

EFFECTS OF A HOME ECONOMICS UNIT AND REINFORCEMENT  
UPON MENTALLY RETARDED ADULTS IN A COMMUNITY CENTER PROGRAM

by

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## ABSTRACT

The study was conducted to investigate the effects of a home economics unit followed by a period of reinforcement upon attitudes and behaviors of retarded adults which are believed to be related to employment success. The unit was designed to facilitate development of more positive attitudes and behaviors with respect to the concepts of cooperation, fairness, perseverance, response to criticism, and cleanliness.

The investigation consisted of (1) a pre-evaluation of student attitudes and behaviors, (2) a period of participation in activities outlined in the unit, (3) a post-evaluation of student attitudes and behaviors immediately following the unit presentation, (4) a period of student attitude and behavior reinforcement, and (5) a final evaluation of student attitudes and behaviors. The evaluations were designed so that the students evaluated their personal attitudes and the instructors evaluated student behaviors.

The students reported positive change in attitudes toward the concepts developed in the unit immediately following completion of the unit and this change was maintained or increased during the five week period of reinforcement. The instructors witnessed positive change in student behaviors during the five week period of reinforcement.

## CHAPTER 1

### INTRODUCTION

In our democratic society, we view education not so much as a privilege but rather as a necessity which enables the individual to fulfill himself and to be a contributing member of the society. Essentially society makes demands of its individual members and in return offers education as the tool which individuals can use to meet these demands. Since this is the case,

at least four aims that relate to the fundamental activities of everyday life seem to be the responsibility of education: (1) to develop the individual as completely as possible, (2) to promote desirable personal-group relationships, (3) to make persons responsive to the welfare of others, (4) to prepare people for proficiency in their vocations (Hammonds and Lamar 1968, p. 29).

The above statement was limited to "normal persons". However, current educational programs for retarded individuals philosophically have essentially these same objectives as ultimate goals. The purposes of a program for the educable mentally retarded, as listed by Kirk and Johnson (1951, p. 118) are:

1. They should be educated to get along with their fellow men; i.e., they should develop social competence through numerous social experiences.

2. They should learn to participate in work for the purpose of earning their own living; i.e., they should develop occupational competence through efficient vocational guidance and training as a part of their school experience.
3. They should develop emotional security and independence in the school and in the home through a good mental hygiene program.
4. They should develop habits of health and sanitation through a good program of health education.
5. They should learn the minimum essentials of the tool subjects, even though their academic limits are third to fifth grade.
6. They should learn to occupy themselves in wholesome leisure time activities through an educational program that teaches them to enjoy recreational and leisure time activities.
7. They should learn to become adequate members of a family and a home through an educational program that emphasizes home membership as a function of the curriculum.
8. They should learn to become adequate members of a community through a school program that emphasizes community participation.

Kirk also defined general educational objectives for the trainable mentally retarded individual. These general objectives are: (1) self-help, (2) social adjustment in the home and neighborhood, and (3) economic usefulness (Kirk 1972 p. 221).

Vocational education is seen by many educators of the retarded as a program which when used in connection with or in addition to a general educational program can facilitate these goals. Vocational education programs strive to help individuals face problems making vocational

choices, preparing for a vocation, entering upon a vocational pursuit, and making progress in a vocation (Hammonds and Lamar 1968, p. 23).

Most normal individuals are expected to become contributing members in society either earning a wage or caring for a family. Therefore, they are encouraged to prepare for future employment. Retarded individuals, however, often face a very different feeling from their families, their communities, and even their teachers. Throughout their lives retarded persons are all too often degraded in overt and subtle ways to feel they never can contribute anything meaningful to the society. Little wonder that upon reaching adulthood and employment age, many retarded individuals are frightened at the thought of employment. They expect to fail at this experience too, because failure is now an integral part of their lives.

As a result of this type of conditioning, negative attitudes toward others and negative self-concepts toward one's own abilities and usefulness are developed. The importance of attitudes is currently being realized by those who work with both normal and retarded persons. Hammonds and Lamar state concerning attitudes, "All around us we see illustrations of the fact that the difference between ability to do and effective ability

to do may be the difference in attitude (Hammonds and Lamar 1968, p. 100).<sup>4</sup> Recent research into methods and materials helpful in the training of retarded persons has indicated that work habits and attitudes should be taught rather than specific skills (Goldstein 1964, p. 26). Sniff (1967, p. 5) suggests that in addition to general habits, attitudes, and skills; the ability to get along with co-workers is necessary in order to proclaim the training as successful.

Research findings indicate that attitudes are learned and can be taught (Klausmeier and Goodwin 1961, p. 357). It is also known that some attitudes are learned early and with experience become stable, while other attitudes are modified throughout one's life as a result of emotional experiences or new information (Klausmeier and Goodwin 1961, pp. 374-375). However, learning and modification of attitudes has been demonstrated more frequently by children in contrast to adolescents and adults (Klausmeier and Goodwin 1961, p. 375).

Many vocational training programs for retarded are designed to be either post-school programs or the final learning experience in a regular school program. When this is the case, the student is already in his late teens or early twenties. It has already been mentioned that adolescence and adulthood is not the optimum

time to learn or modify attitudes. Probably an even more important consideration in most vocational training programs for retarded is the effect rejection and failure has had in shaping attitudes. Klausmeier and Goodwin state, "Unpleasant feelings, failure and punishment lead not only to development of unfavorable attitudes, but can even lead to the extinction of previously favorable attitudes (Klausmeier and Goodwin 1961, p. 375)." Thus in many vocational training programs for the retarded, the students bring with them negative attitudes which may be well reinforced and already somewhat stable.

#### The Problem

After examination of literature relative to both vocational education and educational objectives for the mentally retarded, a decision was made to investigate the effects of a home economics unit followed by reinforcement upon attitudes and behaviors which are believed to be related to work success. This unit emphasized activities which would enable the student to experience success in learning and activities which would enable the student to acquire new information about acceptable attitudes and work habits. The unit specifically attempted to facilitate improvement in attitudes and behaviors with respect to the concepts of cooperation, fairness, perseverance, response to criticism, and cleanliness.

The following questions regarding the effects of the previously described unit were investigated:

1. After involvement in the unit, did each student's scores increase with respect to all five concepts taught as measured by an attitude inventory?
2. Were individual results obtained immediately after the completion of the unit stable over a period of five weeks?
3. After involvement in the unit, did the class score increase with respect to each of the five concepts taught as measured by an attitude inventory?
4. Were the group results obtained immediately after completion of the unit stable over a period of five weeks?
5. After involvement in the unit, were the instructors' ratings of the group of students more positive with respect to each of the five concepts taught as measured by a behavior rating scale?
6. Were the instructors' ratings of the group of students obtained immediately after completion of the unit stable over a period of five weeks as measured by a behavior rating scale?
7. What was the ratio of positive and negative student comments toward each concept presented in the unit as detected by the investigator during the presentation of the unit?

#### Assumptions of the Study

The following assumptions were made by the investigator in the pursuance of the study:

1. The attitude inventory developed, indeed measured, selected student attitudes.
2. The behavior rating scale developed, indeed measured, selected student behaviors.



3. Attitudes and behaviors measured were related to the concepts presented in the unit.

4. Change in student attitudes and behaviors measured during this study was a result of the unit activities and the follow up activities.

#### Limitations of the Study

1. The population studied was limited in number.
2. The investigator controlled influential variables only in the classroom.
3. The presentation of the unit was relatively brief in duration.

#### Definition of Terms

To facilitate common understanding and interpretation of the study, the following definitions are provided:

Affective domain--Those objectives which deal with appreciations, interests, and values in relationship to one's emotions (Krathwohl, Bloom, and Masia, 1964).

Attitude--"A learned emotionally toned predisposition to react in a consistent way, favorable or unfavorable, toward a person, object, or idea. An attitude of an individual is inferred from his behavior (Klausmeier and Goodwin 1961, p. 343)."

Attitude inventory--A formal instrument for measuring attitudes.

Concept--A meaningful association which is to some degree organized in an individual's mind.

Educable mentally retarded--"Those individuals having IQs from 50 to 75; they are expected eventually to achieve academic work at least to the third-grade level an occasionally to the sixth-grade level by school-leaving age; as adults they are expected to be socially adequate and capable of unskilled or semiskilled work (Robinson and Robinson 1965, p. 461)."

Trainable mentally retarded--"Those individuals having IQs of 25 to 49; they are not expected to achieve functionally useful academic skills. Self-care and social adjustment within a restricted environment are envisioned as the goals of their school experience (Robinson and Robinson 1965, p. 461)."

Unit--A distinct or segregated part of the entire educational program provided by educational facilities to change or modify pupil behavior.

Vocational education--Education which prepares the student for selecting a vocation, and maintaining or advancing in that vocational choice.

## CHAPTER 2

### REVIEW OF LITERATURE

The history of handling the problem of mental retardation runs parallel to the prevailing philosophy of life at various points down through the ages. In ancient Roman times, the drive for a super-race justified disposal of the retarded by exposure to the elements. The retarded were used in the courts during the Middle Ages as jesters to amuse and entertain the elite. With the spread of Christianity, the feeling prevailed that the retarded needed to be protected and pitied (Kirk 1962, Wiley and Waite 1964).

Only recently have we become aware of the retarded individual's needs as fellow human beings. In addition, we are now beginning to probe the contributions retarded individuals can make in our society.

