were developed after discussing past experiences and present needs. Limiting factors such as classroom equipment, time available, and teacher-pupil ratio were discussed after which the classes adopted goals for the unit. One of the first big problems selected for the clothing unit was, "What can we learn about current fashions, fabrics, patterns, etc. that will guide us in selecting our construction problem?" This problem was attacked by small groups and involved visiting the stores, interviewing sales personnel, and reviewing pattern catalogs and fashion magazines. After the groups reported their findings to the class, the type

of construction problem was determined. Equipment was organized and a study of selecting and understanding commercial patterns was begun.

An example of an experience which progressed toward student generalizations was a laboratory lesson where students compared commercial dressmaking patterns. The objective of the lesson was primarily to increase awareness about the likenesses and differences of commercial patterns and to provide more familiarity with sample patterns previous to the actual selection and use of one in the homemaking class. The instrument used for the lesson placed an emphasis on recognition of pattern pieces, the interpretation of pattern markings and directions, and a comparison of different patterns.[7] The students seemed to readily recognize the different pieces of the patterns and seemed fairly accurate in interpreting the directions and symbols included. They were able to locate similarities and differences but were not as capable in stating sound conclusions regarding pattern variations. In view of their limited previous experience with commercial patterns, it was not surprising that many of the conclusions reached were mere opinions, half-truths, or value judgments. The expectancy that students would make valid conclusions at that early point in the clothing unit was perhaps overly zealous.

The lesson was an advantage in that it provided opportunity to examine patterns, to become more familiar with their symbols, and to broaden the understanding that patterns are becoming more standardized, but there are still some differences which demand consumer alertness. In addition to accomplishing the goal for the lesson, the teacher and

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[7]See Appendix K, page 110.

students were reminded of the dangers of making conclusions on the basis of insufficient evidence or experience. The attitude that much information and/or experience is helpful in making wise decisions was strengthened. The concept that collection, interpretation, and comparison of information is preparation for problem solving was recognized and discussed by the class thereby placing an emphasis on the WHAT and the HOW of a learning experience.

Soon after students had selected the patterns for the garments they were to make in class a more detailed study of commercial pattern instruction sheets was made. Through studying and comparing pattern instructions, it was found that there were many similarities of steps and sequences for procedures among the various clothing construction projects chosen. From this information it was suggested by the teacher that a guide for progress and approval record flexible enough to fit every student be developed. The students cooperated in the effort to produce such a record by considering their own garments and listing the necessary steps in the order of completion. These were checked by the teacher and a guide was formulated from them.[8] Each student placed a copy of the guide in the front of her notebook. The guide had two major purposes: (1) to serve as a means of planning for weekly goals or accomplishments and (2) to serve as a record of work completed. The guides were used to supplement teacher-pupil planning and evaluation and were in no way a substitute for individual planning and use of the commercial pattern instructions.

Students seemed glad to have a guide to follow. They referred to

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[8]See Appendix L, page 111.

the guide as well as the commercial pattern instruction sheet for reminders of steps to be accomplished. The guide was a unifying factor in helping the class to establish the progress goal for the week. Since the guide also served as a record of progress, the students were eager to have approvals noted on their record. In this way it was symbolic of accomplishment and motivation for further achievement. Students who were able to work ahead of weekly goals and begin a second project were quick to request another guide on which to record their progress. One student expressed reluctance to yield her completed guide to the teacher for data. She requested and was given another copy to use at home. The development and use of the "Guide for Progress and Approval Record" is another evidence of the students' ability to select goals and develop and carry out plans of work. The use of the guides made evaluation easier as they were a record of the amount and in a limited way the quality of the work done.

In the clothing unit, a great deal of emphasis was placed on increasing efficiency through wise management of time, resources, equipment and energy. This emphasis on management began when the students had had enough time to analyze some of the sources of their difficulty or lack of progress. In most cases, as expected, lack of progress could be traced directly to poor management. Students listed good management processes which they thought would help them to increase efficiency. Committees were appointed and met to convert the students' suggestions into a check-list of good management practices which the students could use as a daily and weekly reminder of their management habits. The checklist was designed for a series of ratings and improving between ratings was stressed.

As the students were making simple cotton garments involving basic construction processes, the management idea overshadowed the skill idea and made for a most enthusiastic, industrious class. They acknowledged the value of skills, but skills for a special purpose or as a means to an end. After the words "management" and "mis-management" were introduced and understood, the students were so fascinated by their daily evaluations, that they not only evaluated themselves, but each other and the teacher as well. They had worked together to establish criteria of good management practices and each evaluation seemed to fix the criteria more firmly in their minds. Many students were so enthusiastic about the management idea that they eagerly applied it to the teacher's management practices and were frequently heard to good-naturedly remind the teacher that "A good manager is one who . . ." Very frequently they evaluated and reminded each other of poor management practices emerging. This had the effect of challenging each girl to improve her habits to the point where they were not only acceptable to her, but to the group as well. A copy of the management checklist as cooperatively developed by the classes in the early stages of the laboratory work can be found in Appendix M, page 112.

Not only did the girls have an opportunity to develop management concepts, but also to develop concepts in clothing selection and construction as well. Style shows were held in each class as a means of evaluating the garments made. As the garments were being modeled, concepts of clothing selection and construction were crystallized through discussion of the girls' manner of wearing the garments, the suitability of the garments to the persons, and the effects of construction and fitting techniques to the outward attractiveness of the garments. In

addition, as each girl modeled her garment the class was asked to compare its cost with the cost of similar ready-made garments. The students seemed very pleased that class members judged the prices of comparable ready-made apparel they had examined to be from one and one-half to three times greater than the garments made in class. The comparisons made regarding clothing prices and the results observed in the finished projects led to conclusions about the value of developing sewing skills. The students stated their ideas concerning the value of making one's own clothing. These ideas were discussed until the whole class could agree upon a list of questions which would help one determine when it was worthwhile to sew. Some of the questions considered were:

1. Is there time available for the sewing project?
2. Can the project be done for less money than would be necessary for purchasing a similar ready-made garment?
3. Will making it at home provide the opportunity to have some special design, size, or color that would not otherwise be available?
4. Is it something that can be enjoyed, will it give the opportunity for creative expression?
5. Are clothing construction techniques in harmony with the quality of the garment expected?

The class agreed that one would not have to answer every question positively, but that with varying situations and conditions one single positive answer might be sufficient to justify the making of one's own clothing. A discussion of the application of sewing skills to items other than clothing was not discussed at this time. The comparisons, value judgments, and concepts the students were able to make through this evaluative experience were symbolic of the steps in critical thinking and it is believed that the more opportunities students have

to exercise these types of skills, the more capable they become.

After garments had been discussed and evaluated by class members in the style shows, each student rated the workmanship and design of her individual garment on a scorecard that had been formulated by the classes.[9] To give a sense of direction for the projects the students were going to make, the scorecard was developed early in the clothing unit. In formulating the scorecard, the students contributed ideas describing a well-made garment. As they were doing this, an examination of the garments they were wearing began to develop. Ideas were stated as standards and the ones the whole class thought could be achieved through the projects selected were tentatively adopted for use on the scorecard. Later, after only a few weeks had passed, another look was taken at the proposed scorecard to see if any revisions were necessary as a result of recent developments within the class. At this time suggested standards were grouped according to types and the classes voted upon the number of points to be assigned to each grouping. The scorecard or evaluation device was then drafted into its final form and distributed to the students approximately three weeks before garments were to be completed. This encouraged each girl to compare her garment with the suggested standards many times during the construction period. The sincerity with which the students used the evaluation device is represented by the fact that in sixty per cent of the cases, they rated themselves more severely than did the teacher on an identical device. In thirty-two per cent of the cases, students and teacher agreed on ratings, and in only eight per

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[9] See Appendix N, page 114.

cent of the cases did the teacher rate the students lower than they had rated themselves.

The ability to develop criteria such as the clothing project evaluation device and the willingness to use it in rating herself for a grade is evidence of a student's achievement in assuming personal responsibility for learning. The process involved is also descriptive of another way through which problem solving procedures were used in the classroom.

As a last step in the learning experiences of the clothing unit students were asked to state some generalizations on the basis of what they had experienced. In an effort to get at some of their basic concepts in clothing construction and management, the students were given ten minutes to write generalizations after which they were discussed and evaluated as to their possible application. Students were challenged by each other to defend their generalizations in light of evidences available. The following examples of generalizations were selected because they seemed to be typical of the class as a whole. One student presented the following generalizations:

> Skills are wasted if we don't do our very best work.
> Careful planning of necessary purchases saves money.
> Doing a job well in the beginning saves time in the long run.
> Careful application of design produces a very stylish and pleasing garment.
> If equipment is properly cared for it will last longer.
> Time wasted is time lost forever.
> Proper use of equipment saves time and energy.
> If knowledge learned isn't put to full advantage it is wasted.
> Energy is saved by careful planning of time, equipment, knowledge, and skills.
> Skills can be acquired by anyone willing to take time to practice and study and learn about a subject.

Similar generalizations were written by another student:

> The neater the equipment is kept in one's box, the easier it is

to find it.
When one does not overbuy on material, the more money one saves.
The more one sews and the neater one sews, the more accurately she sews.
When one's project is well planned, she will save more time.
When equipment is well organized, more time is saved.
The more one sews, the more knowledge she gains about sewing.
The more skills one can acquire, the easier the job.
The better the equipment, the easier the job.
The more accurately one does her work, the more energy she saves.

Of special interest to the writer are the following generalizations from selected papers which were indicative of a desirable attitude toward the use of knowledge and skills:

If you have done something very much like what you are trying to do, you can apply the related ideas to your new experience.

Knowledge can be used more efficiently if it adds on to and strengthens the knowledge you already have.

Knowledge from one experience should be applied when working on something else that is similar.

In order to maintain knowledge, you must keep up with a changing world and new inventions.

Knowledge itself is useless unless it can be applied.

If skills are to be worthwhile, you should be able to adapt them to many situations.

The generalizations were analyzed by the teacher and classified according to the following types of statements: (1) incomplete thought, (2) rules, (3) facts, (4) value judgments, and (5) cause-effect reasoning.[10] Statements of cause-effect were more desirable as they showed a relatedness between ideas, integration of thought, and a better understanding of how one factor can affect another. The fewest number of generalizations written by any student in the randomly selected group was two and the largest number written was fourteen. The average per

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[10]See Table VI, page 57.

