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INDUCING ACHIEVEMENT BEHAVIOR THROUGH A
PLANNED GROUP COUNSELING PROGRAM.

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INDUCING ACHIEVEMENT BEHAVIOR THROUGH A PLANNED
GROUP COUNSELING PROGRAM

A DISSERTATION SUBMITTED TO THE GRADUATE DIVISION OF THE
UNIVERSITY OF HAWAII IN PARTIAL FULFILLMENT OF
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By

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This study was an attempt to find an answer to the question: What are the specific treatment conditions which will effectively induce academic achievement behavior among male high school underachievers? It was aimed at the attainment of four specific objectives: (1) to improve the subjects' academic motivation to achieve, (2) to improve the subjects' study habits and skills, (3) to improve the subjects' grade-point average, and (4) to improve the subjects' school attendance.

The subjects of this study were male eleventh and twelfth grade students whose grade-point average in the tenth and eleventh grades, respectively, was more than one standard error of estimate below their predicted grade-point average using their score on a standardized test of academic ability as predictor. The subjects were assigned to three treatment groups, i.e., the counseled group, the aware group, and the unaware group. The counseled group was composed of subjects who were informed of their academic potential, were invited to counseling, and were given group counseling using verbal reinforcement. The aware group was composed of subjects who were informed of their academic potential, were invited to counseling, but were not provided counseling since they declined to participate in the group counseling program. The unaware group was composed of subjects who were neither informed of their academic potential nor invited to counseling nor given group counseling. The subjects in the unaware group were the first to be selected at random from the identified population of male high school underachievers.
Seventeen counseling sessions were held in a classroom furnished with movable arm chairs which were arranged in a circle with a portable tape recorder placed at the center. The sessions were held twice a week for eight and a half weeks. The topics for the counseling sessions were planned in advance and were related to motivation to achieve and effective study habits and skills.

Achievement-oriented responses were elicited by the counselor using general and specific verbal cues in the form of questions. The counselor administered verbal reinforcement contingent on the production of achievement-oriented responses by the subjects. Achievement-oriented responses were defined as verbal utterances or statements expressing a favorable attitude toward education, improved academic performance, effective study habits and skills, and improved school attendance. Verbal reinforcement consisted of praise, agreement, reflection of the subject's statement, or a verbal utterance such as "uh-hum" or a non-verbal indication of assent or attention such as a nod, forward posture, or smile.

The results revealed that the counseled group performed significantly better than either the aware group or the unaware group on the criterion measures of academic motivation to achieve and effective study habits and skills. The counseled group was significantly superior to the unaware group, but not to the aware group, in academic performance as measured by grade-point average. There were no significant differences among the three groups on the school attendance criterion. There were no significant differences between the aware group and the unaware group on all the criterion measures. The results indicate that
planned group-reinforcement counseling is a viable technique for improving the motivation to achieve, study habits and skills, and grade-point average of male high school underachievers.
# LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>I.</td>
<td>Pre- and posttest mean scores, standard deviations, and N's of treatment</td>
<td>49</td>
</tr>
<tr>
<td></td>
<td>groups on the Michigan State Motivation Scales</td>
<td></td>
</tr>
<tr>
<td>II.</td>
<td>Analysis of covariance of scores on the Michigan State Motivation Scales</td>
<td>49</td>
</tr>
<tr>
<td>III.</td>
<td>Adjusted posttest group means on the motivation criterion test</td>
<td>51</td>
</tr>
<tr>
<td>IV.</td>
<td>F ratios of adjusted group mean comparisons on the motivation criterion</td>
<td>51</td>
</tr>
<tr>
<td>V.</td>
<td>Pre- and posttest mean scores, standard deviations, and N's of treatment</td>
<td>53</td>
</tr>
<tr>
<td></td>
<td>groups on the Study Habits Inventory</td>
<td></td>
</tr>
<tr>
<td>VI.</td>
<td>Analysis of covariance of scores on the Study Habits Inventory</td>
<td>53</td>
</tr>
<tr>
<td>VII.</td>
<td>Adjusted posttest group means on the study habits and skills criterion test</td>
<td>54</td>
</tr>
<tr>
<td>VIII.</td>
<td>F ratios of adjusted group mean comparisons on the study habits and skills</td>
<td>54</td>
</tr>
<tr>
<td></td>
<td>criterion</td>
<td></td>
</tr>
<tr>
<td>IX.</td>
<td>Pre- and post-mean GPA's, standard deviations, and N's of treatment groups</td>
<td>57</td>
</tr>
<tr>
<td>X.</td>
<td>Analysis of covariance of subjects' grade-point averages</td>
<td>57</td>
</tr>
<tr>
<td>XI.</td>
<td>Adjusted posttest mean GPA's of treatment groups</td>
<td>60</td>
</tr>
<tr>
<td>XII.</td>
<td>F ratios of adjusted group mean GPA comparisons</td>
<td>60</td>
</tr>
<tr>
<td>XIII.</td>
<td>Pre- and post-mean number of absences, standard deviations, and N's of</td>
<td>63</td>
</tr>
<tr>
<td></td>
<td>treatment groups</td>
<td></td>
</tr>
<tr>
<td>TABLE</td>
<td>Page</td>
<td></td>
</tr>
<tr>
<td>--------</td>
<td>------</td>
<td></td>
</tr>
<tr>
<td>XIV. Analysis of covariance of subjects' number of absences</td>
<td>63</td>
<td></td>
</tr>
<tr>
<td>XV. Adjusted post-group means on absences</td>
<td>64</td>
<td></td>
</tr>
</tbody>
</table>
## LIST OF FIGURES

<table>
<thead>
<tr>
<th>FIGURE</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Comparisons of pre- and posttest group mean scores on the motivation criterion test</td>
<td>56</td>
</tr>
<tr>
<td>2. Comparison of pre- and posttest group mean scores on the study habits and skills criterion test</td>
<td>58</td>
</tr>
<tr>
<td>3. Comparison of pre- and post-group mean GPA's</td>
<td>61</td>
</tr>
<tr>
<td>4. Comparison of pre- and post-group mean number of absences</td>
<td>65</td>
</tr>
</tbody>
</table>
CHAPTER I
INTRODUCTION

Studies have shown that underachievement exists in 10 to 25 percent of a given population (Dizney, 1963; Kowitz & Armstrong, 1961; National Education Association, 1958). The problem of underachievement is of considerable importance and merits the attention of psychologists, sociologists, and other social scientists since underachievement impedes the individual from fully realizing his potential and at the same time deprives the society of the valuable services that the underachieving individual otherwise could have rendered. Society has been increasingly aware and concerned about the accumulated loss of existing talent and manpower resources (McClelland, Baldwin, Bronfenbrenner, & Strodbeck, 1958; Miller, 1961; Wrenn, 1962). According to Havighurst and his associates (1955), at least half of our best human material is not developed to anywhere near capacity. Interest in developing effective methods that will help the underachieving student to utilize his resources to the fullest has been mounting in the last ten years (Baymur & Patterson, 1960; Bosdell, 1962; Broedel, Ohlsen, & Southard, 1960; Calhoun, 1956; Dickenson & Truax, 1966; Gilbreath, 1967; Miller, 1961; National Education Association, 1956; Ohlsen & Proff, 1960; Searles, 1962; Sheldon & Landsman, 1950; Winborn & Schmidt, 1962).

The problem of underachievement assumes an added urgency on account of research findings which indicate that underachievement starts as early as the first grade in school and continues to increase, unless checked by external intervention, as the individual grows older (Barrett, 1957; Frankel, 1960; Shaw & McCuen, 1960). The deterioration of the
underachiever's academic performance is much greater in secondary school than in grade school (Barrett, 1957) and is twice as great in senior high school as in junior high school (Frankel, 1960). On account of this demonstrated accumulating detrimental effect of underachievement, it has been labeled as not an easily modifiable surface phenomenon (Shaw & McCuen, 1960).

Other interesting research findings indicate that underachievement is primarily a male phenomenon (Brickman, 1965; Hilliard & Roth, 1969). Whether this phenomenon is prevalent in all cultures or only in male-dominated cultures has not been established. Certain societal factors may be responsible for the prevalence of underachievement among males as reported in these studies. Since these findings indicate that the problem of underachievement exists mostly among males, attempts to induce achievement behavior among underachieving males are highly relevant.

For the twofold purpose of helping the underachieving individual realize his potentialities and enabling him to contribute to the general welfare of society, numerous attempts have been made to solve the problem of underachievement. Attempts to check underachievement have taken various forms, including group counseling, individual counseling, courses in study skills or academic methods, reading instruction, use of motivational devices, or a combination of these methods. These efforts have resulted in both successes and failures.

Some studies reported significant increases in grade-point average or in scores on standardized achievement tests among underachievers as a result of outside intervention (Bosdell, 1962; Calhoun, 1956; Chestnut, 1965; Dickenson & Truax, 1966; Serene, 1953; Sheldon &
Landsman, 1950; Shouksmith & Taylor, 1964; Spielberger & Weitz, 1962). Other studies reported failure to increase grade-point average and even a decrease in grade-point average following intervention measures (Broedel et al., 1969; Guthrie & O'Neill, 1953; Raph, Goldberg & Passow, 1966; Searles, 1962; Winborn & Schmidt, 1962; Winkler, Teigland, Munger, & Kranzler, 1965). The results of some studies were not clear-cut and were generally qualified (Baymur & Patterson, 1960; Dimichael, 1943; Entwistle, 1960; McKeachie, 1961; Messano, 1968).