As human beings, retarded persons have the same basic needs as normal individuals. Although there is not universal agreement on the definition of basic human needs, the need to feel worthwhile is found in several theories (Brown 1964, Fleck 1970, Klausmeier and Goodwin 1961, and Waite 1971). One step towards fulfilling the need to feel worthwhile is to learn to love and accept oneself. The teacher can partially facilitate this learning by providing

experiences whereby the student realizes success and learns to define and accept reality (Waite 1971, pp. 68-69).

Theories and knowledge from the disciplines of special education, home economics education, and vocational education are useful in implementing educational programs for the adult mentally retarded person. Although various terms are used to describe the need to feel worthwhile, each discipline considers the idea of human fulfillment as a basic educational objective.

An educator from the area of special education states that "the main objectives of education for retarded and normal students are self-realization, human relationships, economic efficiency, and civic responsibility (Waite 1971, p. 98)." These objectives are essentially geared to prepare the student to interact with others and contribute to the society. Another educator of retarded adults suggests that educational goals for retarded individuals should be such that the individual is helped to "understand himself as an individual and as a member of a group or groups so that he may make the best possible adjustment in the community in which he lives and works... (Sniff 1967, p. 10)."

The ultimate objective of the field of home economics is also self-fulfillment of the individual. This fulfillment is encouraged through sound home and family life (Brown 1964, pp. 27-28). Although many of the retarded students in a class may be relatively deprived of past experiences in

the area of family living, this fact should not discourage the home and family approach home economics offers. Rather this approach is valuable in helping retarded individuals construct more positive relationships and conditions in future home-living situations they may encounter throughout life. This approach can also be conducive to helping the student achieve greater self-realization, economic efficiency, and civic responsibility.

Vocational or career education offers the following objectives in line with the theme of human fulfillment:

- (1). To develop the individual as completely as possible.
- (2). To promote desirable personal-group relationships.
- (3). To make persons responsive to the welfare of others.
- (4). To prepare people for proficiency in their vocations (Hammonds and Lamar 1968, p. 29).

Human-fulfillment is achieved as a result of many varied experiences. In our capitalistic society, successful employment experiences are viewed as one way to achieve personal fulfillment. Work is considered important because it is a means of earning economic independence, a means of contributing to society, and a means of participating with others (Fleck 1970, pp. 357-358).

Successful employment experiences are facilitated through education for employment. Much of this education is informal experiences witnessed since early childhood. Recently various educational disciplines have developed programs

specifically designed to educate for employment. The retarded student can benefit from this education designed to help the student obtain and hold a job. Development of fundamental skills and development of positive employment attitudes are the basic goals of employment education programs. For the retarded student, help in developing positive employment attitudes may be one of the most valuable assets the school can provide (Sniff 1967, p. 5). This approach will help the student be more socially acceptable to his employer and fellow employees. The importance of positive co-worker relationships can not be underestimated when viewing ultimate success on the job (Sniff 1967, pp. 5-6).

Accomplishment of the educational objectives previously outlined will be facilitated if the learners experience success and experience positive reinforcement. Experiencing success is essential for all learners whether they be normal learners, educable learners, or trainable learners (Kirk 1972, Kolstoe 1970, Waite 1972).

The teacher can organize the learning situation so as to lead the student to the right answer or the more acceptable idea. The student should never be left with a feeling of failure. The teacher needs to help him through failure to eventual success (Kirk 1972, pp. 214-216).

When success is achieved, recognition for the achievement will help the student feel he has indeed been successful (Waite 1972, p. 45).

Reinforcement is also important in order to achieve and maintain learning successes. Reinforcement can be handled in many different ways. Student reinforcement can be either tangible such as candy or intangible such as praise or a smile of approval. Reinforcement is most effective when it follows immediately after the correct or acceptable student response or action (Kirk 1972, pp. 214-215). On the job or in a sheltered workshop situation, wages will provide reinforcement.

Concept reinforcement is necessary for maximum retention. Overlearning is one means to reinforce a concept. Retarded students benefit from repeated reference to a concept over a period of time (Kirk 1972, Kolstoe 1970, Waite 1972). The student needs to see a relationship in order to experience reinforcement of the concept previously learned.

Not all trainable and educable mentally retarded students will achieve total independence. For many their maximum achievement level will be participation in a sheltered workshop or other highly supervised job situation. However, retarded persons are entitled to the same rights and

privileges accorded to every citizen of a democratic society (Katz 1968, p. 246). Therefore, retarded individuals should be helped to achieve personal, social, and vocational adjustment in accordance with their abilities.

Educational research dealing specifically with the development of more positive attitudes and behaviors related to work success seems to be lacking. As has been pointed out throughout this chapter, there is a need to help retarded adults develop more positive attitudes and behaviors. Hopefully this project will lead to further research which will be helpful to the retarded adult seeking future successful employment.



## CHAPTER 3

### PROCEDURES

In this experimental study, a unit dealing with employment attitudes was evaluated. The unit was designed to facilitate growth with respect to the following concepts: cooperation, fairness, perseverance, response to criticism, and cleanliness.

#### Population

Sixteen adult students in the pre-vocational training program at Southern Arizona Training Programs located in Tucson, Arizona were the subjects of this study. Nine members of the group had previously been employed. Seven of the nine students previously employed had been employed within an institution for retarded individuals in highly supervised employment situations. Two students had been employed outside of an institutional setting. Seven students had no previous employment experiences. None of the group members were employed during the time the unit was presented. The reasons given for students being in the training program were as follows: (1) insufficient training, (2) inadequate performance, (3) unacceptable attitudes, and (4) unavailable employment situations at the moment.

The population consisted of eight males and eight females ranging in age from eighteen years to thirty-six years with a mean age of twenty-five years. The mean mental age was seven to eight years and the range in mental ages was six years to eleven years. The lowest academic level achieved was first grade, while the highest academic level achieved was sixth grade. The mean academic achievement level was second to third grade. Eleven of the students lived at the training center during the presentation of the unit, while the other five members of the group lived at their parental homes.

#### Experimental Design

The five concepts included in the unit were selected as most problematic by professionals working with the population of retarded adults participating in the study. To arrive at an objective decision concerning major problem areas, employment records of former students employed and current students who had been employed were reviewed.

The investigator had had experience teaching vocational education to retarded adults. However, the teacher in charge of presenting the unit was consulted by the investigator to develop a unit which the regular teacher would definitely be able to use in her teaching situation.

The unit was periodically reviewed by Dr. Amy Knorr and Dr. Doris Manning, both on the Home Economics Education

staff at The University of Arizona. Modifications were suggested by these educators and incorporated into the unit. The regular teacher found the modifications to be acceptable.

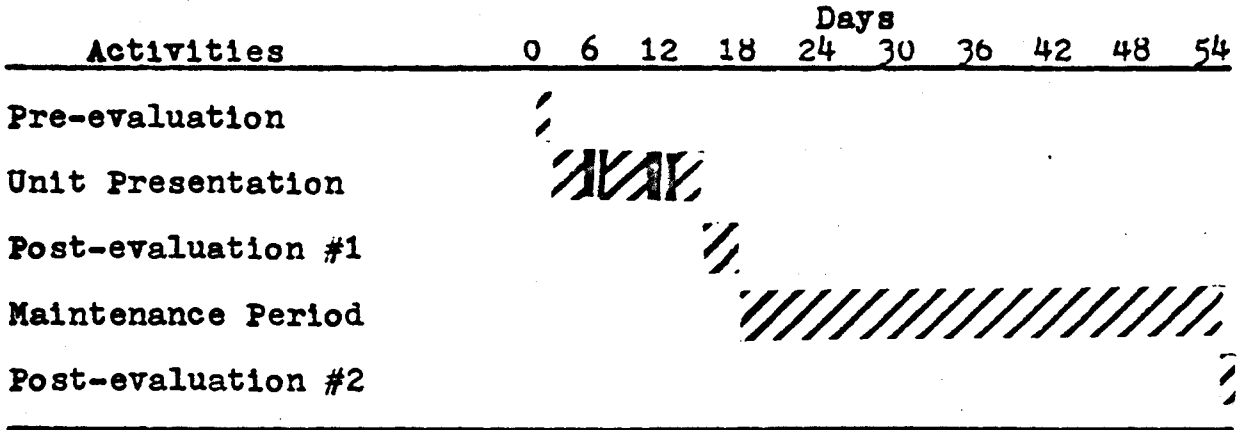




Figure 1. Schedule of research activities.

 activities in progress  
 activities not in progress (week-ends)

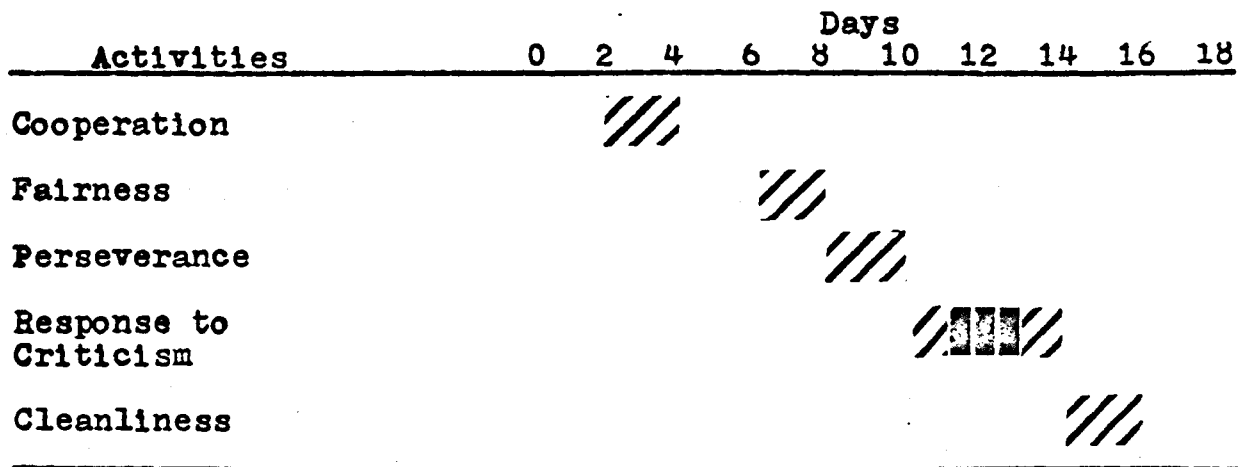




Figure 2. Schedule of unit presentation.