TABLE VI

TEACHER INTERPRETATION OF TYPES OF GENERALIZATIONS WRITTEN BY STUDENTS IN EVALUATING CLOTHING LABORATORY EXPERIENCES

Case Number	TYPES OF GENERALIZATIONS					Total Generalizations
	Statement of Incomplete Thought	Statement of Rule	Statement of Fact	Statement of Value Judgment	Statement of Cause-Effect	
1	---	---	---	---	2	2
2	---	---	---	---	4	4
3	---	7	---	---	5	12
4	1	4	---	---	2	7
5	---	---	---	---	8	8
6	---	7	1	---	1	9
7	---	---	1	3	5	9
8	---	3	---	---	6	9
9	---	2	---	---	6	8
10	1	3	---	---	5	9
11	---	1	---	1	5	7
12	---	5	---	1	7	13
13	---	---	---	---	11	11
14	---	---	---	---	7	7
15	---	---	---	1	8	9
16	---	---	---	1	6	7
17	---	---	---	---	11	11
18	---	---	2	---	8	10
19	---	---	---	1	7	8
20	1	2	---	4	7	14
21	---	1	---	---	9	10
22	---	1	---	2	7	10
23	---	1	---	---	9	10
24	---	---	---	---	11	11
25	---	---	---	---		
Totals	3	37	4	14	167	225
Per cent of Total	2	16	2	6	74	100

girl was nine. Whereas a few of the generalizations presented were statements of rule or fact, the majority of those presented were statements of cause-effect relationships. The cause-effect statements accounted for seventy-four per cent of the total number of generalizations written. Through the types of generalizations made, there seems to be evidences that the students were learning more than manipulative skills and facts. They were learning the relationship of skills, time, money, energy, and equipment to the effectiveness of a job, any job, thus the transfer of learning was more likely and the chances of forgetting more unlikely. The fact that students were able to make generalizations shows that they were able to carry their thinking through to the point of verbalization, which is considered one of the best evidences that the process of critical thinking has been employed.

The clothing unit as other units provided many opportunities for students to participate in selecting goals, developing and carrying out plans of work and developing and using evaluative materials. Not only did the students seem to enjoy these experiences but they began to express pride in the knowledge that they were using some of the higher mental processes in carrying out the learning experiences they had planned.

RELATIONSHIPS UNIT

Experience in selecting goals, formulating and carrying out plans of work in the housing, foods, and clothing units enabled students to state their purposes for the brief relationships unit and get under way quickly. In planning sessions the classes identified their learning possibilities for the relationships unit as listening, reading, seeing

films, debating, interviewing specialists, observing, surveying, and discussing. They agreed that the emphasis should be placed on whole class discussion through which information presented could be evaluated and principles identified. As a means of encouraging each class member to keep her share of class discussion related to meaningful points, a device to guide and evaluate individual participation in class discussion was formulated.[11] The device was checked weekly but its ideas were used daily by the students as they reminded each other of the contents when violations of their suggested rules for good class discussion occurred.

Ability to foresee the difficulties that might arise in discussing relationships problems had led the students to formulate and adopt the evaluation device. The device itself helped insure good relationships within the class because it was developed around the democratic ideal of respect for each person's rights and responsibilities. After the first checking of the evaluation device, the students analyzed its limitations and made suggestions for other criteria which would add to its usefulness, thus they recognized that with knowledge and experience, one becomes better able to judge and/or evaluate.

One criterion which was suggested as an addenda to the evaluation device was a reminder that personal family matters should not be exposed in class discussion. Although verbal agreement to this effect had been made at the beginning of the unit, the students found it very difficult to refrain. Basic principles and values regarding relationships, when

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[11]See Appendix O, page 115.

taken seriously, became so personal that class members found it difficult to maintain an impersonal attitude and to avoid making comments of a personal nature. The presence of this problem was acknowledged as an indication that individual thinking was being done and that effort was being made to solve personal problems.

The very nature of the relationships unit limited the number of detailed planning, recording, and evaluation instruments used, however as small groups planned for special class projects they formulated pencil and paper plans very similar to those used in other units where forms for planning had been provided. Recording took the form of personal class notebooks kept by all students and the teacher. Discussion was summarized each day to help students understand and relate ideas and to record facts or ideas that should be remembered.

An evaluation of the student's notebook was based on a device formulated earlier for use in another unit.[12] At the time the device was used, the students suggested that it be revised for multiple checkings because they could see its application to any subject or any class. Evaluation was an integral part of the relationships unit as it had become in other units. Emphasis on evaluation for a grade had been gradually replaced by emphasis on evaluation as a means of self-improvement. Evidences that this was true were observed in the many casual remarks made by the students to each other. When evaluating themselves as a group, students were overheard to say, "It's not the grade that's important but rather the amount of progress we have made and should make." Many groups were known to adjust their scores if at first count

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[12]See Appendix J, page 108.

they totaled a surprisingly high per cent. Remarks such as, "We must have added it wrong because I know we were not that good?" were frequently heard. This indicates an honest approach to the use of the evaluation devices. In general the students were more concerned with what the evaluation brought to light in terms of improvement needed than they were with the resulting scores. As the year progressed the students seemed to speak less and less about grades and more about growth. They regarded grades as their own responsibility and seemed to worry very little about grades being arbitrarily set by the teacher.

As the relationships unit progressed, the students became very interested in the meanings of words introduced in class discussions and delighted in the opportunity to use these words in casual conversations and in contributions to the class. They were trying to use information obtained in developing their understanding of human behavior. The class atmosphere was open and friendly, thus encouraging the development of each individual. The fact that students sometimes made mistakes in the use of terms did not discourage continued effort to master the terminology.

During the relationships unit students were given the opportunity to observe and practice the technique of solving personal problems by raising and answering related questions. These question raising sessions and resulting study and discussion promoted much thinking and learning and brought the students away from looking for only one right answer to a given problem. To illustrate the diversity and types of considerations given to a particular problem, one class of twenty-six girls pooled their prveiously written questions concerning the topic; "Are you old enough to date?" A summary of the types of questions

raised by the girls is found in Table VII, page 63. In this first attempt at this type of class experience, each girl was limited to four questions and some girls contributed less than four. The discussion resulting from this experience helped the class to determine ideas that should be studied further. For example, as revealed by the summary, the most frequently mentioned topics were maturity, assuming responsibility, making wise decisions, and dating etiquette, which were dealt with in more detail as the unit progressed. Discussions and experiences of this type also helped the classes to state some more definite guidelines for solving certain problems, without yielding to the belief in "pat" answers or "cut-and-dried" routines. Since this experience was one of the early ones in the relationships unit, there was much carry-over of this type of questioning and thinking into the experiences which followed.

The students thought they had increased in their understanding of themselves and others during the relationships unit. An appreciation of their needs and those of other people was developed. Some typical remarks of how they had benefited from the unit were extracted from the final evaluation sheets on which they were to write informal comments. The following types of statements seemed to express the sentiment of the class:

> I have become more understanding of family problems. I now understand my family better and don't seem to "dislike" them so much. I've learned more about myself and other people. This unit has helped me more than <u>any</u> of the others.

> I was absent from school during a large part of this unit. From talking to the ones that were here, I heard it really was helpful to them. In the short while that I was present, I learned a lot about myself and consider it interesting and helpful to know.

TABLE VII

A SUMMARY OF QUESTIONS ASKED BY 26 GIRLS IN DETERMINING DATING READINESS

Order of Frequency	Types of Questions Raised	No. Times Reported
1	Do I think I'm mature enough to date?	20
2	Do I assume responsibilities willingly?	15
3	Would I know how to handle dating problems and make good decisions?	13
4	Do I really want to date and why?	10
5	Do I know enough about dating etiquette?	9
6	What do my parents think about dating?	8
7	Would I make a wise choice on who to date?	7
8	Am I easily influenced?	5
9	Have my friends started dating?	4
10	What do most people regard as the right age to begin dating?	3
11	Would I be fun to be with?	2
12	Would dating interfere with my school responsibilities?	2
13	Are boys my age mature enough to date?	2
14	Have I had enough experience in boy-girl social relationships?	1
	Total	102

> I don't feel that we had enough time in this unit to learn as much as I would like to have learned.
>
> I thought the relationships unit was very good. We have learned how to become more useful in our society. If we try to get along and work at understanding other people, then we will surely become good citizens.

The relationships unit was the last on the yearly schedule and only four weeks time was allowed for it. After the unit was under way, many students expressed disappointment that more time was not available to explore problems of concern. This shortage of time, of course, limited the amount of learning, but the teacher was encouraged that even though the unit was brief, the students did use the time efficiently in planning, formulating and carrying out plans of work, and developing and using evaluative devices and methods.

HOME PROJECTS (EXPERIENCES)

For the purpose of encouraging application of class learnings in the home situation and providing opportunity for additional experiences, each student was asked to complete one supervised home project (experience) each semester. Early in the year, through class discussion, the students became aware of the reasons and possibilities for the home project. A form which had been used successfully by other classes for planning and reporting projects was suggested by the teacher. Revisions were discussed and the corrected form adopted.

The writer believes the home project (experience) is an excellent opportunity for helping the student develop skills in critical thinking. The teacher has an opportunity to work with each student individually in the planning and frequently in the evaluation. Through a conference with the student for the purpose of planning, the teacher can help the

student to limit the project, clarify goals, make job analyses, select procedures and locate reference materials which will be of help. The teacher also helps the students to see how they may apply what they have already learned in a new and different situation. Frequently students request additional conferences to discuss difficulties they may be experiencing. The teacher, through questions asked, helps the student to locate sources of difficulty and revise plans if necessary.

The form for planning and reporting the home project (experience) was sufficiently flexible to allow students to make many statements in regard to how the experience was planned, carried out, and its value to them. These statements were reviewed, carefully studied, interpreted, and grouped according to types of evidence looked for by the teacher. Evidences of critical thinking were identified from statements made by students in each of the following areas:

1. ability to select and clarify goals

    a. statements of reasons for choosing project
    b. statements showing goals selected

2. formulating and carrying out plans of work

    a. statements of difficulties anticipated
    b. statements of references selected
    c. statements outlining a step by step plan of work

3. developing and using evaluative instruments and procedures

    a. statements of benefits derived from the project
    b. statements of difficulties encountered
    c. statements indicating expected uses of learnings in the future
    d. statements of conclusions or generalizations drawn

No summarized tabulation can give an accurate picture of an individual student's work. An exact copy of a student's home project plan and report which will give the reader a more definite understanding of the

types of evidences identified can be found in Appendix P, page 116. Reference to Table VIII, page 67 shows the number of times students were engaged in critical thinking processes as interpreted by the writer after reading students' reports. No doubt many instances of critical thinking in connection with the project were not reported, but were used as a part of decision making necessary to its completion. Reports and plans examined were chosen by the random sampling technique. The number of planning steps determined by job analyses and reported by the students ranged from five to forty-three with thirteen being the average. It would seem that the ability to look at a job and break it down into steps with sequential ordering is one evidence of ability to do critical thinking. The average number of goals selected was four. Again the ability to see a project as furnishing recognizable possibilities for progress is a measure of maturity for a ninth grade girl. It is likely that the number of goals stated was limited by the amount of space available on the form, however, the students were working with the idea that it is better to choose a few goals and accomplish them well, than it is to choose so many goals that their accomplishment cannot be realized. The number of unstated goals held by each student cannot be accurately determined, nor can the exact amount of progress toward attaining these goals be assessed.