The conflicting and ambiguous results reported by various investigators point out the need for additional studies on methods that will effectively eliminate or minimize underachievement. A major shortcoming of many of these studies was the lack of specificity of the treatment variables. It was not surprising that contradictory results were obtained by investigators who were reportedly using the same method. Most often investigators would simply report that they were using individual counseling or group counseling without clearly specifying the content of these treatments.

In one study it was reported that the counselor used every technique at his command to get the student to improve his academic performance (Guthrie & O'Neill, 1953). In other studies the counselees were told that they could talk about anything they liked and were allowed to determine the direction of the counseling sessions (Broedel et al., 1960; Clements, 1966; Davis, 1959; Dickenson & Truax, 1966; Gilbreath, 1967; Spielberger & Weitz, 1962; Winborn & Schmidt, 1962). Other studies only reported that the treatment variable consisted of individual and/or group counseling with only general descriptions of these methods.
(Baymur & Patterson, 1960; Bosdell, 1962; Dickenson & Truax, 1966; Shoukesmith & Taylor, 1964; Thelen & Harris, 1968). On account of the lack of specificity of the treatment variable or variables employed in many of these studies, it would be difficult to attribute the results of the treatment to a specific variable or group of variables since other unidentified, unexpected, or uncontrolled variables were allowed to operate in the counseling situation.

**The Problem**

In view of the contradictory findings of research studies on ways to eliminate or minimize underachievement, experimental studies are needed wherein treatment conditions designed to induce academic achievement behavior among underachievers are specified. The treatment conditions should be specific enough to allow replication of these conditions by other investigators.

This study was an attempt to find an answer to the question: What are the specific treatment conditions which will effectively induce academic achievement behavior among male high school underachievers? Male high school underachievers were selected as subjects of this study since underachievement is primarily a male phenomenon (Brickman, 1965; Hilliard & Roth, 1969) and since underachievement is much greater in secondary school than in grade school. (Barrett, 1957; Frankel, 1960; Shaw & McCuen, 1960).

The primary aim of this study was to induce academic achievement behavior among a definable group of male high school underachievers. This general aim is expressed in terms of the following specific objectives:
1. to improve the subjects' academic motivation to achieve;
2. to improve the subjects' study habits and skills;
3. to improve the subjects' grade-point average;
4. to improve the subjects' school attendance.

**Theoretical Orientation of the Study**

This study is based on the theory that the development of achievement or underachievement behavior is contingent on the kinds of stimuli affecting the individual, their prevalence and intensity, and their reinforcing or aversive effects on the individual. Social reinforcement such as praise, approval, or attention plays an important role in shaping or promoting achievement behavior. The frequency of occurrence of behaviors that are praised, approved, or encouraged tends to increase, while behaviors that are ignored or punished tend to be extinguished or suppressed (Staats & Staats, 1963).

McClelland and his associates (1953) found that cultures and families which stressed independence and competition with standards of excellence tended to produce children with high motivation. Other investigators also found that parents of high achievers gave their children more praise and approval, showed more interest and understanding, and were closer to their children than parents of underachievers (Morrow & Wilson, 1961). Similar findings were earlier reported by Kurtz and Swenson (1951) who stated that parents of high achievers had pride, confidence, affection, and interest in their children, whereas the opposite was true for parents of underachievers. The latter did not expect much of their children and had very little respect or rapport in their relationship with them. A study by Hilliard and Roth (1969) gave
support to the findings reported by McClelland and his associates (1953), Morrow and Wilson (1961), and Kurtz and Swenson (1951). Hilliard and Roth (1969) found that mothers of achievers were more accepting of their children than were mothers of underachievers. The latter were rejecting of their children and usually attended only to the failures of their children while ignoring or taking for granted their successes. Similar findings were reported by other investigators (Kimball, 1953; Pierce, 1961; Strodbeck, 1958).

These findings support the theory that achievement behavior is determined by environmental factors which are usually beyond the individual's control. Outside intervention is necessary in order to create an environment which is conducive to adaptive changes in one's pattern of behavior, including achievement behavior.

The motivation to achieve is influenced also by the presence or absence of adequate achieving models in the immediate environment or life-space of the individual. This assumption is based on studies which demonstrated that significant models were influential in the learning of new behaviors by the observing subjects (Bandura, 1962, 1967; Bandura & Walters, 1963).

Many studies have focused on the characteristics of underachievers and overachievers with the objective of establishing a relationship between personality traits and discrepant achievement (Diener, 1960; Harrison, 1959; Roth & Meyersburg, 1963; Russel, Clark, & Dinitz, 1956; Taylor, 1964). Roth and Meyersburg (1963) indicated that underachievers tend to have no clear system of goals or values, have frequent deprivations and free-floating anxiety, and are prone to self-disparagement.
Diener (1960) noted that overachievers tend to have excellent study habits. Taylor (1964) reviewed studies on the characteristics of underachievers published between 1933 and 1963 and arrived at the following conclusions:

1. Overachievers' activities are centered around academic interests, whereas underachievers' interests are non-academic.
2. Overachievers' goals are realistic, whereas those of underachievers are unrealistic.
3. Overachievers have a positive self-value, whereas underachievers have a negative one.
4. Overachievers are well-disposed toward authority, whereas underachievers are hostile toward authority.
5. Overachievers are able to handle anxiety, whereas underachievers are not able to.
6. Overachievers have positive interpersonal relations, whereas underachievers have negative interpersonal relations.
7. Overachievers have a low independence-dependence conflict, whereas underachievers have a high independence-dependence conflict.

These findings are useful in identifying and understanding overachievers and underachievers but they cannot be regarded as the causes of discrepant achievement behavior. These traits are generally regarded as the effects or consequences of a long history of interaction with environmental factors which either promote or inhibit the development of achievement behavior (Rosen, 1956; Staats & Staats, 1963).

Since various studies have demonstrated the vital role of environmental factors or stimuli in determining human behavior or behavior

Review of Related Studies

Researchers have tried various means to solve the problem of underachievement. Their efforts have met with results which were often contradictory. Attempts to induce achievement or achievement-related behavior are classified according to the nature of the intervention employed, i.e., a nondirective or client-centered approach in which the client is encouraged to say almost anything he wants in the counseling session and is allowed to determine the direction of the session (Rogers, 1951); a behavioral or reinforcement approach in which only certain behavioral or verbal responses of the client which are relevant to the mutually agreed upon counseling goals are promoted (Krumboltz & Thoresen, 1969); and an eclectic approach which includes a combination of a client-centered approach, a behavioral approach and other approaches (Pepinsky & Pepinsky, 1954).

Nondirective Approach

A study by Dickenson and Truax (1966) attempted to improve the academic performance of college freshmen. The matched subjects were given 24 one-hour nondirective counseling held twice a week for three
months. The results revealed that the experimental group made significantly greater improvement than the control group in terms of grade-point average. But the results were qualified in that only those counseled students who received the highest therapeutic conditions tended to show the greatest improvement. What the highest therapeutic conditions consisted of was not specified in detail other than a description of the conditions where the counselor showed more empathy. But again empathy was not operationally defined in terms of specific observable behaviors on the part of the counselor.

Sheldon and Landsman (1950) tried to explore the effectiveness of nondirective group therapy in improving the academic performance and general adjustment of failing but potentially capable college freshmen. Twenty-eight subjects were roughly paired according to intelligence, general adjustment, reading ability, and grade-point average and assigned to two groups. The control group attended a traditional course in "Academic Methods" while the experimental group attended a nondirective group therapy disguised as a course in "Academic Methods" but where the students were allowed to do anything they felt like doing. The investigators reported that a classroom situation where a number of students were working out crossword puzzles was not unusual.

At the end of the one-semester experiment, the investigators reported a significant difference between the two groups in grade-point average in favor of the experimental group. No significant difference in personality traits was reported. But a one-year follow-up revealed that of those in the experimental group who were still in school, only three showed an increase in grade-point average, one remained the same,
and five decreased in grade-point average. Among the remaining subjects in the control group, five showed some increase and three showed a decrease in grade-point average. No personality changes occurred between the two groups.

A similar study (Roth, Mauksch, & Peiser, 1967) involving 174 failing college students at the Illinois Institute of Technology showed that the counseled group increased their grade-point average significantly compared to the non-counseled group and that these changes held over time. The gains were attributed to the counseling experience. The results of this study are questionable since the subjects in the control group were matched with the subjects in the experimental group on variables considered relevant except grade-point average. The control group had a significantly higher grade-point average at the beginning of the study than the experimental group but no statistical adjustment was made on the post-grade-point average of the two groups on account of their significant initial differences. At the conclusion of the study the experimental group had a mean grade-point average of 1.74, whereas the control group had a mean grade-point average of only 1.35. The significant gains made by the experimental group could very likely be due to the regression effect. There was no statistical test made on the significance of the regression. A t-test was employed using gains in grade-point average as scores instead of the more appropriate analysis of covariance which would have accounted for the initial differences in grade-point average between the experimental and control groups.

Thelen and Harris (1968) investigated the effect of group psychotherapy on academic achievement and personality factors and the
relationship between these two dependent variables. The subjects were college freshmen who were divided into three groups: (1) the group composed of test responders who took the personality criterion test but were not interested in group therapy, (2) the experimental group who volunteered for group therapy, and (3) the control group who were interested in group therapy but were denied it during the duration of the experiment. After the experimental period of 17 weeks, the investigators concluded that significantly greater academic improvement occurred in the experimental group than in the control group and that higher correlations between certain adaptive or "healthy" personality variables and academic improvement were obtained in the experimental group than in the control group or the group composed of test responders.