 activities in progress  
 activities not in progress (week-ends)

## Pre-evaluation

Evaluation of each student's attitudes and behaviors believed to reflect those attitudes was conducted before the presentation of the unit by means of an attitude inventory and a behavior rating scale. Standardized attitude inventories and behavior rating scales were explored; however they were found to be too complicated for use with this population. Therefore, the evaluation devices used were developed by the investigator specifically for this research problem and for this population. Keys for scoring positive and negative responses on both devices were established. The devices and the keys are given in Appendix B. The investigator's advisor, Dr. Doris Manning, checked the devices and the keys and found them to be valuable for this problem.

The attitude inventory was used to determine how the students felt about certain situations believed to reflect each of the five concepts dealt with in the unit. The items on the inventory were read by the investigator to each student on an individual basis. The student then responded verbally. If an item was not understood, it was re-read. If an item was still not understood after being re-read, the investigator phrased the item differently using caution not to change the idea underlying the item. This evaluation was conducted July 5, 1972.

Each instructor completed the behavior rating scale on every student assigned to her discussion group. The

instructors had observed each student prior to this evaluation. The instructors were given the rating scales July 5, 1972 and returned the completed rating scales to the investigator July 6, 1972.

#### Unit Presentation

The unit evaluated by this study was presented to the students over nearly a two week period beginning July 6, 1972 and ending July 19, 1972. Classes were conducted daily Monday through Friday during the above mentioned time period. Class sessions were one hour and forty-five minutes long. Classes began at 12:40 p.m. and ended at 2:30 p.m. with a five minute break when the instructor perceived it would be beneficial for her group. Three to four hours were allowed for the development of each of the five concepts. This was left flexible so each day the instructors could vary the time schedule within the permissible schedule to meet the needs of the students. In this study three and one half hours were devoted to the development of each of the following concepts: cooperation, fairness, and cleanliness. Four hours were devoted to the development of the perseverance concept and three hours were devoted to the development of the response to criticism concept. A total of seventeen and one half hours were devoted to the presentation of the entire unit.

The unit was presented by the students' regular instructors. One certified special education teacher and two teacher's aides were involved in the presentation of the unit. Each teacher was involved in the development of all five of the concepts. Large group activities such as films and tapes were presented in a large classroom. Small group discussions were conducted in adjacent small classrooms.

Most of the activities involved in the presentation of this unit were conducted in small groups. Two groups consisted of five students each and the third group consisted of six students. Each small group had one instructor.

The investigator was present at all sessions to monitor consistency in class instruction, to answer questions, and to fix or replace equipment causing problems. The investigator visited each of the three small groups every day for ten to fifteen minutes.

The small group discussions were taped so the investigator could listen to all three small group discussions later that same day. All students were aware their discussions were being taped. The students were also aware that the investigator listened to these tapes. This taping was done to enable the investigator to look at the ratio of positive and negative comments made by the students. The investigator listened to one hour of randomly selected comments from each group on each concept. This was accomplished

by advancing the tape, stopping the tape, and then listening to the conversation for one half hour both the first and second days a concept was presented. The pupil behavior portion of Ryan's (1960) class observation record was used as a guide to classify the positive and negative comments. Student comments which were interpreted as being alert, responsible, confident, or initiating were evaluated as positive comments. Student comments which were interpreted as being apathetic, obstructive, uncertain, or dependent were evaluated as negative comments. The students were not aware of this evaluation.

#### Post-evaluation

Post-evaluation of each student's expressed attitudes and behaviors believed to reflect those attitudes occurred July 20 and 21, 1972 and August 28, 1972. The attitude inventory used for pre-evaluation was used once again to evaluate the student's attitudes after the unit presentation. The instructors used the behavior rating scale used for pre-evaluation to evaluate student behaviors after the presentation of the unit.

During the period of time between the July post-evaluation and the August post-evaluation, an informal maintenance program was conducted. The instructors reinforced the concepts taught in the unit by incorporating the use of these concepts into the instruction and activities

which occurred in class during that five week period. The instructors also reinforced positive behaviors of the students which reflected the ideas presented in the unit. The investigator explained this procedure to the instructors but did not monitor this part of the program.

#### Data Analysis Procedures

Point change and percentage change were computed for individual student responses toward the five concepts, class responses toward each of the five concepts, and instructor's rating scores of student behaviors related to the five concepts. A comparison was made of the point and percentage change measured between the evaluations. The total point and percentage change was also computed.

Student comments were categorized as either positive or negative. A ratio of negative to positive comments was then computed to show the relationship between positive and negative student comments with respect to each of the five concepts presented.



## CHAPTER 4

### FINDINGS AND INTERPRETATIONS

The findings of this study were obtained in three different ways. First, the students responded to an attitude inventory on three occasions. Second, each instructor filled out a behavior rating scale for every student in her group on the same three occasions. Third, student conversations which occurred in small group discussions during the presentation of the unit were evaluated by the investigator using an observation guide.

Three members of the original group of sixteen were not able to complete the unit due to extended absenteeism resulting from illness and a family vacation schedule.

#### Summary of the Responses Obtained from the Student Attitude Inventory

The attitude inventory responses were evaluated two ways. The first method compared the students' attitudes between one evaluation period and the next. The five concepts were grouped together for this evaluation. Each student thus had a composite score representing the complex of attitudes dealt with in the unit.

### Comparison of Student Attitude Toward the Group of Concepts

As seen in Figure 3, the majority of students increased their composite scores. Ten of the thirteen students, 76.9% of the group, increased their scores by one or more points between the pre-evaluation and the evaluation immediately following the unit presentation. Seven students, 53.9% of the group, increased their scores 5% to 10% while three students, 23.1% of the group, increased their scores 15% to 32%. Figure 4 shows this increase in terms of points. Two students, 15.4% of the group, did not change their composite scores on the attitude inventory between the first and the second evaluations. One student, 7.7% of the group, had fewer positive responses on the second inventory.

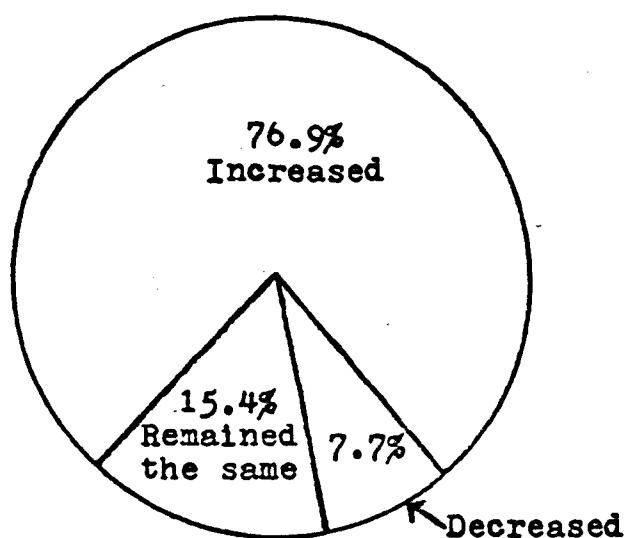


Figure 3. Frequency distribution of attitude inventory score increases, decreases, and constants after involvement in the unit, by number and percentage.

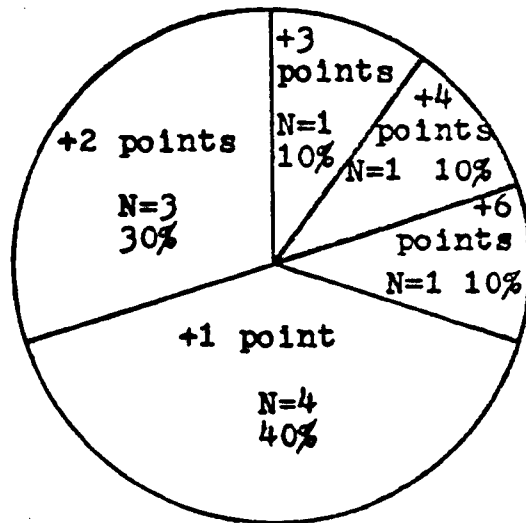


Figure 4. Point increase in attitude inventory scores of students after involvement in the unit, by number and percentage.

The same student attitude inventory used prior to and immediately following the unit presentation was administered to the students a third time five weeks after completion of the unit to assess stability of the second evaluation results. Eleven students, 84.7% of the group, had either maintained or increased the scores which were measured immediately following the unit presentation. Figure 5 shows these results graphically. Over half of the 84.7% increased their scores between 5% and 21%. This is shown in terms of point increase in Figure 6.