The number and type of difficulties anticipated by the students was very similar to those reported. In only two instances or ten per cent of the cases did the students estimate their difficulties to be fewer by two than those actually experienced. In fifty-five per cent of the cases, the number of difficulties anticipated matched those actually experienced and in thirty-five per cent of the cases there was

TABLE VIII

NUMBER STATEMENTS INDICATING EVIDENCES OF USE OF CRITICAL THINKING IN 20 HOME PROJECT REPORTS

	SELECTING GOALS		PLANNING			EVALUATING			
Case No.	Reason for Doing	Goals Planned	Difficulties Anticipated	References Cited	Planning Steps	Benefits Derived	Difficulties Encountered	Future Uses	Generalizations Stated
1- 4	2	4	3	5	28	5	3	4	3
1- 6	2	4	2	5	6	5	2	1	1
1- 9	1	4	2	5	9	5	4	2	3
1-10	1	5	2	5	5	8	3	2	3
1-13	2	6	2	5	7	4	2	1	4
1-17	1	4	3	5	11	10	4	2	3
1-19	1	4	3	5	7	3	2	2	1
1-21	1	4	2	4	7	5	2	1	2
1-22	1	3	3	5	10	4	3	2	3
1-23	2	4	2	5	14	4	2	4	3
2- 1	2	4	2	5	16	3	1	4	1
2- 4	2	5	1	5	26	3	2	2	1
2- 5	2	4	2	5	43	3	2	2	1
2-11	2	4	1	5	16	7	3	2	1
2-12	2	3	1	5	19	3	1	1	1
2-14	2	3	2	5	6	3	1	2	2
2-16	1	2	1	5	9	6	1	1	1
2-17	2	4	2	0	9	7	2	2	1
2-21	2	4	2	5	10	4	2	2	1
2-22	3	5	2	5	15	4	1	1	1

a variance of only one between the difficulties anticipated and those experienced. This seems to indicate that students can recognize possible difficulty with a considerable degree of accuracy and thus prepare to minimize it. The ability to define difficulty and follow through with discovery of ideas or information to effect a solution are recognized practices of reasoning, critical thinking, or problem solving.

Every girl wrote at least one generalization at the end of her home project report. Some generalizations were stated as rules to follow, others were stated as cause-effect relationships. For example, one student wrote as her conclusion or generalization:

> "Be sure to follow cook books carefully and know the meanings of terms used in recipes."

This thought or rule became important to her because she had experienced error in her food preparation work because of disregard or lack of understanding of directions. The majority of the students were able to make more complete generalizations as follows:

> "The more work you put into a project, the better job you do."

> "The more time you take to fit a garment properly before stitching, the more time you have saved in the long run."

> "Sewing machine attachments save much time when one can use them properly."

> "Learning to follow the pattern guide carefully will help you to have a nicely finished product."

It is not known how many generalizations were consciously made due to success, however in light of limited space allowed on the report form, it was not unusual to find that the students most frequently based generalizations on learnings derived from difficulties encountered.

The writer believes the evidences shown are sufficient to conclude

that the home project did provide the opportunity for and the student's use of skills of critical thinking in the following ways:

1. selecting goals (identifying the problem),
2. formulating and carrying out plans of work, and
3. developing and using evaluative materials and devices.

Since all students exhibited some ability to look at a job, break it down into steps with sequential ordering, and carry it through to completion, this activity seems to be one easily recognizable evidence that critical thinking was done.

Students seemed very interested in the home project (experience) phase of the homemaking program. For each girl it furnished the opportunity to have personal help in solving a problem of importance and interest to her. For many it furnished the opportunity to work with parents or other family members in a satisfying relationship. It placed the school and the home together as jointly responsible for the learning experience involved. It is something that almost always brought satisfaction to the student for the work done and encouragement in independent thought and action through recognition that work done for a class project (through the types of processes involved) had provided the confidence necessary to do similar projects "on her own."

CHAPTER IV

IMPLICATIONS FOR FUTURE CLASS WORK

Educators have agreed that the school's responsibility is to help each child in becoming a worthy member of a free society and to help him develop the capabilities for strengthening that society. The writer believes that the human skills of critical thinking both on the part of individuals and groups are those needed for strengthening a society. The main purposes of this study were:

1. to identify the kinds and types of evidences which might be expected as an indication of critical thinking,
2. to develop teacher-pupil plans for learning experiences in which critical thinking was encouraged,
3. to develop and use simple instruments for collecting evidences of critical thinking,
4. to determine if critical thinking was a part of the students' behavior in classes taught by the writer, and
5. to present the findings as a basis for recommending changes in teaching-learning materials and activities.

Ideas gained from a review of the literature combined with results of previous teaching experiences provided the springboard from which the study evolved. The dissatisfactions of the writer as a beginning teacher were the motivational forces behind the study. From a review of literature, the overall purposes of education were more clearly identified and some ideas or concepts which might be beneficial in achieving these purposes explored. Working with the belief that

critical thinking is the most important goal of education, criteria for identifying the steps in critical thinking were designed. Present teaching methods and materials were carefully studied, revised, and improved as time permitted in order to incorporate as many opportunities as possible for students to develop and use skills of critical thinking.

Four units of study and home projects (experiences) planned cooperatively with Homemaking I classes at Stillwater Junior High School were selected for study. The units taught covered parts of five semesters beginning September, 1962 through January, 1965. Although units from four different home economics subject matter areas were reported they were similar in several ways. All started with a discussion of past experiences, present desires, and needs as a means of establishing class goals. Following the selection of goals, specific learning experiences were discussed and planned. Class procedures were selected and put into practice. Work was evaluated on the basis of criteria previously established. All units involved some individual, small group, and whole class effort in carrying out cooperatively developed plans.

Data obtained from student and teacher evaluations of work, case studies, and anecdotal records kept by the teacher showed that students can and do employ the skills of critical thinking in classroom situations where opportunities have been planned to provide for this type of activity. Students proved themselves to be capable of critical thinking by participating in the planning of content to be studied, the learning to be experienced, the procedures to be used, and the evaluation instruments for measuring growth. They seemed to get satisfaction from the knowledge that they were using their mental capacities in this way. Satisfactions appeared in such things as written and oral

expressions, dedication to the work being attempted and the attitude toward class procedures and accomplishments. When students really participated in planning and selecting class goals, formulating and carrying out plans of work, and developing and using evaluative devices, they were at the same time and by the very same processes using the skills of critical thinking.

From the results of this study, the writer has formulated the following suggestions which she believes would increase the possibility that critical thinking will be a realistic outcome of teacher-pupil learning situations:

1. More pre-service and in-service training is needed to help teachers understand ways of planning teaching-learning situations so that skills of critical thinking can be used and improved in the classroom.

2. More pre-service and in-service training is needed to help teachers with the skills of communication so that they will be more capable of interacting with students in problem-solving situations.

3. Specific devices which would measure growth in critical thinking should be developed for home economics subject matter areas.

4. Teachers should be encouraged and provided the opportunity and actual facilities to participate in action research projects which lead to the improvement of teaching and learning.

If further study is made of critical thinking practices, the writer recommends that the scope of each study be limited to only one subject matter unit and that evidences of a greater variety of critical thinking skills be collected by more definite and tested devices. The writer recognizes that data obtained only from students in her own classes is by no means conclusive, but this study seems to point out the need for further study which would attempt to discover more and

better guidelines for helping teachers to develop the skills of critical thinking with all students.

In order to keep pace with the expanding population and the trend toward increasingly crowded classrooms at all levels of education, it is imperative that students be taught to learn independently. When critical thinking practices are developed by students they will be well on the way to achieving this important educational goal. Students who have learned through cooperative and individual efforts to attack problems in a logical manner, working systematically toward planned results with calm assurance, and then evaluating these results in the light of changing situations and recent developments will be valuable and effective participants in the society.

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APPENDIXES

APPENDIX A

Date_____ Name_____

COMPREHENSIVE EVALUATION DEVICE TO MEASURE STUDENT GROWTH IN CRITICAL THINKING

Directions: Underline the characteristics which most accurately describe a student at the time of checking. Use different colored pencils when a device is used to check a student more than one time.

Part I. PLANNING AND SELECTING GOALS

Does not understand goals proposed by class.	Reluctantly accepts goals suggested by class.	Assists in formulating goals for the class.
Not interested in goals proposed.	Shows only moderate interest in class goals.	Sees many possibilities and opportunities in class goals and is anxious to get started.
Fails to recognize class goals as opportunities to learn.	Sees some of class goals as opportunities to learn.	Readily recognizes goals as learning opportunities.
Understands class goals, but fails to see how they can be carried out.	Understands goals, but is reluctant to translate them into action.	Makes worthwhile suggestions on ways of achieving goals.
Gives up easily, seldom reaches goals planned.	Not easily discouraged, but sometimes gives up before goals are reached.	Sees goals as things to be accomplished and works until they are reached.

Part II. FORMULATING AND CARRYING OUT PLANS OF WORK

Unable to visualize plans. Frequently asks what the teacher wants done.	Sometimes unable to foresee possible results.	Able to plan thoroughly toward desired results.
Makes incomplete and poorly organized plans of work.	Makes logical plans, but overlooks many important details.	Makes careful, detailed, and logical plans of work.
Fails to use plans made.	Usually follows plans.	Uses plans to accomplish results and adjusts plans if necessary as work progresses.