Closer scrutiny of the results revealed that these conclusions were not warranted by the data. The difference in grade-point average between the experimental group and the control group using a one-tailed t-test was reported to be significant at the .07 level (t = 1.54). It was in the subsequent analysis of the percentage of subjects in the two groups reaching their predicted grade-point average that the significance level of the difference between the two groups reached the value of .025. With regard to the second conclusion, the investigators discounted or did not explain satisfactorily the unexpected finding that there was a negative relationship between certain adaptive or "healthy" personality variables and academic improvement on the part of the test responders who improved almost just as much in grade-point average as those in the experimental group.

Baymur and Patterson (1960), comparing three methods of helping
underachieving high school students achieve to capacity, reported no significant differences in grade-point average among the subjects who received individual counseling, group counseling, and a one-session motivational counseling which consisted of informing the subjects of their potential ability and encouraging them to use their potential talent to the fullest. No significant differences were also found in other criterion measures, namely, personal adjustment and study habits and attitudes. In their study, the individual and group counseling processes were not specifically described; it would be difficult to tell what exactly transpired in those counseling sessions and what counseling principles were systematically employed by the counselor to achieve the counseling goals.

Using gifted underachieving ninth graders as subjects, Broedel, Ohlsen, and Proff (1960) investigated the extent to which group counseling could improve the mental health and academic performance of these students. The investigators provided counseling in an ordinary classroom furnished with movable arm chairs which were arranged in a circle. The sessions were electronically recorded by a specially installed equipment. The counseling atmosphere was described as permissive and accepting. The members of the experimental group were excused from study hall and met one class period for counseling twice each week for eight weeks. At the end of the experimental period, the members of the experimental group improved significantly on the criterion of acceptance of self and others but decreased significantly more than the control subjects in grade-point average and failed to improve their grades even during the 18-month follow-up.
Winborn and Schmidt (1962) investigated the effectiveness of short-term group counseling upon the academic achievement of potentially superior but underachieving college freshmen. Six counseling sessions extending over a period of two months were provided the experimental group while none was given the control group. The content of the sessions was described as relatively unstructured. At the end of the study, a significant difference was found between the experimental and control groups but in favor of the latter. No significant difference was observed between the two groups on their scores on the California Psychological Inventory.

These studies following a nondirective approach demonstrate a lack of consistency with regard to the results obtained and a lack of specificity of the treatment variables employed. The conflicting and generally negative results of these studies show that a nondirective counseling approach is inadequate and unreliable.

However, these studies are important in that they were honest attempts to find a solution to the problem of underachievement. They point out directions that should or should not be followed. They also suggest to other investigators techniques that can be improved or settings that can be adapted to other approaches such as the counseling setting used in the study by Broedel and his associates (1960) which was partially adopted in this study.

**Behavioral or Reinforcement Approach**

Ryan (1967) investigated the long-term effects of behavioral counseling on the study behavior of college students. The study used two experimental groups and two control groups. The experimental groups
and one of the control groups received seven weekly group counseling sessions in which the experimental groups received verbal reinforcement from the counselor upon the production of the desired responses by the counselee, whereas the active control group did not receive reinforcement. The only difference between the two experimental groups was that one received specific verbal cues to elicit responses while the other received only general cues from the counselor. The active control group received printed material for cueing purposes while the inactive control group received no counseling at all.

The topics for the counseling sessions were planned in advance; they were related to effective study behavior. A three-month follow-up was conducted after the termination of the counseling program. At the end of the study, Ryan (1967, p. 358) concluded that (1) "reinforcement counseling is a viable approach for modifying study behavior of college-age normal Ss, (2) modified behavior generalizes to a noncounseling setting, and (3) modified responses persist at the same strength after reinforcement counseling has been concluded."

A study reported by Phillips and Wiener (1966, p. 131) demonstrated that structured short-term (10 sessions) group therapy using a reinforcement approach was effective in increasing the grade-point average of experimental subjects from C- to B-, which was a significant increase at the .01 level. Another study reported by the same authors (pp. 125-130) showed that between the two therapeutic techniques, i.e., the response-centered procedure and the client-centered procedure, the former was more effective in increasing the grade-point average and the scores of high school experimental subjects on the Iowa Test of
Educational Development after 10 interviews lasting between 45 and 60 minutes each.

Krumboltz and Shroeder (1965) attempted to induce career planning behavior using reinforcement counseling and model-reinforcement counseling with eleventh grade high school students as subjects. In both reinforcement counseling and model-reinforcement counseling, verbal reinforcement was administered by the counselor; the only difference between the two was that in the latter, a tape recorded counseling session with a male counselee serving as model was first presented to the subjects before reinforcement counseling was started. At the conclusion of the study, the experimental groups were found to have engaged more in career planning behavior than the control groups.

In a related study reported by Krumboltz and Thoresen (1964), information-seeking behavior was used as the dependent variable. The independent variables used were (1) reinforcement counseling, (2) model-reinforcement counseling, (3) a placebo procedure wherein the subjects were presented a film or film strip which was followed by a discussion but withholding reinforcement to the responses, and (4) no treatment. The authors reported the following findings:

(a) Model reinforcement and reinforcement counseling produced more external information seeking behavior than control procedures;

(b) With a male model, model reinforcement counseling surpassed reinforcement counseling for males but not for females;

(c) Groups and individual settings were about equally effective on the average but interactions were found with counselor-schools, sex of subjects, and treatments.

[p. 333]
The subjects of their study were normal eleventh grade students. They were made well aware of the counselor's interest in their vocational and educational explorations. The response class that was being reinforced was not therefore disguised.

Ryan and Krumboltz (1964) investigated the relationship between the frequency with which clients make decision and deliberation responses and the counselor's selective reinforcement of these responses. The subjects were 60 male students enrolled in a psychology course. They were assigned randomly to two counselors and three treatment groups, namely, (1) group whose decision responses were reinforced, (2) group whose deliberation responses were reinforced, and (3) group whose decision and deliberation responses were not reinforced. One 20-minute interview was conducted with each subject. The results confirmed the hypothesis that the counselor's reinforcement of decision and deliberation responses of the client would significantly increase the frequency of the reinforced responses. It was also found that decision-making behavior generalized to a noncounseling setting.

Finally, a study by Hansen, Niland, and Zani (1969) gave evidence of the efficacy of model-reinforcement counseling in promoting socially acceptable behavior among elementary school children. The subjects were volunteer sixth grade students in a suburban elementary school. The counselors were two doctoral students. Counseling sessions were held twice a week for four weeks. The counselees were informed that the purpose of the group sessions was to discuss social behavior in school. Each session had a planned specific topic which focused on getting along with others and maturing socially. The counselors reinforced ideas, insights, and suggestions that were relevant to acceptable social
behavior. The results were reported to have been maintained during the follow-up period of two months.

The consistently positive results of these studies using a behavioral or reinforcement approach show promise of being effective in the modification of other types of human behavior, specifically achievement behavior. These studies indicate effective counseling techniques and procedures for modifying human behavior. The counseling techniques used in these studies are especially relevant to the present study which adopted a reinforcement counseling approach.

Eclectic Approach

Clements (1966) studied 180 college-bound seniors to determine whether small group counseling would affect their anxiety level. Counseling was conducted during school time by two full-time doctoral students. The counseling content was structured to the interest of the students, namely, college admission, curriculum, selection of major field, social activities, extra-curricular activities, financial assistance, and vocational opportunities related to major field of study. At the end of the study, the author concluded that an experience in small group counseling significantly lowered the anxiety level of transitional adolescents.

A study by Bosdell (1962) compared the effectiveness of four methods of assisting high school underachievers overcome their academic handicap. Five treatment conditions were used, namely, (1) individual counseling, (2) group counseling, (3) study skills instructions, (4) a combination of group and individual counseling, and (5) no treatment.
Counseling and study skills instruction were conducted once a week for two semesters. Each session was about one class period of 55 minutes. The subjects of the study were underachievers in grades 10 through 12 with I.Q.'s ranging from 90 to 139. At the conclusion of the study, there were no significant differences among the groups in personality variables as measured by the Minnesota Counseling Inventory and the Heston Personal Inventory. However, significant differences were found on the criteria of study habits and attitudes as measured by the Brown-Holtzman Survey of Study Habits and Attitudes, and academic achievement as measured by grade-point average.

In Bosdell's study (1962), individual counseling was found to be the most potent treatment and group counseling to be the least effective treatment in helping students acquire better study habits and attitudes. Study skills instruction and individual counseling were found to be the most potent treatments in improving the academic achievement of high school underachievers while group counseling was found to be the least effective. Follow-up data on the sophomore and junior subjects who were still in school during the following school-year showed that the gains made on the criterion of study habits and attitudes were not maintained.

In another study using group counseling disguised as an academic orientation program (Spielberger & Weitz, 1962), it was shown that the subjects in the experimental group increased their grade-point average when compared to the controls. The subjects were volunteer college freshmen identified as having a high level of anxiety as measured by the Minnesota Multiphasic Personality Inventory. The counseling
sessions were described as unstructured and the subjects could bring up any problems to be discussed at the sessions.