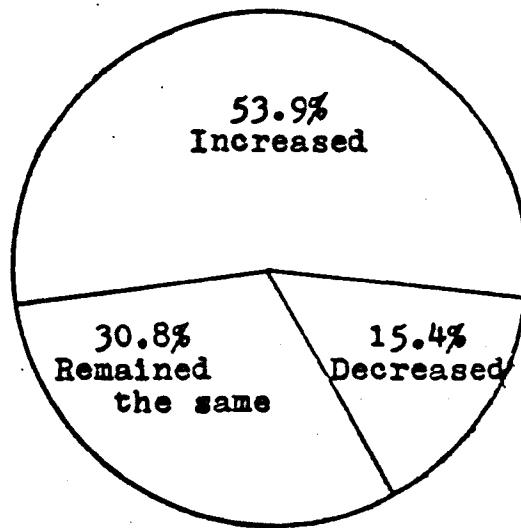


Figure 5. Frequency distribution of attitude inventory score increases, decreases, and constants after the five week reinforcement period, by number and percentage.

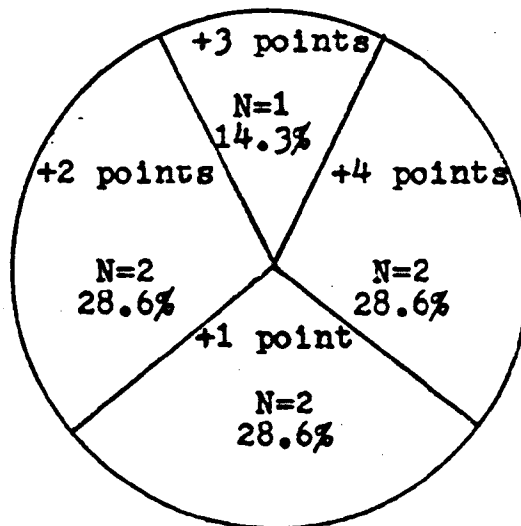


Figure 6. Point increase in attitude inventory scores of students after the five week reinforcement period, by number and percentage.

Nine students, 69.2% of the group, increased their scores an average of 21% between the first evaluation and the third evaluation approximately seven weeks later. The percentage of increase ranged from 5.3% increase to 36.8% increase.

Appendix C reports the data concerning student attitudes with respect to the complex of attitudes measured at each of the three evaluation periods.

#### Comparison of Attitudes Expressed by the Class as a Whole Toward Each Concept

The second method of evaluating the student attitude inventory was used to assess change in attitudes expressed by the class as a whole toward each concept between one evaluation period and the next. Figure 7 reveals that there was positive change with respect to four of the five concepts. The greatest amount of change in student attitudes was measured with respect to the concepts of cooperation and fairness. There was a lesser amount of change measured with respect to the concepts of perseverance and response to criticism. There was no change measured with respect to the concept of cleanliness.

Concept	Percentage of Increase
Cooperation	9.6%
Fairness	17.3%
Perseverance	3.8%
Response to Criticism	5.8%
Cleanliness	0%

Figure 7. Percentage of increase in attitude inventory scores of the total class toward each concept after involvement in the unit.

The results of the third student evaluation five weeks after completion of the unit revealed positive change in student attitudes with respect to four of the five concepts rather than merely stability. The measurement revealed that stability in attitudes toward the concept of cooperation was maintained. A small amount of change was measured with respect to the concepts of fairness and response to criticism. It should be noted that there was more change toward the concepts of perseverance and cleanliness after the third measurement than after the second measurement. These results are shown in Figure 8.

Concept	Percentage of Increase
Cooperation	0%
Fairness	5.8%
Perseverance	7.7%
Response to Criticism	3.8%
Cleanliness	7.7%

Figure 8. Percentage of increase in attitude inventory scores of the total class toward each concept after the five week reinforcement period.

Between the first and third evaluations, positive change in attitudes expressed by the class as a whole toward each concept was measured. This change is given in terms of points and percentages in Table 1.

TABLE 1

TOTAL INCREASE IN ATTITUDE INVENTORY SCORES  
OF THE CLASS TOWARD EACH CONCEPT

Concept	Total Point Increase	Total Percentage Increase
Cooperation	+5	+9.6
Fairness	+12	+23.1
Perseverance	+6	+11.5
Response to Criticism	+5	+9.6
Cleanliness	+4	+7.7

Appendix C reports the data concerning the attitudes expressed by the class as a whole toward each of the five concepts.

Summary of the Results Obtained from the  
Instructors' Ratings of Student Behaviors

The instructors reported very little change in student behaviors at the time of the evaluation immediately following the presentation of the unit. The greatest increase in positive student behaviors was witnessed in behaviors believed to demonstrate fairness. The instructors viewed their students as being slightly more cooperative and slightly cleaner. The instructors witnessed no change in their students' ability to persevere or in their ability to respond in an acceptable manner to criticism. These results are presented in Figure 9.

Concept	Percentage of Increase
Cooperation	3.8%
Fairness	7.7%
Perseverance	0%
Response to Criticism	0%
Cleanliness	3.8%

Figure 9. Percentage of increase in instructors' rating scores of student behaviors relating to each concept after involvement in the unit.



In general, the instructors perceived more positive change in student behaviors after the five week reinforcement period following completion of the unit. As seen in Figure 10, the instructors noted fairly large amounts of positive increase in behaviors believed to reflect cooperation and fairness. Student behaviors manifesting growth in perseverance and cleanliness were perceived by the instructors as increasing slightly. The instructors witnessed no growth in the students' ability to respond to criticism in an acceptable manner.

Concept	Percentage of Increase
Cooperation	21.1%
Fairness	13.4%
Perseverance	3.8%
Response to Criticism	0%
Cleanliness	7.7%

Figure 10. Percentage of increase in instructors' rating scores of student behaviors relating to each concept after the five week reinforcement period.

Between the first evaluation and the third evaluation, there was a sizeable increase in student manifestation of more positive behaviors. Table 2 shows the change in positive student behaviors in terms of total point increase and total percentage increase.

TABLE 2

TOTAL INCREASE IN INSTRUCTORS' RATING SCORES  
OF STUDENT BEHAVIORS RELATING TO EACH CONCEPT

Concept	Total Point Increase	Total Percentage Increase
Cooperation	+13	+24.9
Fairness	+11	+21.1
Perseverance	+2	+3.8
Response to Criticism	0	0.0
Cleanliness	+4	+7.7

Appendix C reports the data concerning the instructors' rating scores of student behaviors believed to relate to each of the five concepts.

Summary of the Responses Obtained  
from the Taped Student Conversations

In every taped student conversation to which the investigator listened, there was a predominance of positive comments made by the students toward the concepts discussed. During the five recording periods of one hour each, the following student responses were recorded by the investigator: five negative comments and twenty-five positive comments in discussions concerning cooperation, fifteen negative comments and seventy-seven positive comments in discussion concerning fairness, twenty-nine negative comments and seventy-six positive comments in discussions concerning perseverance, twenty-three negative comments and thirty-eight positive comments in discussions concerning response to criticism, and twenty-one negative comments and eighty-two positive comments in discussions concerning cleanliness. These results are shown graphically in Figure 11.