Cannot see possibility of adjusting a plan.	Usually able to adjust plans to meet changing situations.	Revises plans readily when to do so means greater success.
Shows little imagination in meeting new situations.	Solves problems with some degree of originality.	Clever in devising solutions to meet perplexing problems, shows creative ability.
Makes a plan with little or no prior investigation of possibilities.	Makes good plans but frequently has to revise them to fit situations.	Carefully analyzes resources and facilities as a part of planning.
Shows little or no consideration for needs and interests of class members.	Considers some of the needs and interests of class members.	Considers needs and interests of class members when planning.
Fails to recognize applicable information.	Does not readily apply knowledge to real life situations.	Makes rapid application of past knowledge in meeting new situations.
Not aware of available sources of information.	Knows where to look for applicable information.	Uses resources well.
Keeps few or inadequate records.	Usually keeps neat and accurate records.	Keeps neat and accurate records, up-to-date, prompt.
Has little understanding of the value of keeping records.	Appreciates records and uses them occasionally.	Resourceful in using records to solve problems.
Needs constant help and advice.	Does not often find new ways to do things.	Uses resources frequently and brings in many new ideas.
Seems indifferent to all class work.	Has a limited number of interests.	Interested in a wide range of activities and projects.
Sees knowledge as an end in itself.	Sees some relation between knowledge gained and the work to be done.	Looks upon knowledge as a tool and uses it in solving problems.
Has little appreciation for resource materials and carelessly uses them.	Seems to understand value of resource materials but frequently misuses them.	Appreciates authoritative resources and works to preserve them.

Expects additional information to come from teachers.	Makes effort to learn more than is already known.	Persists in finding added information even after class work is finished.
Gives incorrect reasons or no reasons at all for action or behavior.	Usually gives correct reasons to support information and actions.	Uses correct (documented) reasons to support discussion and action.
Unwilling to assume own share of responsibility in carrying out work.	Usually carries own share of responsibility.	Assumes responsibilities willingly.
Fails to recognize responsibilities.	Slow to recognize responsibilities.	Recognizes personal responsibilities within a group.
Fails to keep promises and appointments.	Sometimes fails to keep promises.	Keeps promises and appointments, seldom forgets.
Unwilling to modify plans for the good of a group.	Sometimes upset by change in plans.	Adjusts readily and pleasantly to new situations.
Does not work well with others.	Works moderately well with others.	Works harmoniously with others.
Often antagonistic or bored.	Sometimes disagreeable or antagonistic.	Usually agreeable and interested.
Seldom contributes to group discussion and planning.	Usually has ideas in group discussion and planning.	Often takes the lead in group discussion and planning.
Fails to observe personal hygiene.	Usually observes personal hygiene.	Keeps personal hygiene at very high standards.
Has an unpleasant or loud voice.	Usually has a pleasing voice, sometimes loud.	Has a pleasing, well modulated voice.
Ill at ease when working with others.	Sometimes ill at ease in a group.	Natural in group situations, relaxed, composed.
Easily upset in the face of opposition.	Sometimes upset when opposition is met.	Handles opposition nicely, tactfully gives and takes.

Pessimistic.	Usually happy and cheerful.	Optimistic, happy, and cheerful.
Poor sense of humor.	Sometimes able to see the humorous side of things.	Has a sense of humor and uses it kindly.

Part III. DEVELOPING AND USING EVALUATIVE MATERIALS AND PROCEDURES

Does not see the value of an analysis of past experiences.	Sees value of some analysis. Usually honest in analysis.	Able to analyze behavior or work done and judge results clearly in an objective manner.
Does not change method of behavior after evaluation.	Slow to change behavior after evaluation of past experience.	Willing to change method or behavior or both to improve self and work.
Resents being asked to make self-evaluation.	Makes self-evaluations only when requested to do so.	Makes thorough and accurate self-evaluation.
Has little understanding of how to establish evaluative criteria.	Begins to see ways of developing evaluative devices.	Enjoys preparing and checking evaluative devices for self and group.
Sees little or no relation of past experiences to present situations.	Makes some analysis of experiences. Usually honest in evaluation.	Analyzes behavior of work done and judges results in an objective manner.
Resents evaluations of personal behavior and products made by others.	Listens to evaluations of others but does not accept them.	Welcomes critical analyses by instructors, group members and others.
Not interested in evaluating group thinking and action.	Passively accepts evaluations made by others of group work.	Works with group members willingly and objectively in evaluating group thinking and action.

APPENDIX B

EVALUATION OF GROUP WORK

Group No._____ Activity_____ Cl. Hr. ____ Date_____

Chairman_____ Members_____

Directions: Fill in the following form by discussing each point with your group. Record the opinion of the majority in the proper space.

Points to Consider	YES	NO	COMMENTS
1. Did all members assist the chairman in planning the work? Formulating reports?			
2. Did each member assume her share of responsibility willingly?			
3. Did members study books and references before making final plans?			
4. Were plans presented to the teacher for approval at the scheduled time?			
5. Was the group able to reach decisions without waste of time?			
6. Was the group chairman selected democratically?			
7. Were materials and references used left in an orderly condition?			
8. Did the group cooperate by limiting discussion to the problem being studied?			
9. Was it easy to follow the plans that were made for working on the problem?			
10. Did all members of the group see a real need for studying the problem?			
11. Was a suitable method for recording needed information adopted?			
12. Did the work provide for new learning experiences?			

Overall Rating: On the basis of the above answers, we rate our project as (circle one) POOR FAIR GOOD EXCELLENT

Our goals for improving the quality of our group work are:

Assistance needed from teacher or other groups in achieving our goals:

APPENDIX C

FURNITURE ARRANGEMENT EXERCISE

Objective: To learn to arrange furnishings conveniently and attractively.

Instructions: On page 1 you will find a list of rules or principles of furniture arrangement formulated by the classes after studying the problem through small group activities. On page 2 you will find a scaled floor plan for a girl's bedroom. Furniture cutouts are found on page 3. Try several arrangements on the plan on page 2. As you work with the arrangements, review carefully the principles on page 1. Finally, decide on the arrangement that you believe is most attractive and convenient. Glue the furniture cutouts to the plan in the desired arrangement. List the principles you have been able to apply in your arrangement and cite examples to prove their application, page 4. Hand in the plan with the list of principles you have applied. Hand in page 2 and page 4_____.
(date)

FURNITURE ARRANGEMENTS

Two considerations are important in arranging furniture. They are design and function. In the composition of a picture, the principles of design must be observed if the effect of the picture is pleasing. A room is a composition of lines, shapes, and colors in its floor, walls, and furnishings. The principles of design must be observed in this type of composition as well as in the other. However, no matter how beautiful a room appears, it is not satisfactory if it is not functional. For example, in addition to being attractive, a living room should provide for the activities the family carry on in the room and should look as though it belonged to the family. A livable, lived-in look is as important as beauty.

The following rules of furniture arrangement are proposed to help one achieve good design and function:

1. Select furniture that is scaled or in proportion to the room and to the family using the furniture if you expect to be pleased with your arrangements.
2. Select a center of interest, and subordinate all other interest to it.
3. Observe the rules of balance (a) so that large pieces of furniture on one wall balance doors, fireplaces, windows, or large pieces on the opposite wall and (b) so that each wall is balanced from top to bottom. For example, a large picture over a small table will make the wall seem top heavy. Each room is more restful if one wall shows formal balance, but the effect is monotonous if every wall expresses formal balance.
4. Retain good proportions by placing large pieces of furniture on large wall areas and small pieces of furniture on small wall areas.
5. Keep traffic lanes in the hall and in each room clear because it is annoying to bump into chairs, tables, or beds when passing through a room.
6. Place all large pieces of furniture parallel with the structural lines of a room.
7. Avoid using too much furniture in a room.
8. Scatter upholstered pieces of furniture among wood pieces.
9. Avoid letting all furniture hug the wall, but at the same time avoid filling too much of the center floor area.
10. Place large pieces of furniture, such as sofas, beds, chests, and so on, before trying to place small pieces.
11. Arrange all furniture with purpose and function in mind, grouping those pieces which are needed for an activity.

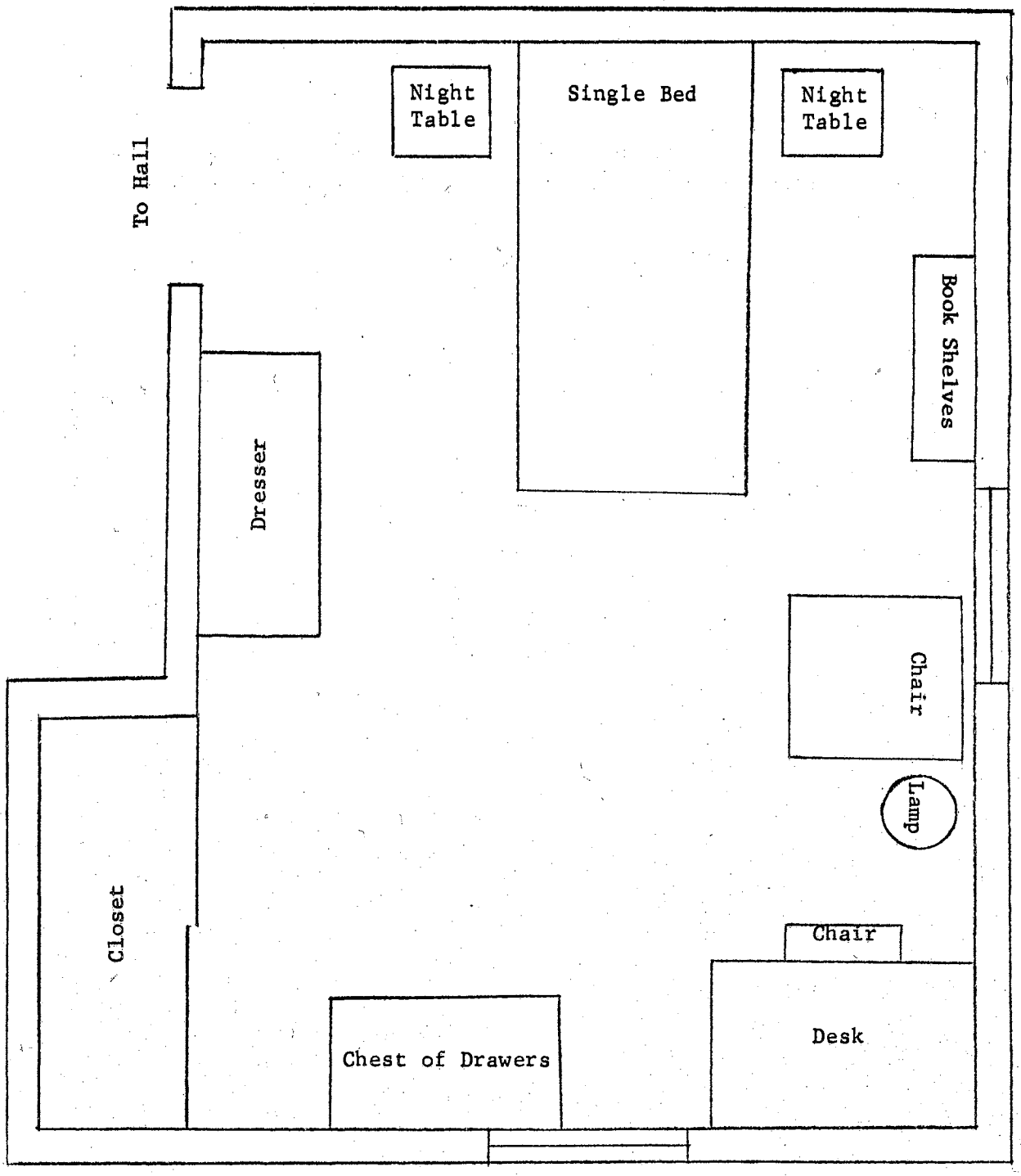
The following suggestions are proposed to help one select and arrange bedroom furnishings:

1. Single or double beds may be used.
2. Each occupant of a bed needs a bedside table and a lamp.
3. Each person needs a chest of drawers or other suitable storage area.