Chestnut (1965) compared the effects of structured and unstructured group counseling on the underachievement of male college students. The treatment conditions consisted of the following: (1) counselor-structured counseling, (2) group-structured counseling, and (3) no counseling. In the first treatment condition, the counselor presented for discussion topics assumed to be relevant to the counseling goals according to a priori diagnostic assumptions. Each topic was presented with a realistic example. The topics selected were the following: (1) academic underachievement, (2) goals and purposes, (3) dependence-independence, (4) self-feelings, (5) expression of anger and hostility, and (6) impulses and controls.

In the second treatment condition, the counseling experience put emphasis on materials spontaneously originating with the group and were reported to be different from the topics discussed in the counselor-structured group. The topics discussed in the second group primarily focused on study habits and attitudes, feelings associated with poor performance, purposes and goals as they might relate to underachievement, and expectations of other people to achieve.

The results indicated that subjects in the counselor-structured group had a significantly greater rate of change in grade-point average than subjects in either the group-structured or control groups. The rate of change in grade-point average of the group-structured group was greater than that of the controls after counseling. A three-month follow-up revealed that the counselor-structured group's rate of change
in grade-point average was significantly greater than that of the controls but not significantly greater than that of the group-structured group.

A similar study by Gilbreath (1967), also using male underachieving college students as subjects, produced results contrary to those of Chestnut's (1965) study. Gilbreath concluded that the leader-structured method of counseling was superior to the group-structured method in modifying the personality characteristics and in improving the academic achievement of male underachieving college subjects.

Calhoun (1956) investigated the effect of counseling on a group of underachievers in the eighth grade. Counseling was described as consisting of showing the subjects an underachievement card and explaining to them that they were underachievers because their academic performance was not equal to their capacity. Appointments were made with the parents of the subjects and the academic performance of the subjects was discussed during the conference. The results of the study showed that there was a significant improvement in academic achievement as measured by grade-point average but no significant improvement in academic achievement was observed using scores on a standardized achievement test battery as the criterion measure.

Dormitory counseling which consisted of a discussion of the subject's study habits, general academic status, and any other factor that might impede his academic progress produced no significant results in terms of grade-point average (Guthrie & O'Neill, 1953). The subjects were college freshmen and the counselors were dormitory resident assistants who were generally graduate students. It was reported that the
counselors used every technique at their command to get the subjects to improve their academic performance with the exception of tutoring.

Winkler and his associates (1965) attempted to determine the effects of selected counseling and remedial techniques on underachieving pupils in the elementary school. Grade-point average and measured personality variables were used as the dependent variables. The subjects in the experimental group were given 14 client-centered counseling and reading instruction treatments lasting half an hour each. The results revealed no significant differences between the experimental and control groups on the two criterion measures, i.e., grade-point average and personality variables.

The effects of a how-to-study course upon academic achievement as measured by grades in specific subjects was investigated by DiMichael (1943). The subjects were ninth graders of different ability levels. The treatment consisted of 27 45-minute class sessions on how to study held twice a week. The lecture method of instruction was followed. At the end of the course, the author found that the middle mental ability group profited most from the course, whereas the poor ability students did not profit from the course at all. The superior group made the highest gains only in the history course. The author concluded that the how-to-study course had differential results related to levels of intelligence.

A review of several evaluations of study skills courses by Entwistle (1960) showed that the students who enrolled in these courses were slightly below average. The author concluded after reviewing 22 evaluations that some kind of improvement follows a study skills course.
Most of the studies reviewed were at the college level and only three studies were done on the high school level which had inconclusive results.

Finally, a type of intervention called "motivational counseling" was conducted by Serene (1953) to determine its effect on potentially capable eleventh grade underachievers. The tenth and twelfth grade students served as controls. The investigator did not define motivational counseling but described it as consisting of the following: (1) an interview with the subjects in the school principal's office during which the subjects were informed that they were potentially capable and were encouraged to close the gap between their potential ability and actual achievement, (2) giving each subject a booklet on how to study effectively, and (3) holding a conference with the parents of the subjects during which the academic status of the subjects was discussed. At the conclusion of the study, the author reported that the correlation between grade-point average and ability increased from .56 to .76 for the experimental group but remained almost constant for the control groups. It was not reported whether the correlational increment was significant or not.

These studies following an eclectic approach are at best indications of continued interest in finding effective solutions to the problem of underachievement. They help discover both blind alleys and promising corridors leading to an effective solution of the underachievement problem.

A coherent theory encompassing all these studies is apparently lacking but these studies are useful as trial-and-error attempts to
solve the underachievement problem. They are also useful for comparison purposes with other studies following a specified theoretical approach; their relevance to the present study lies primarily in their comparative value.

**Pilot Study**

During the semester prior to the commencement of this study, the experimenter conducted a pilot project in McKinley High School in Honolulu using five low-motivated high school students. These students were identified by a school counselor as potential dropouts. The pilot project had the dual purpose of pretesting the content of the discussion topics designed to induce achievement behavior and of providing the experimenter with the desired training experience in group-reinforcement counseling with students in a public high school in Hawaii. It was deemed advisable for the experimenter to familiarize himself with the local school situation since he was not raised in Hawaii.

The subjects of the pilot project received group-reinforcement counseling twice a week in a vacant classroom during student time for a period of one semester. Each counseling session lasted about 40 minutes the first five minutes of which were used for introducing the new topic and reviewing the previous topic with emphasis on the implementation of the ideas that had been discussed. The next 30 minutes were used for the actual discussion of the given topic for the session, and the last five minutes were used to summarize the discussion and to encourage the subjects to try out the ideas that were discussed.

The counselor provided a counseling situation where the positive ideas of the subjects regarding staying in school, getting good grades,
planning or scheduling time, establishing good relations with other
people, and striving hard to prepare for a better future were recog­
nized, praised, and acknowledged. The counselor used verbal cues in
the form of questions to elicit responses of which the desired ones
were selectively reinforced with such utterances as "Good idea" or
"That sounds very reasonable" upon their occurrence.

The pilot project was deemed to have accomplished its dual purpose.
The tapescripts of the counseling sessions were critiqued by a qualified
person and revisions were made in the program content based on its
judged effectiveness in eliciting achievement-oriented responses from
the subjects. Topics that proved to be too abstract for these high
school students, such as "The Democratic Process in our Society," were
eliminated and related topics were integrated.

Necessity and Importance of the Study

The results of the studies following either a nondirective or an
eclectic approach have been shown to be conflicting. The lack of speci­
ficity with regard to the treatment variables utilized in many of these
studies points up the necessity of conducting a study to modify under­
achievement behavior in which the treatment variables are specific
enough to allow replication by other investigators. The contradictory
results of studies on inducing achievement behavior using a nondirective
or an eclectic approach also indicate the inadequacy of these approaches.
In many instances, there was a lack of either experimental or statisti­
cal control over the extraneous factors entering into the counseling
process.

The studies on behavior modification following a behavioral
approach, however, have shown clear-cut, impressive, and generally consistent results. The procedures employed in these studies were precise and easily replicable. But most of these studies did not focus on achievement behavior as defined in this study although their dependent variables were clearly components of achievement or achievement-related behavior. This study was therefore necessary to demonstrate the efficacy of a behavioral approach to induce achievement behavior among high school underachievers using a planned group counseling program whose content included factors or variables related to achievement behavior as described in the literature (Carmichael, 1964; Diener, 1960; Farquhar, 1963; Frankel, 1960; Harrison, 1959; Hummel & Sprinthall, 1965; Kurtz, 1951; McClelland, 1953; Morrow & Wilson, 1961; Roth & Meyersburg, 1963; Taylor, 1964; Teigland & Winkler, 1966).

This study was an implementation of an aspect of the general theory explicated in the section on the theoretical orientation of the study. That aspect is specifically dealing with achievement behavior as determined by environmental factors or stimuli. The environment manipulated in this study was the counseling setting which included events that transpired in it during the experimental period. These events consisted primarily of a series of interactions between the counselees and the counselor in the form of verbal and nonverbal responses.

A review of the literature revealed that society has become increasingly concerned about the accumulated loss of existing talent and manpower resources (McClelland et al., 1958; Miller, 1961; Wrenn, 1962) and that effective methods to assist underachieving individuals to realize their potentials have been sought with mounting interest in the

Various methods developed by investigators to assist underachievers have been shown to have mixed results. Their procedures were not precise enough and in some cases, such as those following an eclectic approach, they had no coherent underlying theory to explain their results.

This study is important from the standpoint of being an attempt to apply reinforcement theory to the problem of underachievement. Whereas many studies using a behavioral approach were focused on other areas of human behavior such as decision making (Ryan, 1968; Ryan & Krumboltz, 1964), verbal behavior (Greenspoon, 1962; Krasner, 1958), career planning (Krumboltz & Shroeder, 1965), information seeking (Krumboltz & Thoresen, 1964), and socially acceptable behavior (Hansen et al., 1969) generally using normal subjects, this study is valuable since it focused on achievement behavior utilizing underachieving subjects. This study is a relatively novel application of reinforcement theory to a field that is of considerable importance to both individuals and society.

**Definition of Terms**

**Academic Motivation.** Academic motivation refers to the "strength or frequency" (Staats & Staats, 1963, p. 286) of achievement behavior as operationally defined below. Academic motivation is shaped by reinforcers that are effective for a particular individual. Generally, academic motivation is developed by common reinforcers, such as the
approval of or recognition by parents, teachers, counselors, peers, and other persons that an individual holds in high esteem, which are given contingent on the successful performance of learning tasks. "The behavior of achievement . . . (is) to some extent a function of the (individual's) reinforcement system" (Staats & Staats, 1963, p. 291).