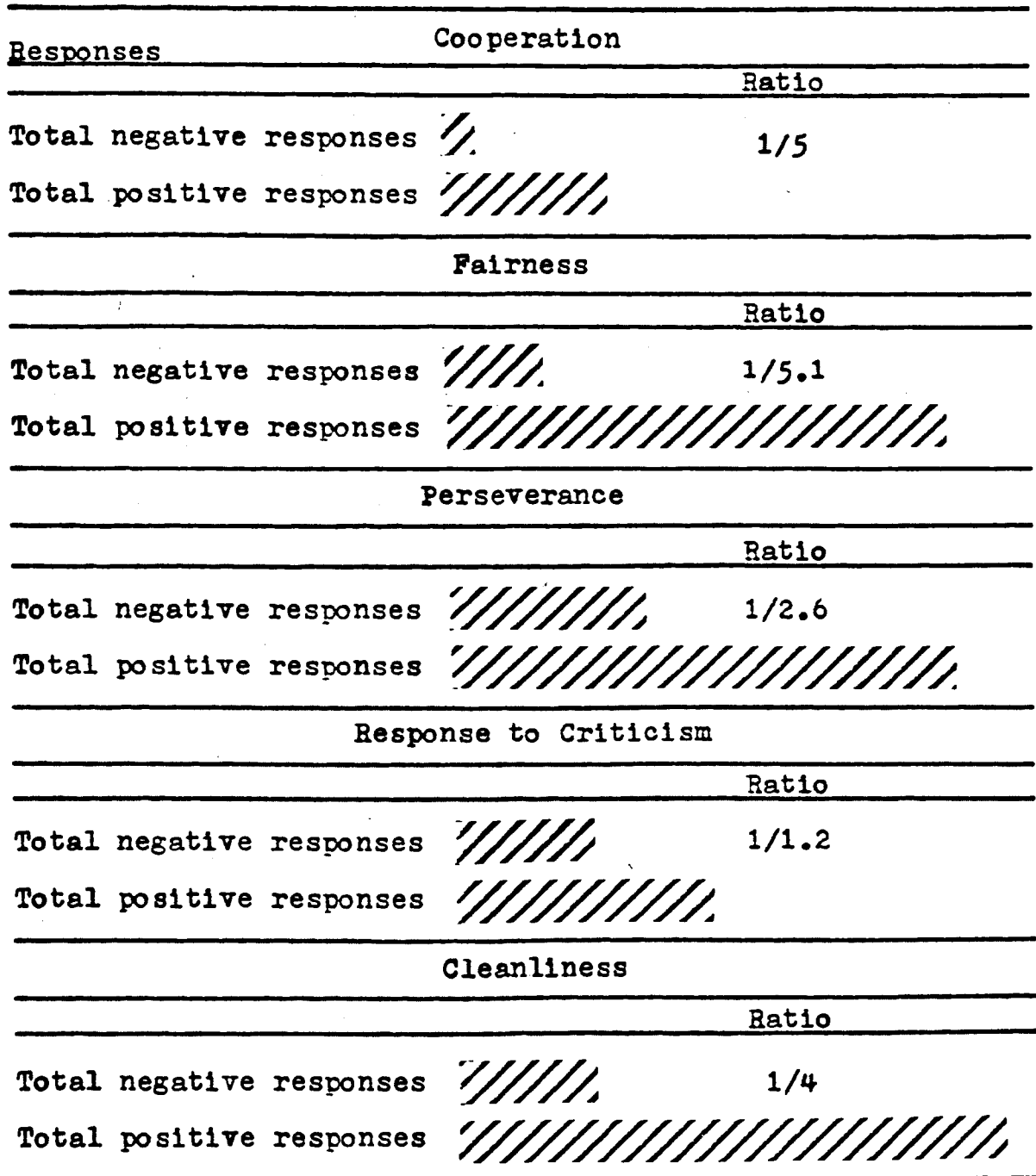


Figure 11. Ratio of positive and negative student comments with respect to each concept which occurred in a one hour time period.

negative responses: apathetic, obstructive, uncertain, dependent  
 positive responses: alert, responsible, confident, initiating

### Interpretations of the Results Obtained

Three interpretations are offered to explain the results obtained by the class on specific concepts. The greater increase in attitude change toward the concepts of cooperation and fairness may be due to the order in which the concepts were presented. These two concepts were presented first in the unit. As the study proceeded, it became apparent that some of the students were anxious to end the study of this unit and return to their regularly scheduled activities. This could have resulted in greater change in attitudes toward the first two concepts discussed and lesser change in attitudes toward the last three concepts discussed. No measured attitude change toward cleanliness, the last concept discussed, could indicate that the unit lasted too long, and negative feelings toward the unit activities were beginning to arise among the students.

Another possible explanation could be the longer lapse of time between initial exposure to the concept and measurement of change in attitudes toward the concept immediately following completion of the unit. The students were exposed to the concepts of cooperation and fairness longer than the concepts of perseverance, response to criticism, and cleanliness.

A third possible explanation is that the greater increase was found in attitudes toward cooperation and fairness because these attitudes were the most negative

when measured the first time. Negative responses on items believed to measure these concepts were more frequent than positive responses to these items. On items believed to measure the concepts of perseverance, response to criticism, and cleanliness, there were more positive responses measured than negative responses on the evaluation prior to the presentation of the unit. It is possible that no increase in attitudes toward cleanliness occurred because attitudes toward cleanliness were already very positive as evidenced from the measurement prior to the unit presentation. The scores used as a basis for this interpretation are shown in Appendix C.

It is interesting to note the increase in the class scores with respect to the specific concepts and in individual composite scores measured after the five week interim following completion of the unit. It was hoped that the instructors' reinforcement of the concepts and positive student behaviors would at best result in stability of student scores. However, many students' attitude scores increased, and the class scores increased toward four of the five specific concepts. It appears that this informal method of reinforcement produced positive results. This increase could be the result of the phenomenon known as "snowballing". The instructors were reinforcing positive behaviors. As a result, the students may have tried to repeat the behaviors reinforced in order to receive additional reinforcement.

After repeating a more positive behavior for a period of time, the attitude toward that behavior may have become more positive also. This interpretation may explain why attitudes toward perseverance and cleanliness showed the greatest increase. The behaviors representing these concepts were possibly the easiest to identify and therefore to reinforce.

The instructors' ratings of student behaviors showed very little change in the measurement immediately following the presentation of the unit, whereas a large amount of student behavior change was measured five weeks after involvement in the unit. This could be because the students' behaviors did not change as rapidly as their attitudes. It may be that behaviors reflecting positive response to criticism were not yet occurring in spite of attitude change, because this concept was the most threatening in the past. These past experiences may later be less influential if the new attitudes become more important than past experiences to the student.

The evaluation of taped student conversations revealed that positive responses occurred more frequently than negative responses with respect to every concept discussed. It is possible that these comments reflected the students' true inner emotions. However, it seems logical that the students were aware of what were the more acceptable things to say in order to impress the instructors and the investigator. This behavior may be as important as the

other behaviors discussed in this study, because employers do expect their employees to respond positively most of the time in spite of how the employee may actually feel.

The fewest number of comments were made with respect to the concepts of cooperation and response to criticism. The students probably were somewhat uncomfortable discussing cooperation since it was the first concept discussed. The discussion on criticism may have been perceived by the students as somewhat threatening, thus they commented less often and expressed proportionately more negative comments.



## CHAPTER 5

### SUMMARY, CONCLUSIONS, RECOMMENDATIONS

One of home economics education's ultimate objectives is to enable individuals to be fulfilled. Most individuals find partial fulfillment through employment. The retarded individual often has difficulty getting and then keeping a job. It has been speculated that much of this failure may be related to attitudes rather than manual skills.

#### Summary

This research was conducted in order to investigate the effects of a home economics unit followed by reinforcement upon attitudes and behaviors which are believed to be related to work success. The unit specifically dealt with the following five concepts: cooperation, fairness, perseverance, response to criticism, and cleanliness.

Thirteen retarded adults participated in this study to its completion. In addition to being involved in the presentation of the unit, the students responded to an attitude inventory prior to the unit presentation, immediately following the unit presentation, and five weeks after completion of the unit.

The unit was presented by three instructors who regularly worked with the students. Each instructor also completed a behavior rating scale on every student in her group.

The student attitude inventory and the behavior rating scale were the principle devices used in obtaining the data for this study. A third means of obtaining data was an observation guide used by the investigator to evaluate student conversations during the study of each concept. Percentages were computed on all the data.

The unit was presented over a two week period. Following the presentation of the unit, a five week period elapsed in which positive student behaviors were reinforced by the instructors and concepts presented in the unit were related to daily activities.

The results obtained after completion of the study indicated that nine students, 69.2% of the group, had increased their scores on the attitude inventory. Three students, 23.1% of the group, had maintained the same attitude score. One student, 7.7% of the group, had a decrease in his attitude score.

The class score on each concept increased in all five cases during the seven week period in which this study was conducted. The following list ranks from most change to least change, the class change in scores with respect to the concepts: fairness, perseverance, cooperation and

response to criticism, and cleanliness. There was a 23.1% increase in the class score believed to represent fairness, and a 7.7% increase in the class score believed to represent cleanliness.

The instructors did not rate student behaviors much higher when measured immediately following completion of the unit. However, these ratings increased more when measured after the five week interim following completion of the unit. The following list ranks, from most change to least change, the change in student behaviors with respect to the five concepts as witnessed by the instructors: cooperation, fairness, cleanliness, perseverance, and response to criticism. The range of measured change in student behaviors was 24.9% increase in behaviors believed to be related to the concept of cooperation, and 0% change in behaviors believed to be related to the concept of response to criticism.

The evaluation of student comments revealed the predominance of positive student comments over negative student comments with respect to all five of the concepts discussed.

### Conclusions

The data obtained on a population of thirteen retarded adult students in a pre-vocational training program indicate that:

1. Involvement in the unit did facilitate, in general, individual score increases with respect to all five of the concepts presented.

2. The five week period of informal concept and student behavior reinforcement did facilitate maintenance of student scores and in some instances resulted in improvement of student scores.

3. The student group had most positive change in attitudes toward specific concepts immediately following the completion of the unit.

4. The positive change in scores of the student group toward specific concepts was maintained over the five week period of reinforcement.

5. Instructors witnessed the most positive change in student behaviors during the five week period of reinforcement.

### Recommendations

Due to the small population used in this study and the uniqueness of the problem studied, statistical significance was not established. Teachers and educational agencies involved in the teaching and training of retarded individuals are encouraged to further investigate the use of this unit with their specific populations and educational programs. The following recommendations are made for teacher use of the unit in an educational setting and for further research in this area.

#### Teacher Use of the Unit in an Educational Setting

1. Shorten the length of the daily session to an hour or less.
2. Present the concepts outlined in the unit interspersed with other activities in the regular program.
3. Reinforce positive student behaviors relating to the concepts during the period of time the unit is formally presented as well as after the formal presentation of the unit.
4. Point out the relationship of these concepts to activities the students are involved in during the period of time the unit is presented as well as after the presentation of the unit.

5. Set aside time every day to discuss specific situations which occurred during that day regarding manifested behaviors and expressed attitudes.

6. Involve members of the students' families or other department members if the student lives in an institution in reinforcement of positive student behaviors relating to the concepts being taught.

#### Future Research in the Area

1. Investigate the effects of each of the following teaching methods against a control group: (a) formal presentation of the unit with no reinforcement follow up, (b) presentation of the concepts outlined in the unit interspersed with other activities in the regular program, (c) reinforcement of positive student behaviors and discussions of attitudes prompting behaviors as the situation arises, (d) combination of the formal unit presentation and the reinforcement follow up.