4. Place bed or beds first, out of drafts, morning sun and traffic lanes.
5. Place beds 16 inches apart to permit each bed to be made from both sides.
6. Beds should be placed so that there is a clear traffic lane to the entrance door and between the dressing table and the closet.
7. Chests and dressing tables should be placed near the closet to make dressing easy.
8. Desks, tables, lamps and chairs may be grouped to form a center for reading, studying, or sewing.

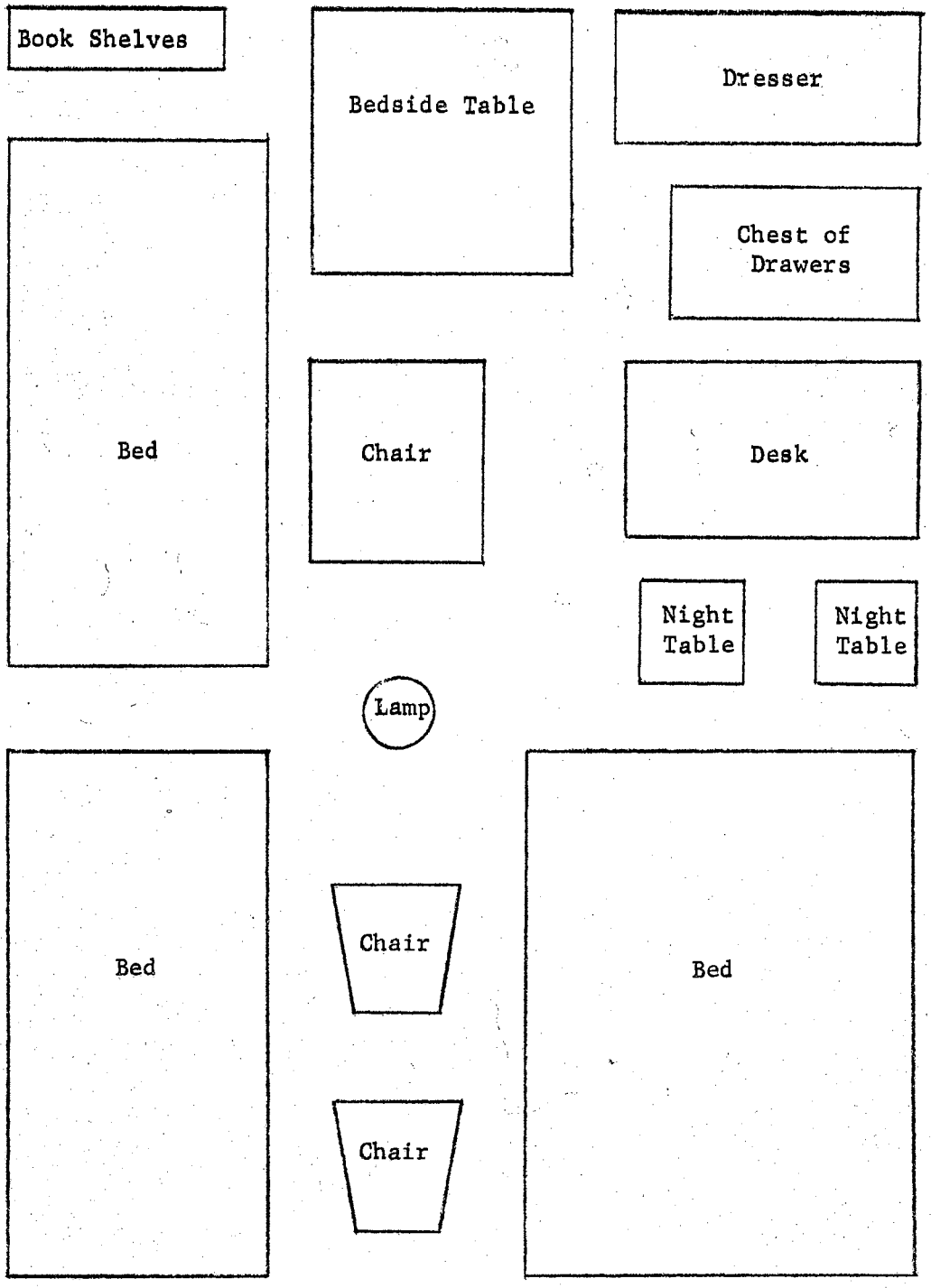
Name MARY BARTON

PROBLEM: FURNITURE ARRANGEMENT



Dimension: 10 feet x 14 feet Scale: 1 inch = 2 feet

FURNITURE CUTOUTS



Name MARY BARTON

PRINCIPLES OF FURNITURE ARRANGEMENT

I. The following principles were applied in the arrangement on page 2: (Give examples of each application.)

1. I selected furniture in good proportion to the other pieces, and to the whole, and to my own desires. Example: the chair and the floor lamp, the bed and the night tables.
2. My center of interest is the bed which is the first thing you notice from the entrance. It could be emphasized with colored pillows, and perhaps stuffed animals.
3. Observe the rules of balance. Example: The bed on one side of the room balances with the dresser, chest of drawers, and desk on the other side. The bed and two night tables provide formal balance on one wall.
4. I retained good proportions by placing large pieces of furniture on large wall areas (such as the bed) and small pieces of furniture on small wall areas (such as the desk).
5. I kept traffic lanes clear to prevent bumping into objects. Example: There is a clear lane from the entrance to all parts or areas of the room. I could move from one area to another without any inconvenience.
6. I placed all large pieces of furniture parallel with the structural lines of the room. Example: The bed is parallel to one wall, the dresser is parallel with another wall.
7. I did not use too much or unnecessary funiture in the room. I used just what I needed.
8. I scattered upholstered furniture among wood pieces for more interesting texture, color, rhythm, etc. Example: The upholstered chair is placed between the bookshelves and the desk.
9. I avoided letting all the furniture hug the wall, but at the same time, I avoided filling too much of the center floor area. Example: The comfortable chair and the two night tables do not hug the wall, but the other pieces do in order to conserve floor space.
10. I placed the large pieces of furniture (bed, chest, dresser, and desk) before trying to place the small pieces.
11. I arranged all furniture with purpose and function in mind, grouping those pieces which were needed for an activity. Example: (1) Sleeping area - bed, night tables; (2) study area - desk, chair, and bookshelves; (3) grooming area - dresser, closet, and chest of drawers; (4) reading area - comfortable chair, floor lamp, bookshelves.

II. List any structural changes in the room that would have made the arrangement problem simpler.

I think the window on the longest wall should have been placed farther down to one side instead of directly in the middle. Furniture arrangement is easier when large amounts of unbroken wall space are available.

APPENDIX D

Approved_____

Class Hour 2 Chairman Beverly

FIELD TRIP PLAN

Group Members Jane, Pamela, Nancy

Date of Field Trip Oct. 14, 1964 Day of Week Wednesday Time 9:40

Destination Mrs. Smith's Address_____ Phone_____

Person in charge of arrangements Beverly

Transportation (if needed) provided by Mrs. Jones

Problem being studied by the class How can we learn to use storage space more conveniently?

Planned observations which will help us achieve a better understanding of the problem being studied: (State in the form of questions to be answered through observation.)

Beverly: 1. What pieces of furniture can be selected to serve a dual purpose? (storage and another function)

Jane: 2. When are drawer dividers practical?

Jane: 3. How can drawer dividers be made, easily, economically, and durably?

Pamela: 4. What storage accessories from the department store have been used successfully in this home?

Nancy: 5. What seems to be this homemaker's most important idea about good storage?

Beverly: 6. Has this homemaker used any unusual ideas to make closet space more usable?

All: 7. What makes storage space convenient?

All: 8. What practices cause storage space to become inconveniently used?

Class Hour 2 Group Chairman Beverly

FIELD TRIP REPORT

Destination of Field Trip Mrs. Smith's

Our main purpose was to find ideas that would help us to use our storage more conveniently.

We saw principles applied in the following ways: (Give definite examples. Report to class may be supplemented with sketches on chalkboard, etc. to make it more easily understood by those who did not see.)

1. In closets, place articles worn together near each other. Example: In Mrs. Smith's closet, she had a high bar for blouses and a low bar for skirts in one end of the closet. Coordinated garments were placed to the right on the corresponding bars.
2. We didn't see any storage furniture that could be used for another purpose in the bedroom but in Mrs. Smith's living room she showed us a lamp table that had some storage space in it.
3. Drawer dividers are practical when they help keep things orderly and convenient. Some furniture comes with dividers already in place. Example: record cabinets, buffet drawers, etc. The best examples of drawer dividers we saw at the Smith house were those used in Mrs. Smith's dresser. They were permanently built of plywood and placed in one drawer to organize curlers, clips, pins, hairnets, etc. We also saw in a book where drawer dividers (SHOW) could be made from heavy cardboard or pressed wood and painted or papered attractively. In order to be convenient, drawer dividers must be durable and stay in place.
4. Mrs. Smith had used several storage accessories which she had bought. Example: shoe bag, circular belt hanger, garment bags, and plastic cosmetic tray.
5. The most important idea about good storage is to have a place for everything and keep everything in its place.
6. Storage space can be convenient when people have a plan for putting things used most frequently in convenient places and things used not-too-often in out-of-the-way places.
7. Storage space becomes cluttered when people are careless about the manner in which they put things away and when they forget to spend a little time with their storage areas for keeping them neat and orderly.