Operationally defined specifically for purposes of this study, academic motivation is one's performance on the Michigan State Motivation Scales.

**Achievement Behavior.** Achievement behavior is operationally defined in this study as consisting of the following observable behaviors: (1) obtaining a high score on the Michigan State Motivation Scales, (2) obtaining a high score on Ryan's Study Habits Inventory, (3) obtaining a grade-point average which is within one standard error of estimate above or below the predicted grade-point average using the corresponding score on a standardized academic aptitude test as predictor, and (4) having either perfect school attendance or a few number of unexcused absences which does not exceed five per semester. (The choice of a maximum of five unexcused absences was based on the semestral mean number of absences during the previous schoolyear of male eleventh and twelfth grade students at McKinley High School excluding the identified underachievers.)

**Underachievers.** Underachievers are defined in this study as those students whose actual grade-point average is more than one standard error of estimate below their predicted grade-point average using their score on a standardized academic aptitude test as predictor.

**Achievement-oriented Responses.** Achievement-oriented responses are verbal utterances or statements which express a favorable attitude
toward achievement behavior, a tendency to engage in achievement behavior, or which express a performance of achievement behavior. Some examples of achievement-oriented responses are as follows:

"I think that having better grades will help a lot in getting into college."

"I always try to come to school unless I'm sick or some emergency happens."

"I find that I learn more easily when I study where there's very little noise and other sources of distraction and when I keep a schedule of my study and recreation hours."

"I think it is worthwhile to have a long-range goal to work for. If you don't have any goal, you just wander about in life and waste much of your energy and time on useless things."

"I did my homework last night."

"I got mostly A's and B's this grading period."

These responses are closely related to the desired or correct responses in Farquhar's (1963) Michigan State Motivation Scales (M-Scales) and Ryan's (1967) Study Habits Inventory (SHI), which are verbal measures of two aspects of achievement behavior as defined in this study. Achievement-oriented responses also include verbal expressions of the performance or the tendency to perform observable achievement behavior, i.e., grade-point average and school attendance. Achievement-oriented responses may be distinguished from responses to the M-Scales and the SHI primarily in the manner in which they are elicited; the former are elicited by verbal cues from the counselor, while the latter are elicited by written stimuli in the form of questions or statements.
which appear in the measuring instruments.

**Counseling.** For purposes of this study, counseling is defined as consisting of "whatever ethical activities a counselor undertakes in an effort to help the client engage in those types of behaviors which will lead to a resolution of the client's problems" (Krumboltz, 1965, p. 334). Stated in another way, "counseling is a variety of procedures systematically undertaken by a counselor to promote specific changes in the behavior of clients. These changes are directly relevant to goals which have been mutually established between the client and the counselor" (Thoresen, 1969, p. 841).

**Statement of Hypotheses**

The rationale for this study is based on the general theory that achievement behavior is determined by environmental factors and that outside intervention is necessary in order to create an environment that is conducive to bringing about adaptive changes in one's pattern of behavior, especially achievement behavior. The intervention measure employed in this study was a planned group-reinforcement counseling program designed to induce achievement behavior among a definable population of male high school underachievers. The intervention was designed to provide an environment that would be conducive to the promotion of achievement behavior.

On account of its underlying theoretical rationale, this study sought to confirm the following hypotheses and predictions:

**Hypothesis 1.** Planned group-reinforcement counseling is effective in improving the academic motivation to achieve of
male high school underachievers. A prediction derived from this hypothesis is:

Prediction 1. Subjects who have received planned group-reinforcement counseling will score higher on an academic motivation criterion test than subjects in either the aware or unaware group.

Hypothesis 2. Planned group-reinforcement counseling is effective in improving the study habits and skills of male high school underachievers. A prediction derived from this hypothesis is:

Prediction 2. Subjects who have received planned group-reinforcement counseling will score higher on a criterion test of effective study habits and skills than subjects in either the aware or unaware group.

Hypothesis 3. Planned group-reinforcement counseling is effective in improving the academic achievement of male high school underachievers as measured by grade-point average (GPA). A prediction derived from this hypothesis is:

Prediction 3. Subjects who have received planned group-reinforcement counseling will have a higher grade-point average than subjects in either the aware or unaware group.

Hypothesis 4. Planned group-reinforcement counseling is effective in improving the school attendance of male high
school underachievers. A prediction derived from this hypothesis is:

Prediction 4. Subjects who have received planned group-reinforcement counseling will have fewer number of unexcused absences than subjects in either the aware or unaware group.
Subjects

The subjects of this study were 49 male high school students in the eleventh and twelfth grades at McKinley High School in Honolulu whose actual grade-point average during their tenth and eleventh year, respectively, was more than one standard error of estimate below their predicted grade-point average using their score on the School and College Ability Test (SCAT) as predictor. These 49 students were among the 85 underachievers identified during the summer from a population of 589 male tenth and eleventh grade students who had both SCAT scores and final grades available. Of the 85 male underachievers identified in the summer, 36 either did not return to McKinley High School in the following schoolyear or registered late after the counseling program was already underway. Of the 49 available subjects, 16 volunteered for counseling, 16 declined the counseling offer, and 17 neither volunteered for nor refused counseling since they were neither informed about nor invited to the counseling program. These 17 subjects were not given group-reinforcement counseling during the experimental period.

Subject Selection Procedure

Work was begun on the identification of the eligible subjects in the summer immediately preceding the semester during which the study was conducted. Final grades of male tenth and eleventh grade students were examined as well as their scores on the School and College Ability Test. The letter grades were transformed into numerical equivalents on a
5-point scale with the value of four assigned to the highest grade (A) and the value of zero to the lowest grade (F). Grade-point average was then computed for each student excluding the grades in Physical Education, Reserve Officers Training Corps, and School Service since these school subjects were assumed to be not significantly related to academic ability as measured by the SCAT. Using the regression equation, predicted grade-point average was obtained for each student using his SCAT score as predictor.

Of the 589 male high school students examined, 85 were found to be underachievers. Only 49 of the 85 identified underachievers were available for inclusion in the study during the following semester. There were 25 subjects in the eleventh grade and 24 subjects in the twelfth grade.

The subjects were listed alphabetically by grade level and assigned consecutive numbers. Since there were three treatment conditions, about one-third of the students in each grade level were randomly selected to constitute the unaware group using a table of random numbers. Nine students in the eleventh grade and eight students in the twelfth grade constituted the unaware group.

The remaining two-thirds were sent a mimeographed letter by the school principal informing them of a special program only for those students whose scores on the School and College Ability Test showed promise of successful performance in academic subjects (See Appendix E). These students were informed that they were eligible to participate in a special program designed to help them learn better study techniques in order to be able to pass exams successfully, improve their skills in
talking with people, build up their self-confidence, and help them in planning their future. They were told that their participation in this special program would be recorded in their personal school file which could be used later in making future recommendations for them. The principal's letter also included the qualifications of the counselor who would conduct the special program and the duration of the program. The students were promised a Certificate of Participation after their successful completion of the program (See Appendix F). Finally, they were strongly encouraged to take advantage of this opportunity.

Of the 32 students to whom letters of invitation were sent by the school principal, 20 appeared on the first session during which the objectives of the program were explained and questions about the program entertained by the counselor. Four subjects dropped out after the first session and another failed to report after the second session. One subject joined the program on the second session and increased the number of subjects in the counseled group to 16. The five students who declined to participate in the special program and the 11 students who failed to respond to the principal's letter of invitation by not coming to the first or second session constituted the aware group. There were 17 subjects in the unaware group, 16 subjects in the aware group and 16 subjects in the counseled group.

Counselor

The counselor had three years of combined teaching, part-time counseling, and administrative experience in an American school in the Philippines before coming to Hawaii as an East-West Center grantee. As part of his field study grant, he had the opportunity to take some
psychology and counseling courses at Harvard and Michigan State University during the summer and fall term of 1967, respectively. He also had six semester hours of counseling practicum experience while on the Ph.D. program at the University of Hawaii.

Treatment Variables

The first independent variable consisted of planned group counseling utilizing verbal reinforcement wherein the subjects were informed of their potential ability and were invited to counseling. The content of the counseling program consisted of planned topics designed to elicit achievement-oriented responses. These topics focused on effective study habits and techniques, competition, independence, modeling after successful people, decision making concerning future jobs, establishing good relations with the right people, seeing one's self positively, and planning for the future (See Appendix A).

Achievement-oriented responses were elicited by the counselor using general and specific verbal cues in the form of questions. These cues were specific to each counseling topic. Some examples of general and specific cues for the topic on how to plan a schedule are: (1) "Any ideas as to why a schedule is worthwhile?" (2) "In planning a schedule, what do you think about planning time for recreation?" Suggested verbal cues for each counseling topic are found in Appendix B.

The counselor administered verbal reinforcement contingent on the production of achievement-oriented responses by the counselee. Some examples of statements or utterances assumed to have reinforcement value are: (1) "That's a good idea," (2) "Your idea is worth trying," and (3) "Uh-hum." A list of suggested verbal reinforcers is found in
Appendix C. In addition to verbal reinforcement, the counselor also administered nonverbal reinforcement such as a nod, a smile, or a forward posture following the production of the desired response.

The second treatment variable consisted of informing the subjects that they were potentially capable students and inviting them to a special program designed to help them achieve certain specific counseling goals. No counseling was given to these subjects since they either failed to respond to the invitation or declined to participate in the program after the first two sessions.

The third treatment variable consisted of neither informing the subjects of their academic potential nor inviting them to participate in a special program designed to help them achieve certain specific goals. No counseling was given to these subjects.