2. Investigate the results obtained by different age groups to ascertain the effects on different age groups.

3. Investigate the results obtained by students with varying intelligence quotients to ascertain if the method used in this study is more useful with members of a specific intelligence level.

4. Investigate the results obtained by male and female students to ascertain if sex influences achievement of the unit objectives.

5. Investigate the results obtained by students who have had successful employment experiences, students who have had unsuccessful employment experiences, and students who have had no employment experiences to ascertain if employment experiences influence achievement of the unit objectives.

6. Investigate the results obtained by students who live in an institutional setting and students who live in a non-institutional setting to ascertain if living situations influence achievement of the unit objectives.

7. Investigate the results obtained by students who have lived in an institutional setting for varying lengths of time to ascertain if length of institutionalization influences achievement of the unit objectives.

8. Investigate future employment experiences of students involved in the unit study to ascertain if results obtained on the unit evaluations correlate with successful or unsuccessful employment experiences.

**APPENDIX A**

**EXPERIMENTAL UNIT**

**FOR ADULT MENTALLY RETARDED STUDENTS**



Concept: Cooperation

**Topical Outline**

- 1.0 Definition of cooperation
- 2.0 Understanding promotes cooperation
  - 2.1 likes and dislikes
  - 2.2 schedules
  - 2.3 abilities
  - 2.4 habits
  - 2.5 responsibilities
- 3.0 Benefits of cooperating
  - 3.1 understanding and appreciating differences
  - 3.2 efficiency
  - 3.3 feelings of occupational satisfaction and pleasure
  - 3.4 feelings of personal satisfaction and pleasure

### Conceptual Statements

1. Cooperation is the joining together of persons to accomplish a goal.
2. Cooperation will tend to occur when the members attempt to understand one another's likes and dislikes, schedules, abilities, habits, and responsibilities.
3. Cooperation can help individuals develop greater understanding and appreciation for differences in others.
4. Cooperation contributes to efficiency, thus reducing the time each individual spends involved in an effort.
5. Individuals who cooperate tend to benefit because cooperative efforts allow each individual to do what he likes best or to do that for which he is most qualified in order to accomplish the job or task.
6. Successful cooperative efforts tend to result in feelings of satisfaction and pleasure.

### BEHAVIORAL OBJECTIVES

Defines cooperation  
(cognitive--comprehension)

### LEARNING EXPERIENCES

Students view film "Working Together".  
Identify situations in which cooperation is involved.  
Examine situations using the following questions as discussion guidelines:

- Where did cooperation occur?
- Why did cooperation occur?
- What would have been the result if cooperation had not occurred?
- Are there other ways these situations could have been handled?

Students report situations from their own experience in which cooperation was involved.  
Examine situations using the same questions as for the film.

**BEHAVIORAL OBJECTIVES**

Defines cooperation.  
continued

Practices cooperation in  
a practical situation.  
(cognitive--application)  
(affective--responding)

**LEARNING EXPERIENCES**

Students arrive at a definition for cooperation using ideas brought out in the two above discussions.

Students identify at least one situation involving other students which could benefit from cooperation.  
Select one situation to be worked on together for improvement in cooperation.  
Investigate the problem areas.  
Suggest ways cooperation could improve these problem areas.

Students interview each other to discover likes, dislikes, schedules, abilities, habits, and responsibilities of one another.

Students make plans for improving the selected situation using the information secured in the above activities.

Students suggest benefits which may occur as a result of cooperation on this project.  
(Teacher makes sure conceptual statements 3-6 have been mentioned).

Students select one benefit mentioned above to look for during the project and report the finding to the class.

Students complete the project as planned.

**BEHAVIORAL OBJECTIVES**

Justifies the benefit of cooperation in a practical situation.  
(affective--valuing)

**LEARNING EXPERIENCES**

Students give reports on benefits they discovered as a result of the cooperative effort.

Students discuss implications for the future discovered as a result of this project.

(The following questions can be used to guide discussion.)

- What are some things you would like to change the next time this task is done cooperatively? Why?
- What were the feelings you had while working together?
- What were the feelings you had after completing this task together?

Concept: Fairness

**Topical Outline**

- 1.0 Definition of fairness
- 2.0 Fair actions
  - 2.1 withholding judgement
  - 2.2 giving honest days work
  - 2.3 taking only scheduled breaks
  - 2.4 scheduling personal appointments during free time
  - 2.5 sharing joint responsibilities
  - 2.6 leaving harmful remarks unsaid
  - 2.7 being honest about abilities and accomplishments
- 3.0 Benefits of fair actions
  - 3.1 feeling of self-respect
  - 3.2 winning respect of others
  - 3.3 knowing your actions influence others

### Conceptual Statements

1. Fairness is the act of considering another person's well-being and rights as equal to one's own well-being and rights.
2. When individuals strive to be fair, they will tend to withhold judgement of another until all the facts and circumstances are known, give an honest days work for the pay, take only scheduled breaks, schedule personal appointments during free time, share joint responsibilities and tasks equally, leave truthful but harmful remarks unsaid, and be honest about their abilities and accomplishments.
3. Feelings of self-respect, winning the respect and confidence of your boss and fellow employees, and knowing your actions may influence others to be fair are likely to be the results when one practices fairness.

### BEHAVIORAL OBJECTIVES

Develops a list of fair actions and unfair actions which apply to employment relationships.  
(cognitive--comprehension)

### LEARNING EXPERIENCES

Students listen to tapes of conversations that may occur on the job.  
(Suggested topics: talking behind a fellow employee's back, using company time for one's own use, sneaking in late, calling in sick for personal time off, taking advantage of a fellow employee).  
Pick out the key concept in each conversation to form a list of unfair actions.  
Develop a list of fair actions to parallel each unfair action listed. Add examples to this list from your own experiences.

**BEHAVIORAL OBJECTIVES**

Discovers how one's own actions and conversations reflect fairness and unfairness.

(cognitive--application)  
(affective--responding)

**LEARNING EXPERIENCES**

Students select a partner. Each pair is assigned a specific situation involving fair and/or unfair actions defined by the group or by the teacher. Role play this situation for the group.

(This activity also reinforces the cooperation concept).

The group discusses each situation including:

- identification of fair and unfair actions
- suggestions for improving the situation by correcting unfair actions.

Students select one situation and illustrate it on a bulletin board.

(Teacher guides the group to select a title that reflects the realization that these actions are characteristic for the entire group).

Include identifications and suggestions made in the above discussion.

(Suggestion--have students use the bulletin board to present their discovery to other students, faculty and staff, or parent groups).

**BEHAVIORAL OBJECTIVES**

Justifies the benefit of fair actions.  
(affective--valuing)

**LEARNING EXPERIENCES**

Students form panels to debate an issue involving fairness.  
Students and teacher plan for this debate by:  
    -selecting an issue  
    -establishing debate guidelines  
using fairness to panel members as the criteria.  
(Suggestion: video-tape this activity for student review in the future).

Students discuss the benefits resulting from fairness discovered during the involvement in these activities.



**Concept: Perseverance****Topical Outline****1.0 Definition of perseverance****2.0 Promotion of perseverance**

2.1 recognize most jobs have advantages and disadvantages

2.2 learn to cope with job difficulties and unpleasantnesses

**3.0 Benefits of persevering**

3.1 feelings of success

3.2 feelings of pride

3.3 feelings of self-assurance

3.4 feelings of fulfillment

### Conceptual Statements

1. Perseverance is continuing to do something in spite of unpleasantness, difficulty, or opposition.
2. Inherent in most tasks and jobs are advantages which make one want to continue and disadvantages which make one want to quit the job or task.
3. Coping with unpleasantnesses and difficulties which arise on the job tends to promote the desire to persevere.
4. Feelings of success, pride, self-assurance, and fulfillment are likely to be the result when one perseveres.

### BEHAVIORAL OBJECTIVES

Presents a realistic list of job advantages and disadvantages.  
 (cognitive--comprehension)  
 (affective--responding)

### LEARNING EXPERIENCES

Students form viewing teams to consider the following points:

- What kind of life did the people have who were not working?
- What are reasons people work?
- What are some positive aspects of work brought out in the film?
- What are some negative aspects of work brought out in the film?

View the film "Jobs in the World of Work--A Good Place to Be".

Discuss the assigned areas of the film.

Students select a partner. Make advanced arrangements to interview an employee at the school.

Each group of two prepares a list of questions designed to find out from the person being interviewed problems and inconveniences which occur as a result of their employ-

**BEHAVIORAL OBJECTIVES**

Presents a realistic list of job advantages and disadvantages. continued

**LEARNING EXPERIENCES**

ment and how they solve these problems or compensate for the inconveniences.

(Teacher--guide the students so they select people having various types and levels of jobs. Example--counselor, teacher, cook, janitor, secretary, and bus driver).

Conduct the interview.

Compile the findings in the form of a list having one column of disadvantages and the other column for advantages and solutions to problems. Add to the list information concerning job advantages and disadvantages discovered from the film, past experience, and experiences of friends.

Select pictures from magazines to depict some of the items listed and create a bulletin board of job advantages and disadvantages. (Teacher--point out to the students that this activity reinforces the cooperation concept in that it is done in pairs and also the fairness concept since the students make prior arrangements with those individuals to be interviewed).