Class Hour 2 Group Chairman Beverly

F I E L D T R I P R E P O R T, page 2

The most unique, clever, or appealing ideas we saw were: (Show the relationship of these to principles being studied.)

Inexpensive unpainted chests had been placed in specially built areas and painted the same as the walls to form built-in storage areas.
The drawer dividers.
The clothes bars at different levels for skirts and blouses.

We learned: (State in form of generalizations, conclusions, or facts.)

See Numbers 1, 3, 5, 6, and 7 above.

Our suggestions for other observation groups are:

Do some reading before going on the field trip. Looking for ideas in books or magazines can help you form better questions and will help you be more alert or aware of things when you go on the field trip.

EVALUATION OF GROUP WORK

Group No. IA Activity Observation Cl. Hr. 2 Date Oct. 16, 1964

Chairman Beverly Members Jane, Pamela, Nancy

Directions: Fill in the following form by discussing each point with your group. Record the opinion of the majority in the proper space.

Points to Consider	YES	NO	COMMENTS
1. Did all members assist the chairman in planning the work? Formulating reports?	X		
2. Did each member assume her share of responsibility willingly?	X		
3. Did members study books and references before making final plans?	X		But we should have studied more to give us better ideas.
4. Were plans presented to the teacher for approval at the scheduled time?	X		
5. Was the group able to reach decisions without waste of time?		X	We had trouble deciding on our questions.
6. Was the group chairman selected democratically?	X		We rotate.
7. Were materials and references used left in an orderly condition?	X		
8. Did the group cooperate by limiting discussion to the problem being studied?	X		Most of the time.
9. Was it easy to follow the plans that were made for working on the problem?	X		
10. Did all members of the group see a need for studying the problem?	X		
11. Was a suitable method for recording needed information adopted?		X	It was kinda hard to make our report from our notes.
12. Did the work provide for new learning experiences?	X		We learned a lot.

E V A L U A T I O N O F G R O U P W O R K, page 2

On the basis of the above answers, we rate our project as:

POOR FAIR GOOD EXCELLENT (circle one)

Our goals for improving the quality of our group work are:

To stop talking about other things when we are trying to plan or make our report. To get a better method of recording information for our report to class.

Assistance needed from teacher or other groups in achieveing our goals:

None.

APPENDIX E

8th Grade Foods Unit Outline - Stillwater Jr. High - Spring 1964

Meal Patterns	New Learning Experiences	Notebook Emphasis	Demonstration Topics
R. I (30¢) Buffet Breakfast Fruit Assortment Meat Waffles, Hot Cakes Milk Beverage (Hot)	Selecting and preparing breakfast meats Working with others Locating equipment Caring for equipment Analyzing jobs Working safely in the kitchen Shopping within a budget Buffet meal service Planning nutritious meals Varying the breakfast menu Preparing quick breads Selecting foods wisely Storing foods properly Table setting and etiquette Making centerpieces or flower arrangements Conservation of time, energy, space, money	Table setting Table service Nutrition and preparation of milk	Flower arrangements Using kitchen equipment Method of mixing quick breads
R. II (25¢) Teen Time Lunch Hot Sandwich Relish Plate Fresh Fruit Cookies Milk Beverage	Sandwich preparation and variations Preparation of vegetables for relish plates Using the oven Food garnishes Selecting and storing breads Variations of milk beverages	Vegetable - Fruit Food Group (nutrition & preparation) Cereal Foods (nutrition, preparation)	Preparation of relishes Use of cutting equipment Garnishes Using appliances

Meal Patterns	New Learning Experiences	Notebook Emphasis	Demonstration Topics
R. III (25¢) Country Breakfast Fruit Juice Cooked Cereal Eggs Toast Variation Beverage	Selecting and storing eggs Preparing cereal foods Preparing eggs, variations (protein cooking) Toast variations	Nutrition and preparation of eggs Cereal Foods (selection, storage)	Egg preparation Toast variations
R. IV (40¢) Family Dinner Meat Canned Vegetable Salad Bread Beverage	Interesting ways of serving canned vegetables Selecting and using convenience foods Preparing salad greens for salads Selecting and storing fresh vegetables Tasting new foods Managing time, energy, space, money Improving table manners	Vegetable preparation Cost analysis Meat Group (nutrition, preparation)	Preparation of salad greens Rotisserie cooking Meat serving hints
R. V (20¢) Dessert Party Frozen Dessert Beverage	Use of home freezer Setting table for dessert course Selecting nutritious desserts Festive decorations	Entertainment planning	Wrapping foods for the freezer

APPENDIX F

PLAN FOR MEAL PREPARATION

Kitchen_____

Group_____

Cl. Hr._____

Group Members:
Manager_____

Asst. Mgr._____

Hostess_____

Cook_____

Cook_____

What foods shall we prepare?
(Write menu here.)

Where shall we find our recipes?
Book: Page:

What new learning experiences will this give us?

Have we cleared our menu with the teacher?_____
(Approval)

How will the meal be served? (What type of service will be used? Describe.)

What are the hostess's responsibilities for the meal service?

PLAN FOR MEAL PREPARATION, page 2

How shall we set the table? (Draw a sketch of one place setting here.)

What equipment will we need for setting the table?

Amount: Item:

What shall our centerpiece look like? (Sketch here.)

What equipment will we need for the centerpiece?

Amount: Item:

Sketch the position of <u>service</u> dishes and silver to be placed on the table before the meal.

Have we located all of the equipment needed so we can find it easily on meal preparation day?

Yes_____ No_____

PLAN FOR MEAL PREPARATION, page 3

HOW SHALL WE DIVIDE OUR RESPONSIBILITIES?

Manager_____ Kitchen_____ Group No._____

Class Hour_____ Date_____

Job to Be Done	Person	Starting and Finishing Times	Equipment Needed	Cooking or Baking Temp.

PLAN FOR MEAL PREPARATION, page 4

INDIVIDUAL TIME PLANS

Name		Name		Name	
Time	Job	Time	Job	Time	Job
Name		Name		Name	
Time	Job	Time	Job	Time	Job

PLAN FOR MEAL PREPARATION, page 5

OUR SHOPPING LIST

Menu

Name of Manager_____
Date of Prep._____
Group No._____
Class Hr._____
Approval_____

To be filled out before shopping: To be completed after shopping:

Food Items	On Hand	Amount Needed	Estimated Cost	Amount Purchased	Unit Cost	Amount Used	Cost for Amt. Used
MILK AND MILK PRODUCTS:							
CEREALS, BREAD							
MEAT AND EGGS:							
FRUITS & VEGS:							
MISC. & SUP-PLIES							
		Total _____				Total_____	
		Per Person _____				Per Person_____	

Date_____ Market_____ Ticket No._____ By_____

APPENDIX G

Names_____

MEAL MANAGEMENT

Manager_____Rotation_____ Class_____Date_____

POINTS

I. Management of Space and Energy (25)
   A. Did each keep her working area neat, well organized as she worked?----------5 _____
   B. Was the work center selected to avoid unnecessary steps?----------5 _____
   C. Was the kitchen in good order when the meal was served?----------5 _____
   D. Was a good method selected and used for each job?----------5 _____
   E. Was all work planned and carried out to use as little energy as possible? (collecting supplies and ingredients, setting table, clearing table, washing dishes, storing dishes, etc.)----------5 _____

II. Time Management (25)
   A. Was time used to a good advantage?----------5 _____
   B. Was the meal prepared without rushing?----------5 _____
   C. Was the meal ready on time with all foods at the right temperature or degree of doneness--5 _____
   D. Was there time to enjoy the meal through relaxed gracious, dining?----------5 _____
   E. Was ample time available for clean-up duties?----------5 _____

III. Management of Equipment (25)
   A. Was the most practical and convenient equipment used for each job?----------5 _____
   B. Was the equipment used efficiently and safely?----------5 _____
   C. Was equipment handled and stored as well as possible?----------5 _____
   D. Were directions for use of equipment (if any) observed?----------5 _____
   E. Was all equipment cleaned and left in good order at the end of the meal?----------5 _____

IV. Money Management (25)
   A. Was a wise choice made in selecting foods for each use?----------5 _____
   B. Was the right amount of food selected and used? Were unused foods and supplies stored properly to prevent waste?----------5 _____
   C. Was there a reasonable amount of nutrition for the amount of money spent?----------5 _____

MEAL MANAGEMENT, page 2

POINTS

IV. Money Management (25) (Continued)

D. Was the meal prepared within the specified budget?----------5 _____

E. Was there a combined effort to be conservative in use of power, fuel, supplies, etc.?----------5 _____

TOTAL SCORE _____

Our group was best in the management of_____

and poorest in the management of_____.

Comments:

APPENDIX H

DETERMINING AESTHETIC AND FUNCTIONAL QUALITIES OF TABLE ARRANGEMENTS

Group No._____ Meal _____ Date_____

Group Members_____

Rated By Group No._____ Members_____

AESTHETIC QUALITIES:

1. Is the place setting well balanced? (10) _____
2. Is the table well balanced, taking all place settings, serving dishes, etc. into consideration? (5) _____
3. Is there good color harmony of linens, pottery, centerpiece, and foods? (10) _____
4. Does the centerpiece display good proportion in its arrangement? (5) _____
5. Does the centerpiece show simplicity of design? (5) _____
6. Does the centerpiece have a good color harmony of its parts? (5) _____
7. Is serving silver placed beside the companion dish or tray? (5) _____
8. Are all items for one person placed neatly within the space usually allowed for one person? (10) _____

FUNCTIONAL QUALITIES:

1. Is the place setting arranged to provide for all the foods in the menu and nothing more? (10) _____
2. Are pieces of silverware arranged in the order of use from the outside to the plate? (10) _____
3. Is the napkin easy to reach and unfold with as little motion as possible? (5) _____
4. Are salt and pepper shakers placed between covers for easy reach? (5) _____
5. Is it possible for the guests to see easily above and around the centerpiece to any other place at the table? (5) _____

DETERMINING AESTHETIC AND FUNCTIONAL QUALITIES OF TABLE ARRANGEMENTS, page 2

FUNCTIONAL QUALITIES: (Continued)

6. Is the person responsible for serving to be seated near the kitchen? (5) _____

7. Are chairs placed in the correct alignment to the table to allow for seating guests graciously? (5) _____

TOTAL SCORE _____

APPENDIX I

EVALUATION OF INDIVIDUAL PLANNING

Manager_____ Meal_____ Rotation_____ Class Hr._____ Date_____

Directions: Allow 10 points credit per question. Write your name in one of the columns to the right, then record the number of points you feel you earned for each item. Total points at the bottom of page.