**Treatment Conditions**

The three treatment conditions to which the subjects were assigned are as follows:

- **Treatment 1** which consisted of (1) informing the subjects of their potential ability, (2) inviting them to a special counseling program, and (3) giving them group-reinforcement counseling;

- **Treatment 2** which consisted of (1) informing the subjects of their potential ability, (2) inviting them to a special counseling program, and (3) giving them no group-reinforcement counseling since they declined the invitation to counseling;
Treatment 3 which consisted of (1) not informing the subjects of their potential ability, (2) not inviting them to a special counseling program, and (3) not giving them group-reinforcement counseling.

It was assumed in this study that volunteering for, not volunteering for, or declining counseling is not a relevant variable to the effectiveness of counseling. All the subjects in the three treatment groups were therefore assumed to belong to the same population of underachievers. Various studies have reported significantly positive results using either volunteer or nonvolunteer subjects (Arbuckle, 1961; Calhoun, 1956; Davis, 1959; Gilbreath, 1967; Hansen et al., 1969; Roth et al., 1967; Spielberger et al., 1962). In one study, subjects who volunteered for counseling but made to wait for a certain period did not show improvement (Williams, 1962), whereas in another study, subjects who were offered counseling but declined it manifested just as much improvement during the follow-up period as those who volunteered for counseling and who did receive counseling (Thelen & Harris, 1968). These findings question the general assumption that volunteering for, not volunteering for, or declining counseling is a relevant variable in the investigation of the effectiveness of the counseling treatment.

The investigators who suggested that volunteering or not volunteering for counseling is a significant variable in the counseling process were usually those who obtained negative results in their attempts to modify the academic performance of nonvolunteer subjects (Richardson, 1960; Searles, 1962). Their suggestion appears to be a ready excuse for the ineffectiveness of the type of counseling treatment.
they employed.

**Criterion Measures**

The four criterion measures used in this study are the following:

1. A measure of academic motivation to achieve which has been operationally defined as one's performance on the Michigan State Motivation Scales;
2. A measure of study habits and skills which is indicated by a score on Ryan's Study Habits Inventory;
3. Grade-point average which is defined as an arithmetic average of the numerically transformed grades on school subjects excluding Physical Education, Reserve Officers Training Corps, and School Service;
4. An inverse measure of school attendance which is designated as the number of unexcused absences from school.

**Measuring Instruments**

The criterion measures used in this study were obtained by the following means:

1. Farquhar's (1963) Michigan State Motivation Scales (M-Scales) to measure academic motivation to achieve;
2. Ryan's (1967) Study Habits Inventory (SHI) to measure study habits and skills;
3. School grades to measure grade-point average;
4. Number of unexcused absences as an inverse measure of school attendance.

Since Ryan's Study Habits Inventory was originally designed for use with college students, it was slightly modified and adapted to the high
school level. Several items which were judged to be beyond the academic experience of high school students were eliminated such as those that referred to making footnotes, table of contents, and bibliography. The Study Habits Inventory was reduced from 100 to 80 items.

The test-retest reliability coefficients of the SHI ranged from .88 to .92. The validity coefficients of the SHI using grade-point average as validating criterion ranged from .23 to .31 which were significant at the .05 level. Correlation between diary-reported study behavior and SHI responses was found to be \( r = .75 \) and correlation between participant observer reports on study behavior of 20 randomly selected students from one residence hall and SHI results for those students was found to be \( r = .62 \) (Ryan, 1967, Appendix G-2).

The Michigan State Motivation Scales were shortened from 203 items to 150 items since several items were found to be similar in content. This redundancy was noted when the students in the pilot project to whom the M-Scales were administered on a trial basis complained of the numerous repetitions of the same or similar questions in the test.

The reported reliability estimates of the Michigan State Motivation Scales using Hoyte's analysis of variance technique was .94 for males and .93 for females. The validity estimates of the M-Scales against grade-point average was .56 for males and .40 for females (Farquhar, 1963, pp. 97, 98, 117).

The computed reliability estimates of the SHI in its shortened form ranged from .85 to .90 and those of the M-Scales in the shortened form were .92 for males and .91 for females. Computed validity estimates of the shortened SHI ranged from .21 to .29 while those of the
shortened M-Scales were .52 for males and .38 for females. The computation formulas were taken from Gulliksen's text (1950, pp. 86-89).

Setting

For the duration of the study, the group counseling sessions were held in an ordinary classroom furnished with movable arm chairs. The participants were seated in a circle during the group discussion. They were not assigned fixed seats nor fixed positions. A portable tape recorder was placed in the center of the group. It was explained to the participants that the use of the tape recorder was mainly for note-taking purposes since an outline or summary of each session would be furnished at the next session. (See Appendix H)

Schedule and Duration

The group counseling sessions were held twice a week except when it was not possible to do so due to the occurrence of state or national holidays on scheduled counseling days or due to changes in the regular school schedule on account of special school programs or assemblies.

The duration of each session was about 30 minutes. The first five minutes of each session were used for introducing the new topic for discussion and reviewing the previous topic with special emphasis on what the participants had done to put into practice the things discussed in the previous session. The next 20 minutes were used for the actual discussion of the topic for the day's session, and the last five minutes were used to summarize the discussion and to encourage the subjects to try out the new ideas that were discussed.

One group of 10 students met on student time starting at 12:45 P. M.
and ending at 1:15 P. M. The other group of six students met on study hall time starting at 1:30 P. M. and ending at 2:00 P. M. on the same days as the first group. The time arrangement was based mainly on the scheduling convenience of the students. The six students in the second group were released by their teachers from study hall for the first 30 minutes of that period. After the counseling session, they returned to their respective study hall rooms.

The participants in the special program were regularly informed about the topic for the coming session as well as of any changes in the counseling schedule mostly by mail and occasionally by telephone. The special program lasted eight and a half weeks.

Program Content

The topics discussed during the counseling sessions were closely related to factors affecting underachievement as identified in the literature (Barrett, 1957; Diener, 1960; Harrison, 1959; Hummel & Sprinthall, 1965; Kurtz & Swenson, 1951; Roth & Meyersburg, 1963; Serene, 1953; Taylor, 1964; Teigland et al., 1966). The content of the special program consisted of six topics on effective study habits and techniques and eight topics which focused on competition, personal independence, modeling after successful people, decision making concerning future jobs, establishing good relations with the right people, seeing one's self positively, and planning for the future. The topics relating to effective study habits and skills were alternately discussed with topics relating to motivation to achieve during the first 12 sessions.

One role playing took place on the third session in which the
counselor served as the interviewer and the participants as job applicants. One demonstration on how to read rapidly using the phrasing and skimming techniques was performed by the counselor on the eighth session.

In addition to the summary or outline of each session, the materials which were given to each participant included a folder on which was printed the name of the program, i.e., "Special Program for Potentially Capable Students," a Xeroxed copy of a chart showing the different classifications of jobs and occupations taken from a vocational guidance textbook (Norris, Zeran, & Hatch, 1966, pp. 108-109), mimeographed materials taken from a textbook on effective study techniques (Wagner, 1961, pp. 78, 79, 142, 143), and a booklet containing information on scholarships and financial aids available to deserving students who intend to continue their education after graduating from high school (Educational Guidance and Opportunities, n. d.).

**Counseling Technique**

At the beginning of the counseling program the counselor explained to the participants the goals of the special program and the means to achieve these goals. Two of the four goals of the program were revealed to the counselees without disguising them in any way. These two goals are: (1) to improve their study habits and skills, and (2) to improve their grades in school. The goal of improving their academic motivation to achieve was disguised in the form of three stated goals, namely: (1) to develop skill in talking with people; (2) to build up self-confidence; and (3) to learn to plan and make decisions for the future regarding careers or jobs and how to prepare for them. The fourth goal
of improving their school attendance was not mentioned to them but only hinted at as a means to improve their grades.

The stated means to be used to achieve the goals of the special program are the following: (1) group discussion, (2) demonstration or role playing, (3) information-giving on the part of the counselor, and (4) a visit from one or two university professors to take part in the discussion. The fourth stated means was intended primarily for motivational purposes, i.e., to reinforce their achievement behavior. After the program goals and means had been explained, the subjects were requested to sign an agreement form indicating their intention to participate in the program (See Appendix G).

The counselor followed a planned reinforcement procedure in conducting the counseling sessions. After the topic for the session had been introduced, the counselor gave the participants verbal cues in the form of questions in order to elicit their responses. These cues had been prepared in advance specifically for the topic to be discussed. Some examples of verbal cues on the topic of note-taking are: (1) "What value do you see in taking notes?" (2) "How do you go about organizing material so that it is worth something?" (See Appendix B for suggested cues relevant to each counseling topic.)

The counselor selectively reinforced only those responses that were achievement-oriented. The reinforcement was either verbal, nonverbal, or both. Verbal reinforcement took the form of counselor utterances indicating approval, encouragement, and attention such as the following: (1) "I really agree with you on that"; (2) "I think your idea is worth trying"; (3) "That's really a good idea!"; (4) "Uh-hum."
(See Appendix C for suggested counselor reinforcement responses.) Non-verbal reinforcement was given in the form of a nod, a smile, a forward posture, or a combination of these. When a counselee gave a non-achievement-oriented response such as, "I don't think making a schedule is important," the counselor simply ignored his statement and quickly turned to another counselee for other ideas on the topic under discussion.