**BEHAVIORAL OBJECTIVES**

Performs a task which has been avoided.  
(cognitive--application)  
(affective--responding)

Reports feelings concerning the act of persevering.  
(affective--responding)

**LEARNING EXPERIENCES**

Students list tasks which are unpleasant to them.  
Discuss what makes these tasks unpleasant.  
Discuss ways these tasks could be made to be more pleasant.  
(Teacher--encourage the students to cooperate in order to make the task more pleasant).

Each student or pair of students selects one unpleasant task to accomplish. Decide what makes this specific task unpleasant for you and what you can do to make this task more pleasant.

Complete the task.

Students report feelings during the progress and completion of the task using these questions as guidelines:

- How did you feel while preparing for this task?
- How did you feel while working at this task?
- How did you feel after the task was completed?
- What pleasant thoughts or activities did you include to make the task more pleasant?

Students discuss how they feel about using the plan to try to make tasks more pleasant.  
Students discuss how they feel about using the plan in future situations.

**BEHAVIORAL OBJECTIVES**

Reports feelings concerning the act of persevering. continued

**LEARNING EXPERIENCES**

Students make a list of positive feelings which can occur as a result of persevering.

(Suggestion--video tape students involved in the tasks and some discussion concerning their feelings. The students will have persevered and cooperated in order to produce their own film).

Concept: Response to Criticism

**Topical Outline**

- 1.0 Definition of criticism
- 2.0 Reasons for criticism
  - 2.1 emotional release
  - 2.2 task oriented or constructive criticism
- 3.0 Reacting to criticism
  - 3.1 analyze purpose
  - 3.2 reactions to emotional criticism
  - 3.3 using constructive criticism

### Conceptual Statements

1. Criticism is the act of analyzing and making judgements.
2. Individuals criticize others when seeking a release for their own emotions and when trying to facilitate improvement in others.
3. Individuals being criticized will benefit from a careful examination of critical comments to determine the purpose for which the comments were intended.
4. One need not feel threatened upon receiving emotional criticism, since most everyone is the object of this type of criticism at some time.
5. Using constructive criticism is one way to facilitate self-improvement.

### BEHAVIORAL OBJECTIVES

Identifies the difference between constructive and destructive criticism.  
(cognitive--comprehension)

Recognizes there are more and less appropriate ways to react to criticism.  
(cognitive--comprehension)  
(affective--responding)

### LEARNING EXPERIENCES

Students listen to tapes which demonstrate constructive and destructive criticism.  
Discuss the difference in purpose between the two types of criticism.

Students develop a criteria for judging criticism.

Students look for articles in the paper or at news programs on TV for examples of criticism people must live with every day.  
Discuss how these people handled criticism.

**BEHAVIORAL OBJECTIVES**

Recognizes there are more and less appropriate ways to react to criticism, continued.

Practices receiving criticism in an appropriate manner.  
(cognitive--application)  
(affective--responding)

**LEARNING EXPERIENCES**

Students view the film "Jobs and Their Environment--On the Job".

Discuss the situation where the boss criticized the new employee. Use the criteria developed to judge his comments. Discuss the new employee's reactions to this criticism.

Discuss how you would have felt and reacted if you had been the new employee.

Students listen to a guest speaker who is prominent in the community discuss how he reacts to and uses criticism. Students ask the speaker questions or make comments after the talk.

Students summarize appropriate ways to react to criticism.

Students receive constructive criticism from their teacher when such comments are appropriate.  
(Teacher--do not create the situation; rather use a situation when it arises).

Individual students and the teacher discuss the above activity at a later time. The criteria developed previously and the summary sheet of appropriate ways to react to criticism could be used to make this discussion more objective.  
(Teacher--guide the students to recognize that they can learn from such encounters with others).



Concept: Cleanliness

**Topical Outline**

- 1.0 Definition of cleanliness
- 2.0 Cleanliness depends on:
  - 2.1 individual differences
  - 2.2 nature of the job
- 3.0 Cleanliness may influence one's self-concept

### Conceptual Statements

1. Cleanliness is the freedom from dirt and offensive odor and the use of sanitary practices so as to prevent the spread of infectious diseases.
2. Cleanliness schedules will depend on the individual's body chemistry and physical and emotional activities.
3. A person's job may influence the degree of cleanliness practiced in that situation.
4. Cleanliness may influence the way a person feels about himself.

### BEHAVIORAL OBJECTIVES

Defines cleanliness.  
(cognitive--comprehension)

Discusses the importance of cleanliness in relationship to employment.  
(cognitive--comprehension)  
(affective--responding)

### LEARNING EXPERIENCES

Students form viewing teams to consider the following points:

- Why should one wash the body on a regular basis?
- What lives in dirt?
- What do germs cause?
- How do we help the spread of germs?

View the film "Health-Personal Cleanliness".

Discuss the assigned areas of the film.

Arrive at a definition for cleanliness from the above discussion.

Students discuss the importance of cleanliness with respect to specific situations:

- the interview
- a kitchen job
- a car wash job
- a cleaning job
- a baby sitting job
- a waiter or waitress job
- a plant nursery or farm job

**BEHAVIORAL OBJECTIVES**

Outlines personal cleanliness standards and practices.

(cognitive--application)

(affective--responding)

**LEARNING EXPERIENCES**

Students develop a list of general rules and schedules for cleanliness.

Each student develops a personal schedule.

Each student develops a list of personal cleanliness standards desired.

Compare personal lists to general list made previously.

Discuss reasons why each individual's standards and practices may vary from the general list developed.

**APPENDIX B**

**KEYED EVALUATION INSTRUMENTS**

Student Attitude Inventory

Note to future users of this device: The underlined response is the more positive of the two responses. The attitude which each statement is believed to measure is given in parenthesis following each statement.

Directions: Listen to the statement carefully. Then tell the person reading the statement whether you agree with the statement or disagree with the statement.

- A    D    1. I feel upset when someone tells me I have done something wrong. (response to criticism)
- A    D    2. I like to have an appointment scheduled during work or school because then I can get off work or out of school. (fairness)
- A    D    3. I feel upset if someone suggests that I need to wash my hair, use deodorant, or take a bath. (cleanliness)
- A    D    4. I like my teacher or boss to explain what I have done wrong so I can improve my work. (response to criticism)
- A    D    5. I prefer working alone to working with another person or a group of people.
- A    D    6. I like to quit a job or problem when it seems I am getting nowhere and move on to a job or problem I can do more easily. (perseverance)
- A    D    7. I like to do a whole job rather than parts of a job. (cooperation)

- A D 8. I feel it is alright to sit and look at a magazine if I have my work finished, even though others may still be working. (fairness)
- A D 9. I feel going to work dirty would not matter if the job involved dirty work, such as field work, car washes, and household cleaning. (cleanliness)
- A D 10. I like to put off unpleasant tasks as long as possible. (perseverance)
- A D 11. I feel I get more things done when I work with someone else. (cooperation)
- A D 12. I like to complete a single job or task at a time before taking on others. (perseverance)
- A D 13. I feel I have a right to be dirty if that is how I wish to be. (cleanliness)
- A D 14. I do not feel badly talking about someone if what is said is the truth. (fairness)
- A D 15. I like working alone because then people know who has done the work. (cooperation)
- A D 16. I feel like people are picking on me when they tell me I could do better work. (response to criticism)
- A D 17. I feel upset or depressed when faced with an unpleasant job or task. (perseverance)
- A D 18. I do not feel good unless I take a bath or shower once a day. (cleanliness)
- A D 19. I work more when my supervisor or teacher is watching me. (fairness)

Student Behavior Rating Scale

Note to future users of this device: The underlined response is the more positive of the three responses. The behavior which each statement is believed to measure is given in parenthesis following each statement.

Directions: After reading the statement carefully, circle the response which is most characteristic of the person being evaluated.

- |    |   |                |              |               |
|----|---|----------------|--------------|---------------|
| 1. | Attempts to make work as pleasant as possible for himself.<br>(perseverance)                                  | <u>usually</u> | occasionally | seldom        |
| 2. | Has clean, fresh smelling hair.<br>(cleanliness)  | <u>usually</u> | occasionally | seldom        |
| 3. | Speaks more frequently about job advantages rather than job disadvantages.<br>(perseverance)                  | <u>usually</u> | occasionally | seldom        |
| 4. | Tries to escape responsibilities when possible. (fairness)  | usually        | occasionally | <u>seldom</u> |
| 5. | Volunteers to do tasks or takes on responsibilities he can do well so the whole group benefits. (cooperation) | <u>usually</u> | occasionally | seldom        |

- |   |                |              |               |
|---|----------------|--------------|---------------|
| 6. Defends inferior work when approached with suggestions on how to improve his work. (response to criticism)                         | usually        | occasionally | <u>seldom</u> |
| 7. Makes an effort to share joint responsibilities and tasks equally with the other involved members of the group. (fairness)         | <u>usually</u> | occasionally | seldom        |
| 8. Is reluctant to listen to suggestions on how to improve his work. (response to criticism)  | usually        | occasionally | <u>seldom</u> |
| 9. Is free from offensive body odor. (cleanliness)  | <u>usually</u> | occasionally | seldom        |
| 10. Performs less pleasant tasks without complaining about them or seeking excuses to put them off until a later time. (perseverance) | <u>usually</u> | occasionally | seldom        |
| 11. Participates willingly in group activities involving division of labor. (cooperation)   | <u>usually</u> | occasionally | seldom        |
| 12. Appears to enjoy spreading rumors or gossip about others. (fairness)  | usually        | occasionally | <u>seldom</u> |
| 13. Cries easily when approached by a supervisor with suggestions on how to improve his work. (response to criticism)                 | usually        | occasionally | <u>seldom</u> |