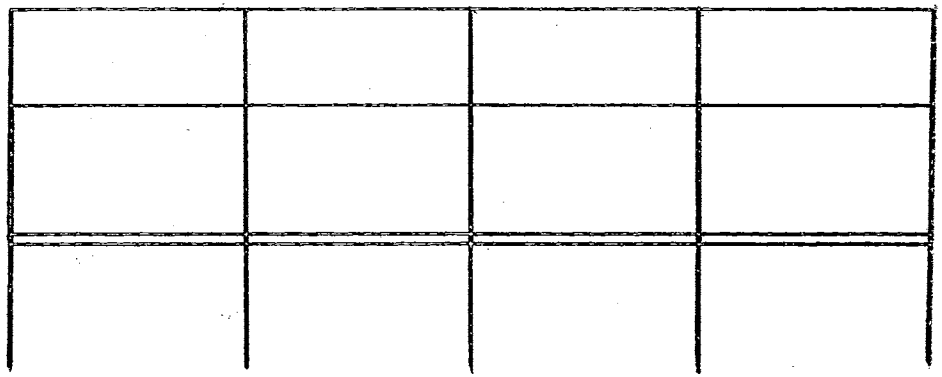
NAME ⟶			
1. Did you have all the information needed in order to do your job well?			
2. Did you know where to find all of your equipment and supplies quickly without unnecessary steps?			
3. Was your choice of all equipment practical, convenient, and time-saving?			
4. Did some problems arise that you had not anticipated or planned for?			
5. Were you able to follow your time schedule calmly, efficiently?			
6. Did your job coincide or relate well to other jobs that were being done?			
7. Did you know the proper table service and etiquette needed for the meal?			
8. Did you gain some new ideas, or learn some new methods or facts?			

EVALUATION OF INDIVIDUAL PLANNING (Continued)

9. Did you have a thorough knowledge of all phases of the meal, even though you were directly responsible for a part of it?

10. Did you know and prepare in advance for all of your responsibilities including clean-up?

TOTAL



APPENDIX J

Home Economics Name_____

EVALUATION OF STUDENT'S NOTEBOOK

Score a maximum of ten points for each item. Subtract points for practices which do not meet the standard suggested.

	POINTS ALLOWED			
Date ——				
1. Are notes organized in order of first use, with all materials firmly attached?				
2. Are bold captions used to focus attention on main topics? (Score 1 point for each bold topic you can find -- up to 10.)				
3. Is the method of taking notes consistent? Do you use the same good form repeatedly? (Always - 10, Usually - 5, Occasionally - 3)				
4. Are new words and terms emphasized, underlined, and defined?				
5. Are notes accurate, complete, easy to read and understand?				
6. Is material organized so that notes pertaining to a particular topic are grouped. Are notes related to topics, understandings, or goals?				
7. Is there a special place and method for writing assignments and dates due?				
8. Have checked papers and printed materials been placed in a special area for easy reference?				

EVALUATION OF STUDENT'S NOTEBOOK (Continued)

	POINTS ALLOWED			
Date ———				
9. Have you included meaningful (worthwhile) notes from unassigned, but related references?				
10. Do you feel that your notebook is of value to you for study and learning purposes? (Much - 10, Some - 5, Little - 3, None - 0.				
TOTAL ———				

APPENDIX K

Date Due Feb. 21 Name Mary Smith

A COMPARISON OF TWO COMMERCIAL DRESSMAKING PATTERNS

Directions: Compare any two printed commercial dressmaking patterns as to their directions, symbols, and other information.

I. The 3 features I like best about the Brand A (brand name) pattern are:

1. Good construction markings
2. Good pattern layouts
3. Good explanations

II. The 3 features I like best about the Brand B (brand name) pattern are:

1. Good construction markings
2. Easy to read sewing guide
3. Good explanations

III. The two patterns are alike in the following ways:

1. Easy to understand
2. Tell how much material
3. Tell notions
4. Tell suggested fabrics
5. Explain different sizes
6. Both give pattern pieces
7. Give pattern pieces on back and inside
8. Both have pattern layouts
9. Both tell how to cut
10. Both tell how to mark

IV. The two patterns are different in the following ways:

1. Brand B tells how to treat special fabrics.
2. Brand A says how to straighten fabric.
3. Brand A tells how to finish seams.

V. Conclusions:

I believe that the Brand A patterns are better, mainly because they give the directions in simple terms and they also have a better selection of styles from which to choose.

APPENDIX L

Name_____

PROGRESS RECORD - APPROVAL SHEET

Directions: After each major step is completed, have it checked by the teacher. While you are waiting your turn for approval, you could use your time by studying ahead for future steps, organizing equipment, reviewing, etc. (It is important to use time well.)

Step to Be Completed	Approval Date	Comments
1. Pattern alteration		
2. Pattern layout		
3. Cutting		
4. Marking		
5. Staystitching		
6. Pin fitting (Have a classmate check and approve this step.)		
7. Darts		
8. Shoulder seams		
9. Neck facing:		
Basting		
Stitching		
10. Armhole facings or sleeves:		
Basting		
Stitching		
11. Understitching		
12. Vertical seams		
13. Waistline seams		
14. Zipper or other closures		
15. Hem:		
Basting		
Finishing		
16. Misc. finishing		
17. Final pressing & fitting		

APPENDIX M

Name Ellen Rogers

AM I A GOOD MANAGER?

		Mar. 20	Mar. 25	Apr. 3	Apr. 10
I. Using Equipment Wisely					
A. Is my equipment labeled and arranged in an orderly way in my tote tray?	A.		U	U	U
B. Do I have the necessary equipment in my tote tray?	B.		A	A	A
C. Do I properly use, care for and put away equipment that belongs to the class?	C.		U	U	U
D. Do I share in use of equipment taking only my share of time?	D.		U	U	U
II. Using Work Space Effectively					
A. Do I keep work spaces cleared of unnecessary items? (Coats, books, purses)	A.		U	U	U
B. Do I willingly share available work space?	B.		U	U	U
C. Do I help keep working areas and floors cleared of scraps, threads, pins, etc.?	C.		U	A	A
III. Acquiring Knowledge and Working Independently					
A. Do I pay close attention when the demonstrations are given?	A.		A	A	A
B. Do I record the necessary information from each demonstration in my notebook?	B.		S	U	U
C. Do I use my instruction guide sheet for directions before asking for teacher's help?	C.		U	U	U
D. Do I consult bulletin boards and other illustrative material when I have questions?	D.		U	U	U
E. Do I evaluate and check my work before asking questions?	E.		S	U	U
IV. Using Time to Best Advantage					
A. Do I begin work immediately at the beginning of the class period?	A.		A	A	A
B. Do I plan the use of my time?	B.		U	U	U
C. Do I plan to use those minutes while waiting for teacher's help or for a machine?	C.		U	U	U
D. Do I work until bell time, allowing only enough time for clean up?	D.		U	U	U

AM I A GOOD MANAGER? (Continued)

V. Planning

A. Do I plan to reach a daily goal, as well as the goal for the week?

B. Do I plan my machine work so as to take as little time as possible?

C. Do I plan my class time (and other time, if necessary) to keep with the class goal.

	Mar. 20	Mar. 25	Apr. 3	Apr. 10
A.		S	U	U
B.		U	U	U
C.		U	U	U
		fair	good	good

On the basis of the above questions, I rate myself as a: (good, fair, poor, or lousy) manager.

Key to Responses:

A - Always, S - Sometimes, N - Never, U - Usually

APPENDIX N

Name Barbara Mason

SCORE SHEET FOR CLOTHING PROJECT

	Points Possible	Points Allowed
Neatness of Machine Stitching (30)		
- Even, smooth, straight stitching lines, correct matching, good tension & length	10	8
- Seams finished for permanent durability (pinked, turned and stitched, or bound)	5	5
- Top stitching or decorative stitching especially neat and attractive	5	5
- Zipper, plackets etc. applied smoothly, neatly, evenly, accurately	5	5
- Pockets, trims, etc. uniform in size, neatly stitched or applied	5	5
Neatness of Pressing (10)		
- Seams, darts, pleats, facings, pressed correctly	5	5
- Hems, waistband, pockets, etc. pressed flat, smooth	5	5
Neatness of Finishing (30)		
- Threads tied and clipped	5	5
- Basting, markings, etc. removed	5	4
- Fasteners placed neatly, accurately, securely	5	5
- Handwork barely visible on either side; uniform, durable, stitches	10	10
- Seams free of excess bulk, roughness	5	5
Neatness of Fitting (30)		
- Hems hang level from floor; attractive length	10	10
- Smooth, graceful fit, waistline snug, but comfortable; slight ease through hipline	10	10
- Flattering; well proportioned to size and shape of figure	10	10
TOTAL	100	97

APPENDIX O

Name _____

EVALUATION OF STUDENT'S PARTICIPATION IN CLASS DISCUSSION

Key to Responses: A = always; U = usually; S = sometimes; Sd = seldom; N = never

	Wk. 1	Wk. 2	Wk. 3	Wk. 4
1. Have I avoided interrupting others?				
2. Have I timed my comments and questions so that they are definitely related to the lesson?				
3. Have I given careful consideration to the wording of my comments for the sake of brevity and clarity?				
4. Do I raise questions for the purpose of clarifying a point or comment when needed for my own understanding?				
5. Do I summarize class discussion into meaningful facts or generalizations each day?				
6. Do I avoid monopolizing class discussion?				
7. Do I contribute my responsible share to class discussion?				
8. Do I refrain from making sarcastic or comic remarks which are a distraction to the class?				
9. Am I tolerant to the views of others?				
10. Do I duscuss calmly without display of emotion?				
11. Do I consciously and consistently try to make progress in my ability to speak confidently before others?				

How can I improve my contributions to the class?

What are my suggestions for the whole class?

APPENDIX P

Home Project Plan Stillwater Junior High School

Part I. PLANNING THE PROJECT

Name Cynthia Bell Address _____

Semester 2nd Plan Due Feb. 15 Project Due April 13, 1964

General Project Topic Personality

Project Title How to Get Along With Others and Face Up to Problems

My reasons for choosing this project:

So that I may learn more about people and also so that I may get along with all people. To help me improve my relationships with my sister and brother-in-law with whom I live.

I believe I can do this project because:

I don't know if I can succeed in this project, but I'm going to try as hard as I can.