In cases where a counselee gave either ambiguous or contradictory responses, the counselor reinforced only those responses that were achievement-oriented and ignored the rest. This was done by either rephrasing or reflecting the desired responses and agreeing with the counselee on those reflected responses only. The same procedure was followed in cases where successive responses were given by two or more participants. Only those responses that were achievement-oriented were recognized by reflecting them to the group and verbally reinforcing them. Reflection of a response was assumed to be reinforcing. In cases where a counselee asked a question about college work such as, "Are college courses hard?" the counselor gave him reassurance that as long as a student was studying regularly using effective study habits and techniques and following a well-planned schedule, he would find college work relatively easy. In administering verbal reinforcement, the counselor often tried to make it as prompt and immediate as possible following the occurrence of the desired response.

Data Collection

Just before the beginning of the special program, a regular school counselor administered the "Guidance Inventory", which consisted of the
shortened M-Scales and SHI, to the subjects of this study. They were
told that it was part of the school's guidance program and that its
purpose was to enable the school counselors to understand the students
better in order to be able to help them more effectively with regard to
their problems in school, problems in getting a good job, or problems
in getting into college, technical, or business school after graduation
from high school (See Appendix D). Fifteen subjects out of 16 in the
counseled group, 12 subjects out of 16 in the aware group, and 11 sub-
jects out of 17 in the unaware group took the "Guidance Inventory"
which furnished pretest scores on the academic motivation and study
habits and skills criterion tests. Final grades and number of absences
for the previous schoolyear were also obtained for each subject to
serve as pretest criterion measures.

On the day following the termination of the special program, the
school principal requested the teachers concerned to release from their
classes all the students whose names appeared on a sheet of paper to
enable them to take the "Guidance Inventory" to be administered by the
school counselor in charge of college-bound students. All the subjects
who had taken the "Guidance Inventory" before the program started were
listed alphabetically in order to avoid any possibility of guessing on
the part of the teachers, the counselors, and even the school principal
as to who belonged to the counseled group or the aware and unaware
groups. There was no indication that the teachers were aware that the
students listed on the sheet of paper accompanying the principal's
letter were subjects of this study. Data were collected from all the
subjects who had pretest scores on the "Guidance Inventory."
The grades for the first and second quarters together with the number of absences for each subject were obtained from the school registrar's office as soon as they were available. Grade-point average was computed for each subject after the letter grades had been converted to their numerical equivalents on a 5-point scale with the highest grade (A) assigned the value of four and the lowest grade (F) assigned the value of zero. Grades in Physical Education, Reserve Officers Training Corps, and School Service were excluded from the computation of grade-point average. The pretest and posttest data on the criterion measures were then subjected to the appropriate statistical analyses described below.

**Statistical Analyses**

An analysis of covariance was performed on the data for each of the criterion measures using the pretest scores on the motivation and study habits and skills tests, previous schoolyear's grade-point average, and previous schoolyear's number of absences as covariates. Prior to the analysis of covariance, group means and standard deviations were computed and the data for each criterion measure were subjected to a preliminary analysis to determine the appropriateness of the use of the covariance analysis on the data. Following the procedure described in Winer (1962, pp. 590-591), an $F$ test was applied to the data on each criterion measure to determine whether the within-class regression was homogeneous, which is a fundamental assumption of the analysis of covariance. The analysis of covariance was made contingent on the nonsignificance of the $F$ ratio obtained since this would indicate that the data did not contradict the assumption of homogeneity of the within-class
regression.

Following the analysis of covariance, posttest group means on each criterion measure were adjusted for the effect of the covariate and compared with one another to determine significant differences between any two of them by means of an F test (Winer, 1962, pp. 592-593). The F test was applied only when a significant F ratio was obtained in the prior analysis of covariance.

Analysis of variance of the pretest data as well as of the posttest data were also performed to determine whether the groups were initially different and whether they were significantly different from one another, without taking into account their initial conditions, at the end of the experimental period.
CHAPTER III
RESULTS

Preliminary analyses of the data on all the criterion measures revealed no significant $F$ ratios. All the data indicated that the assumption of homogeneity of the within-class regression, which is a fundamental assumption of the analysis of covariance, was not contradicted. Since the appropriateness of the analysis of covariance was supported by the results of the preliminary analyses, the data on each criterion measure were subjected to the covariance analysis.

Motivation Criterion

Analysis of the pre- and posttest scores of the subjects on the M-Scales showed that the counseled group had pre- and posttest means of 95.87 and 101.40 with the corresponding standard deviations of 16.49 and 15.40 respectively; the aware group had pre- and posttest means of 83.75 and 77.50 with the corresponding standard deviations of 18.13 and 15.34 respectively; the unaware group had pre- and posttest means of 91.00 and 86.27 with the corresponding standard deviations of 16.82 and 14.62 respectively. Table I presents the pre- and posttest group means, their respective standard deviations, and the number of subjects in each group who took the M-Scales.

The analysis of covariance of the scores on the M-Scales revealed significant differences among the groups. An $F$ ratio of 11.58 was obtained, which was significant beyond the .01 level (See Table II).
### TABLE I

PRE- AND POSTTEST MEAN SCORES, STANDARD DEVIATIONS, AND N'S OF TREATMENT GROUPS ON THE MICHIGAN STATE MOTIVATION SCALES

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean Pre</th>
<th>Post</th>
<th>S.D. Pre</th>
<th>Post</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Counseled Group (C)</td>
<td>95.87</td>
<td>101.40</td>
<td>16.49</td>
<td>15.40</td>
<td>15</td>
</tr>
<tr>
<td>Aware Group (A)</td>
<td>83.75</td>
<td>77.50</td>
<td>18.13</td>
<td>15.34</td>
<td>12</td>
</tr>
<tr>
<td>Unaware Group (U)</td>
<td>91.00</td>
<td>86.27</td>
<td>16.82</td>
<td>14.62</td>
<td>11</td>
</tr>
</tbody>
</table>

### TABLE II

ANALYSIS OF COVARIANCE OF SCORES ON THE MICHIGAN STATE MOTIVATION SCALES

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>df</th>
<th>SS_x</th>
<th>SP_xy</th>
<th>SS_y</th>
<th>SS_y'</th>
<th>df</th>
<th>MS_y'</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Means</td>
<td>2</td>
<td>980.87</td>
<td>1912.37</td>
<td>3966.69</td>
<td>1519.84</td>
<td>2</td>
<td>759.92</td>
<td>11.58**</td>
</tr>
<tr>
<td>Within</td>
<td>35</td>
<td>10252.00</td>
<td>7721.31</td>
<td>8046.81</td>
<td>2231.50</td>
<td>34</td>
<td>65.63</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>37</td>
<td>11232.87</td>
<td>9633.69</td>
<td>12013.50</td>
<td>3751.32</td>
<td>36</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

** p < .01
The analysis of variance of the pretest scores on the M-Scales showed no significant differences among the groups. The F ratio obtained was 1.67 with 2 and 35 degrees of freedom for the numerator and denominator respectively.

The analysis of variance of the posttest scores on the M-Scales revealed significant differences among the groups. The F ratio obtained was 8.63 with 2 and 35 degrees of freedom for the numerator and denominator respectively. This F ratio was significant beyond the .01 level. [All the analyses of variance were performed internally in the BMD01R computer program (Dixon, 1967) and only the F ratios, together with their respective degrees of freedom, were printed in the output.]

The adjusted group means on the motivation criterion were 97.14 for the counseled group, 82.36 for the aware group, and 85.68 for the unaware group. Table III presents the pretest, posttest, and adjusted means of the three groups together with the value of the pooled within-class regression coefficient (b = .753) used to adjust the posttest means for the effect of the covariate.

Results of the comparisons made between any two adjusted group means revealed that the counseled group performed significantly better than either the aware or unaware group on the motivation criterion test. There was no significant difference between the aware and unaware groups on the motivation criterion test. Table IV presents the F ratios obtained in contrasting group means.

The pretest and the posttest group means are shown graphically in Figure 1. The positive slope of the solid line representing the performance of the counseled group shows improvement, whereas the negative
### TABLE III

**ADJUSTED POSTTEST GROUP MEANS ON THE MOTIVATION CRITERION TEST**

<table>
<thead>
<tr>
<th>Group C</th>
<th>Group A</th>
<th>Group U</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\tilde{x}_j$ = 95.87</td>
<td>83.75</td>
<td>91.00</td>
</tr>
<tr>
<td>$\tilde{x}_j - \bar{x}$ = 5.66</td>
<td>-6.46</td>
<td>.79</td>
</tr>
<tr>
<td>$\tilde{y}_j$ = 101.40</td>
<td>77.50</td>
<td>86.27</td>
</tr>
<tr>
<td>$\tilde{y}'_j = \tilde{y}_j - b(\tilde{x}_j - \bar{x}) = 97.14$</td>
<td>82.36</td>
<td>85.68</td>
</tr>
</tbody>
</table>

$b = .753$

### TABLE IV

**F RATIOS OF ADJUSTED GROUP MEAN COMPARISONS ON THE MOTIVATION CRITERION**

<table>
<thead>
<tr>
<th>Contrasted Groups</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Counseled Group (C) vs. Aware Group (A)</td>
<td>17.89**</td>
</tr>
<tr>
<td>Counseled Group (C) vs. Unaware Group (U)</td>
<td>12.83**</td>
</tr>
<tr>
<td>Aware Group (A) vs. Unaware Group (U)</td>
<td>1.06</td>
</tr>
</tbody>
</table>

**p < .01**
slopes of the dotted and broken lines representing the performance of the unaware and aware groups respectively indicate deterioration.