- |     |   |                |              |               |
|-----|---|----------------|--------------|---------------|
| 14. | Prefers to work alone rather than with someone else or a group. (cooperation)   | usually        | occasionally | <u>seldom</u> |
| 15. | Needs to be reminded to take care of personal cleanliness tasks. (cleanliness)  | usually        | occasionally | <u>seldom</u> |
| 16. | Completes a task once it has been started. (perseverance)   | <u>usually</u> | occasionally | seldom        |
| 17. | Tries to understand a partner's differences, likes, dislikes, habits, and abilities so as to improve working relationships. (cooperation) | <u>usually</u> | occasionally | seldom        |
| 18. | Works as well when left alone as when closely supervised. (fairness)  | <u>usually</u> | occasionally | seldom        |
| 19. | Wears clean clothing. (cleanliness)   | <u>usually</u> | occasionally | seldom        |

**APPENDIX C**

**PROJECT DATA**

**TABLE C-1**  
**STUDENT RESPONSES TOWARD THE FIVE CONCEPTS**  
**(TUCSON, ARIZONA 1972-1973)**

Students	Prior to Unit Presentation		Immediately after Unit Presentation		Five Weeks after Unit Presentation	
	+	-	+	-	+	-
S1	13	6	14	5	14	5
S2	15	4	16	3	18	1
S3	10	9	13	6	10	9
S4	7	12	13	6	13	6
S5	8	11	12	7	15	4
S6	14	5	15	4	14	5
S7	10	9	12	7	13	6
S8	8	11	8	11	8	11
S9	8	11	8	11	10	9
S10	15	4	11	8	11	8
S11	11	8	11	8	14	5
S12	10	9	11	8	15	4
S13	7	12	9	10	13	6

+ refers to positive student responses

- refers to negative student responses

TABLE C-2

POINT CHANGE IN STUDENT RESPONSES TOWARD THE FIVE CONCEPTS  
(TUCSON, ARIZONA 1972-1973)

Students	Measured from Evaluation I* to II	Measured from Evaluation II* to III	Total Point Change Measured from Evaluation I to III*
S1	+1	0	+1
S2	+1	+2	+3
S3	+3	-3	0
S4	+6	0	+6
S5	+4	+3	+7
S6	+1	-1	0
S7	+2	+1	+3
S8	0	0	0
S9	0	+2	+2
S10	-4	0	-4
S11	0	+3	+3
S12	+1	+4	+5
S13	+2	+4	+6

\* I refers to pre-evaluation conducted July 5, 1972

II refers to post-evaluation #1 conducted  
July 20 and 21, 1972

III refers to post-evaluation #2 conducted  
August 28, 1972

TABLE C-3  
 PERCENTAGE CHANGE IN STUDENT RESPONSES  
 TOWARD THE FIVE CONCEPTS  
 (TUCSON, ARIZONA 1972-1973)

Students	Measured from Evaluation I* to II	Measured from Evaluation II* to III	Total % Change Measured from Evaluation I to III*
S1	+5.3	0.0	+5.3
S2	+5.3	+10.5	+15.8
S3	+15.8	-15.8	0.0
S4	+31.6	0.0	+31.6
S5	+21.0	+15.8	+36.8
S6	+5.3	-5.3	0.0
S7	+10.5	+5.3	+15.8
S8	0.0	0.0	0.0
S9	0.0	+10.5	+10.5
S10	-21.0	0.0	-21.0
S11	0.0	+15.8	+15.8
S12	+5.3	+21.0	+26.3
S13	+10.5	+21.0	+31.5

\* I refers to pre-evaluation conducted July 5, 1972

II refers to post-evaluation #1 conducted  
July 20 and 21, 1972

III refers to post-evaluation #2 conducted  
August 28, 1972

TABLE C-4

CLASS RESPONSES TOWARD EACH OF THE FIVE CONCEPTS  
(TUCSON, ARIZONA 1972-1973)

Concepts	Prior to Unit Presentation		Immediately after Unit Presentation		Five Weeks after Unit Presentation	
	+	-	+	-	+	-
Cooperation	20	32	25	27	25	27
Fariness	24	28	33	19	36	16
Perseverance	29	23	31	21	35	17
Response to Criticism	22	17	25	14	27	12
Cleanliness	41	11	41	11	45	7

+ refers to positive student responses

- refers to negative student responses

TABLE C-5

POINT CHANGE IN CLASS RESPONSES  
TOWARD EACH OF THE FIVE CONCEPTS  
(TUCSON, ARIZONA 1972-1973)

Concepts	Measured from Evaluation I* to II	Measured from Evaluation II* to III	Total Point Change Measured from Evaluation I to III*
Cooperation	+5	0	+5
Fairness	+9	+3	+12
Perseverance	+2	+4	+6
Response to Criticism	+3	+2	+5
Cleanliness	0	+4	+4

\* I refers to pre-evaluation conducted July 5, 1972

II refers to post-evaluation #1 conducted  
July 20 and 21, 1972

III refers to post-evaluation #2 conducted  
August 28, 1972

TABLE C-6

PERCENTAGE CHANGE IN CLASS RESPONSES  
TOWARD EACH OF THE FIVE CONCEPTS  
(TUCSON, ARIZONA 1972-1973)

Concepts	Measured from Evaluation I* to II	Measured from Evaluation II* to III	Total % Change Measured from Evaluation I to III*
Cooperation	+9.6	0.0	+9.6
Fairness	+17.3	+5.8	+23.1
Perseverance	+3.8	+7.7	+11.5
Response to Criticism	+5.8	+3.8	+9.6
Cleanliness	0.0	+7.7	+7.7

\* I refers to pre-evaluation conducted July 5, 1972

II refers to post-evaluation #1 conducted  
July 20 and 21, 1972

III refers to post-evaluation #2 conducted  
August 28, 1972



TABLE C-7

INSTRUCTORS' RATING SCORES OF STUDENT BEHAVIORS  
RELATED TO THE FIVE CONCEPTS  
(TUCSON, ARIZONA 1972-1973)

Concepts	Prior to Unit Presentation			Immediately after Unit Presentation			Five Weeks after Unit Presentation		
	+	-	0	+	-	0	+	-	0
Cooperation	18	27	7	20	25	7	31	16	5
Fairness	24	18	10	28	16	8	35	14	3
Perseverance	25	20	7	25	23	4	27	21	4
Response to Criticism	22	11	6	22	14	3	22	16	1
Cleanliness	30	15	7	32	17	3	34	15	3

+ refers to student behaviors which are usually positive

- refers to student behaviors which are seldom positive

0 refers to student behaviors which are occasionally positive

TABLE C-8

POINT CHANGE IN INSTRUCTORS' RATING SCORES  
OF STUDENT BEHAVIORS RELATED TO THE FIVE CONCEPTS  
(TUCSON, ARIZONA 1972-1973)

Concepts	Measured from Evaluation I* to II	Measured from Evaluation II* to III	Total Point Change Measured from Evaluation I to III*
Cooperation	+2	+11	+13
Fairness	+4	+7	+11
Perseverance	0	+2	+2
Response to Criticism	0	0	0
Cleanliness	+2	+2	+4

\* I refers to pre-evaluation conducted July 5, 1972

II refers to post-evaluation #1 conducted  
July 20 and 21, 1972

III refers to post-evaluation #2 conducted  
August 28, 1972

TABLE C-9

PERCENTAGE CHANGE IN INSTRUCTORS' RATING SCORES  
OF STUDENT BEHAVIORS RELATED TO THE FIVE CONCEPTS  
(TUCSON, ARIZONA 1972-1973)

Concepts	Measured from Evaluation I* to II	Measured from Evaluation II* to III	Total % Change Measured from Evaluation I to III*
Cooperation	+3.8	+21.1	+24.9
Fairness	+7.7	+13.4	+21.1
Perseverance	0.0	+3.8	+3.8
Response to Criticism	0.0	0.0	0.0
Cleanliness	+3.8	+3.8	+7.6

\* I refers to pre-evaluation conducted July 5, 1972

II refers to post-evaluation #1 conducted  
July 20 and 21, 1972

III refers to post-evaluation #2 conducted  
August 28, 1972

TABLE C-10

POSITIVE STUDENT COMMENTS TOWARD EACH OF THE FIVE CONCEPTS  
 USING RYAN'S OBSERVATION RECORD  
 (TUCSON, ARIZONA 1972-1973)

Comments	Cooperation	Fairness	Perseverance	Response to Criticism	Cleanliness
Alert	11	33	45	26	47
Responsible	6	8	8	6	12
Confident	4	16	11	4	16
Initiating	4	20	12	2	7
TOTAL POSITIVE COMMENTS	<u>25</u>	<u>77</u>	<u>76</u>	<u>38</u>	<u>82</u>

TABLE C-11

NEGATIVE STUDENT COMMENTS TOWARD EACH OF THE FIVE CONCEPTS  
 USING RYAN'S OBSERVATION RECORD  
 (TUCSON, ARIZONA 1972-1973)

Comments	Cooperation	Fairness	Perseverance	Response to Criticism	Cleanliness
Apathetic	3	1	1	2	3
Obstructive	0	2	3	0	1
Uncertain	2	10	15	10	9
Dependent	0	2	10	11	8
<b>TOTAL NEGATIVE COMMENTS</b>	<u>5</u>	<u>15</u>	<u>29</u>	<u>23</u>	<u>21</u>

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