Goals for learning, improving, and/or achieving are:

1. To be able to get along with others and to help in their problems.
2. To improve my personality in general.
3. To be able to face up to all of my problems with a strong heart and chin-up.
4. To learn to talk my problems over with members of my family without losing my temper.

This is exactly what I will do in my efforts to accomplish these goals: (Give the amount of work to be done, exact number of times, etc.)

I will read books and pamphlets in order to learn more about getting along with other people. I will try to understand myself and others better. I will try to apply what I learn from what I read in my day-to-day activities.

Problems or difficulties I expect to encounter:

1. Developing better emotional control.
2. Learning to "give-in" when I should, not being stubborn.

References I will use: (Five references are the suggested minimum.)

	Author	Title	Pages
1.	Judson & Landis	BUILDING YOUR LIFE	29-196
2.	Allen & Briggs	IF YOU PLEASE	6-15
3.	Fisher & Noble	COLLEGE EDUCATION AS A PERSONAL DEVELOPMENT	2-133
4.	Baxter, Justin	OUR SHARE IN THE HOME	1-12
5.	Ahern	TEENAGE LIVING	111-118

HOME PROJECT PLAN, page 2

Detailed PLAN I will try to follow: (Insert extra sheets if needed.)

1. I will read references and take note of important ideas I should try to apply.
2. I will study my personality and try to find ways to improve it.

   Example: a. I will smile more, be more cheerful.
   b. I will try to help others.
   c. I will try to stay out of arguments.

3. I will try to listen to people's advice and consider it for my own good.
4. I will try hard to look for the good things about people in my family and learn to appreciate them more.
5. I will try to avoid feeling sorry for myself.

Supplies and equipment I will need:

Amount	Item	On Hand	Will Buy	Estimated Cost
None				

Total_____

I have estimated the time required to complete the project to be 18 hours which I believe to be reasonable in relation to my other studies and activities and the goals established for the project.

I plan to organize the use of my time as follows:

About two hours reading each week.
About 15 minutes each day to think and plan.

I plan for others to help me with my project as follows:

Name of person	Help needed
None	

HOME PROJECT PLAN, page 3

THINKING IT OVER: In the blank at the left of each question below, answer YES, SOMEWHAT, or NO depending upon the degree to which the planned project meets the criteria indicated by the question. AFTER you have completed the project, answer again in the space on the right.

Will It?			Did it?
yes	1.	Help me solve a problem of concern to me?	yes
yes	2.	Give me a chance to learn something new?	yes
yes	3.	Have the approval of my parents?	yes
yes	4.	Prove to be difficult enough for me, but not too difficult?	yes
yes	5.	Give me an opportunity to apply what I already know in a different situation?	some
yes	6.	Show me the connection between what we do at school and what we do at home?	yes
yes	7.	Bring me into closer relationship with other members of my family?	yes
yes	8.	Teach me to accept responsibility?	yes
yes	9.	Teach me to make good use of my time?	no
some	10.	Provide experience in planning and management?	yes
yes	11.	Give me a feeling of satisfaction?	yes

Parent's approval and comments about planned project:

Signed, Mrs. Robert Jones

Home Project Report

Part II. REPORTING THE PROJECT

Story of my Home Project: (Use the following space and attached sheets if necessary. Use good form for writing, correct grammar, sentence structure, and spelling.)

When I started my project I first read my references. I got a little mixed up with some of my reading because all of my references didn't agree. I usually followed the one that seemed to be the most practical to me. Beside using my references I studied other people to whom I thought set good examples for a good personality. I tried to smile all of the time, but I know that I didn't. I wouldn't say that I had full success in my project, but the old saying still stands, "Don't give up the ship," and so I'll keep on trying. The hardest part of my project was getting along with my brother-in-law. I realized that he is the one most responsible for me and this gives him the right to correct me. All kids need to be corrected at times. Now when I am corrected, no matter if I think I'm right, I keep my opinion to myself and try to profit from the situation. I have learned to think through my problems better without getting so upset. The most interesting part of my project was studying other people. I have always been interested in other peoples' reactions to different circumstances. With the help of my references I now think I understand people better and why they act as they do. I think on the whole my project has helped me a great deal. I have learned that one person's efforts can make a difference in a family. I have enjoyed being at home more. I have also learned that when a person tries to improve their personality, they cannot help but get results. Not only have I been happier at home, but I am beginning to enjoy my friends and school more too.

READING NOTES

These are the ideas from my readings which I tried to apply in my project.

1. Judson and Landis. BUILDING YOUR LIFE, page 29-196
   - Make it a habit to be friendly to everyone you meet. Don't wait to see if the other person will speak first.
   - Give people honest compliments. This helps you to form the habit of looking for the good in others rather than paying attention to their faults.
   - Try to look sharp. Your own feelings about your appearance are important in determining your effect on others.
   - Value the friends that like you in spite of your faults, but keep trying to improve your personality. Never stop trying to make new friends.
   - Happy families are those in which all members are considerate of each other and try to understand each other.

2. Allen and Briggs. IF YOU PLEASE, page 6-15
   - Be what you appear to be, not a pretender or a poser.
   - Don't use your friends, or expect too much of them, or take them for granted.
   - Acquire the habit of being pleasant about things and people, of smiling instead of scowling, of seeing the bright side of life instead of the gloomy side. Keep your sense of humor hitting on all eight. If you can laugh at things and at yourself, you will save many situations. Be sure to laugh with people not at them.

3. Fisher and Noble. COLLEGE EDUCATION AS A PERSONAL DEVELOPMENT, page 2-133
   - Be able to be independent from your parents.
   - Look over people's faults and errors. Everyone has faults.
   - Getting to sleep on time has a lot to do with how you treat people.

4. Baxter, Justin, & Rust. OUR SHARE IN THE HOME, page 1-12
   - It is important that we understand our families and be able to live with satisfaction in our own family group.
   - The power of shaping one's own life varies with individuals. In some it is very strong, in others, weak. It can be developed.

5. Ahern. TEENAGE LIVING. page 111-118
   - Before you talk about someone think of how you would like them talking about you.
   - Friendships is communication, the sharing of happiness, disappointments, ideas and interests. In order to have friends, you must be one.

5. Ahern. TEENAGE LIVING. page 111-118 (Continued)

- Look for common interests in everyone.
- Be fun to be with.

From assorted references and my own ideas, I tried to apply the following:

- Do not hold the past against someone.
- Try to be helpful to others.
- Try not to judge people.
- Have encouragement and hopefulness to offer people.
- Don't jump to decisions.
- Instead of doing what you want to all the time, let others have their way once in a while.

Home Project Report

The readings related to my project were useful to me in these ways: (Tell how information learned through readings was applied in the project.)

I learned more about getting along with people. I tried to apply the ideas from my readings in my day-to-day experiences with people in order to make my life and theirs more pleasant.

I took a personality test in one of the books and picked out some points I would try to improve.

How others helped with my project:

Person:	Help received:
My teacher	Conference-advised me to be more helpful at home and to give my brother-in-law and sister more privacy at times.

The good points about my project are:

Helped me to change my thoughts of others.
Helped in my relationships toward others.
Made me look on the "brighter" side of things.
Helped me to develop a better personality.

The difficulties I encountered were:	These might have been avoided if:
Sometimes I forgot to hold my temper in control.	Self-discipline, which I don't always have.
I wasn't always as pleasant as I know I should have been.	Perhaps more sleep, and more concentration on the idea.

If I were to start all over again on this project I would do these things differently:	because:
Read even more references.	So I would have more knowledge of my subject.
Smile more.	Because I know if I smile then usually other people will smile back and things will be more pleasant.

The total cost of my home project was $_____. This was $_____more or less than I had planned. (underline one)

Comment:

The approximate number of hours spent on my project was 18-25. This was _____hours more or less (underline one) than I had planned.

Comment:

I probably read more than two hours per week, because if it was interesting, it was hard to stop.

The overall value of the project to me and/or my family is:

I believe it has brought us closer and it has given me hope that we can be happy. I know that I understand them better how and understand myself better too.

I believe the experience and/or information gained through this project can help me later in these ways:

1. It can help me to be a better student and citizen.
2. It will help me to be able to handle responsibility.
3. It will help me to get along with others.
4. It will help me to face situations with high hopes and chin-up.

My generalizations (summarizing statements, broad conclusions, related facts which grew out of the experience) after the completion of this project are:

The thing that really makes a good personality is your love and understanding for others. If a person wants to be happy, they must try to make others happy. When a person wants to improve her personality and applies herself to the job, she can accomplish results.

PARENT'S EVALUATION OF HOME PROJECT

Please circle the most accurate response to each question. Other comments will also be helpful.

Was your daughter interested in the experience? MUCH SOME LITTLE
Comments:

Did she use her time well? USUALLY SOMETIMES SELDOM
Comments:

Was she able to follow her plans? MUCH SOME LITTLE
Comments:

Was she able to meet difficulties? USUALLY SOMETIMES SELDOM
Comments:

She became less difficult to get along with.

Did she obtain good results? USUALLY SOMETIMES SELDOM
Comments:

Did she seem to benefit from the project: MUCH SOME LITTLE
Comments:

She seemed to enjoy working on the project and seemed satisfied at her results.

Did the family benefit from the experience? MUCH SOME LITTLE
Comments:

We are encouraged by her efforts.

Signed, Mrs. Robert Jones

VITA

Beulah Marie Hirschlein

Candidate for the Degree of

Master of Science

Thesis: AN EXPLORATORY STUDY OF CRITICAL THINKING PRACTICES IN NINTH GRADE HOMEMAKING CLASSES

Major Field: Home Economics Education

Biographical:

Personal Data: Born near Mangum, Oklahoma, January 16, 1935, the daughter of John A. and Zelda J. Luker.

Education: Graduated from City View High School, Granite, Oklahoma, in 1952; attended Oklahoma State University, University of Arizona, and University of Oklahoma; received the Bachelor of Science degree, with a major in Home Economics Education, from Oklahoma State University in 1958; completed requirements for the Master of Science degree in Home Economics Education in January, 1965.

Professional Experience: Taught Vocational Homemaking in Crescent High School, Crescent, Oklahoma, 1958-1961, Stillwater Junior High School, Stillwater, Oklahoma, 1961-1965.

Professional Organizations: Member of Oklahoma Home Economics Association, American Home Economics Association, Oklahoma Vocational Association, American Vocational Association, Oklahoma Education Association, National Education Association, Oklahoma State University Home Economics Alumni Association.