**Study Habits and Skills Criterion**

The pre- and posttest means of the three groups on the SRI were 106.07 and 130.13 with the corresponding standard deviations of 25.05 and 32.46 respectively for the counseled group; 108.58 and 107.33 with the corresponding standard deviations of 26.00 and 18.52 respectively for the aware group; and 107.81 and 102.55 with the corresponding standard deviations of 30.59 and 37.00 respectively for the unaware group. Table V presents the pre- and posttest mean scores, their respective standard deviations, and the number of subjects in each group who took the SRI.

The analysis of covariance of the SRI scores showed that there were significant differences among the groups on the study habits and skills criterion. An $F$ ratio of 7.69 was obtained, which was significant beyond the .01 level (See Table VI).

Analyses of variance of both the pretest and posttest SRI scores revealed no significant differences among the groups in both cases. $F$ ratios of .03 and 3.18 were obtained for the pretest and posttest scores respectively.

The adjusted group means on the SRI were 131.31 for the counseled group, 106.33 for the aware group, and 102.27 for the unaware group. Table VII presents the pretest, posttest, and adjusted means of the three groups and the value of the within-class regression coefficient ($b = .828$) used to adjust the posttest means.

Contrasts made between any two adjusted group means indicated that
**TABLE V**

PRE- AND POSTTEST MEAN SCORES, STANDARD DEVIATIONS, AND N'S OF TREATMENT GROUPS ON THE STUDY HABITS INVENTORY

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean Pre</th>
<th>S.D. Pre</th>
<th>Mean Post</th>
<th>S.D. Post</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Counseled Group (C)</td>
<td>106.07</td>
<td>25.05</td>
<td>130.13</td>
<td>32.46</td>
<td>15</td>
</tr>
<tr>
<td>Aware Group (A)</td>
<td>108.58</td>
<td>26.00</td>
<td>107.33</td>
<td>18.52</td>
<td>12</td>
</tr>
<tr>
<td>Unaware Group (U)</td>
<td>107.81</td>
<td>30.59</td>
<td>102.55</td>
<td>37.00</td>
<td>11</td>
</tr>
</tbody>
</table>

**TABLE VI**

ANALYSIS OF COVARIANCE OF SCORES ON THE STUDY HABITS INVENTORY

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>df</th>
<th>SSx</th>
<th>SPxy</th>
<th>SSy</th>
<th>SSy'</th>
<th>df</th>
<th>MSy'</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Means</td>
<td>2</td>
<td>45.31</td>
<td>-468.94</td>
<td>5846.75</td>
<td>6644.24</td>
<td>2</td>
<td>3322.12</td>
<td>7.69**</td>
</tr>
<tr>
<td>Within</td>
<td>35</td>
<td>25579.56</td>
<td>21176.69</td>
<td>32215.19</td>
<td>14683.54</td>
<td>34</td>
<td>431.87</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>37</td>
<td>25624.87</td>
<td>20707.75</td>
<td>38061.94</td>
<td>21327.78</td>
<td>36</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

** p < .01
### TABLE VII

**ADJUSTED POSTTEST GROUP MEANS ON THE STUDY HABITS AND SKILLS CRITERION TEST**

<table>
<thead>
<tr>
<th></th>
<th>Group C</th>
<th>Group A</th>
<th>Group U</th>
</tr>
</thead>
<tbody>
<tr>
<td>( \bar{X}_j )</td>
<td>106.07</td>
<td>108.58</td>
<td>107.81</td>
</tr>
<tr>
<td>( \bar{X}_j - \bar{X} )</td>
<td>-1.42</td>
<td>1.09</td>
<td>0.32</td>
</tr>
<tr>
<td>( \bar{Y}_j )</td>
<td>130.13</td>
<td>107.33</td>
<td>102.55</td>
</tr>
<tr>
<td>( \bar{Y}_j ' = \bar{Y}_j - b(\bar{X}_j - \bar{X}) )</td>
<td>131.31</td>
<td>106.33</td>
<td>102.28</td>
</tr>
</tbody>
</table>

\( b = 0.828 \)

### TABLE VIII

**F RATIOS OF ADJUSTED GROUP MEAN COMPARISONS ON THE STUDY HABITS AND SKILLS CRITERION TEST**

<table>
<thead>
<tr>
<th>Contrasted Groups</th>
<th>( F )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Counseled Group (C) vs. Aware Group (A)</td>
<td>9.37**</td>
</tr>
<tr>
<td>Counseled Group (C) vs. Unaware Group (U)</td>
<td>12.65**</td>
</tr>
<tr>
<td>Aware Group (A) vs. Unaware Group (U)</td>
<td>0.25</td>
</tr>
</tbody>
</table>

**\( p < 0.01 \)**
the counseled group performed significantly better than either the aware or unaware group on the SHI. There was no significant difference between the aware and unaware groups (See Table VIII).

A comparison of the three groups on their pretest and posttest group means on the SHI is illustrated in Figure 2. The steep positive slope of the solid line representing the performance of the counseled group indicates progress, whereas the negative slopes of the broken and dotted lines representing the performance of the aware and unaware groups respectively indicate retrogression.

Grade-point Average Criterion

The mean pre- and post-grade-point averages of the three groups with their corresponding standard deviations are as follows: 1.81 and 2.42 with the corresponding standard deviations of .41 and .61 for the counseled group; 1.27 and 1.71 with the corresponding standard deviations of .51 and .61 for the aware group; and 1.41 and 1.48 with the corresponding standard deviations of .60 and .87 for the unaware group. Table IX presents these data together with the number of subjects in each treatment group.

The analysis of covariance performed on the grade-point average data indicated significant differences among the groups. An $F$ ratio of 3.74 was obtained, which was significant at the .05 level (See Table X).

The analysis of variance performed on the pre-grade-point average data showed significant differences among the groups at the .05 level ($F = 4.93$). Analysis of variance of the post-grade-point average data also indicated significant differences among the groups but at the .01 level ($F = 7.20$).
FIGURE 1

Comparisons of pre- and posttest group mean scores on the motivation criterion test
### TABLE IX
PRE- AND POST-MEAN GPA'S, STANDARD DEVIATIONS, AND N'S OF TREATMENT GROUPS

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean Pre</th>
<th>Mean Post</th>
<th>S.D. Pre</th>
<th>S.D. Post</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Counseled Group (C)</td>
<td>1.81</td>
<td>2.42</td>
<td>.41</td>
<td>.61</td>
<td>16</td>
</tr>
<tr>
<td>Aware Group (A)</td>
<td>1.27</td>
<td>1.71</td>
<td>.51</td>
<td>.69</td>
<td>16</td>
</tr>
<tr>
<td>Unaware Group (U)</td>
<td>1.41</td>
<td>1.48</td>
<td>.60</td>
<td>.87</td>
<td>17</td>
</tr>
</tbody>
</table>

### TABLE X
ANALYSIS OF COVARIANCE OF SUBJECTS' GRADE-POINT AVERAGES

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>df</th>
<th>SS_x</th>
<th>SP_xy</th>
<th>SS_y</th>
<th>SS_y'</th>
<th>df</th>
<th>MS_y'</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Means</td>
<td>2</td>
<td>2.61</td>
<td>3.98</td>
<td>7.77</td>
<td>2.75</td>
<td>2</td>
<td>1.38</td>
<td>3.74*</td>
</tr>
<tr>
<td>Within</td>
<td>46</td>
<td>12.09</td>
<td>10.01</td>
<td>24.82</td>
<td>16.52</td>
<td>45</td>
<td>.36</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>48</td>
<td>14.70</td>
<td>13.99</td>
<td>32.59</td>
<td>19.27</td>
<td>47</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* p < .05
FIGURE 2

Comparison of pre- and posttest group mean scores on
the study habits and skills criterion test
C = COUNSELED GROUP
A = AWARE GROUP
U = UNAWARE GROUP

MEAN SCORES

PRE-TEST MEAN

POST-TEST MEAN
The adjusted mean grade-point average of the counseled group was 2.16, that of the aware group was 1.90, and that of the unaware group was 1.55. Table XI shows the pre-, post-, and adjusted mean grade-point averages of the three groups and the value of the within-class regression coefficient ($b = .828$).

Results of comparisons made between any two adjusted group mean grade-point averages show that the counseled group had a significantly higher mean grade-point average than the unaware group. The difference between the mean grade-point averages of the counseled group and the aware group failed to reach statistical significance. There was no significant difference between the mean grade-point averages of the aware and unaware groups (See Table XII).

The comparison of the pre- and post-mean grade-point averages of the three groups is illustrated in Figure 3. The positive slopes of the solid and broken lines representing the performance of the counseled and aware groups respectively indicate improvement, while the almost zero slope of the dotted line representing the performance of the unaware group indicate no progress.

**School Attendance Criterion**

Results of the analysis of the data on absences show that the counseled group had pre- and post-mean absences of 6.00 and 3.88 respectively, with the corresponding standard deviations of 5.98 and 4.30; the aware group had pre- and post-mean absences of 17.19 and 8.69 respectively, with the corresponding standard deviations of 13.57 and 6.62; and the unaware group had pre- and post-mean absences of 13.71 and 11.12 respectively, with the corresponding standard deviations of
TABLE XI
ADJUSTED MEAN GPA'S OF TREATMENT GROUPS

<table>
<thead>
<tr>
<th></th>
<th>Group C</th>
<th>Group A</th>
<th>Group U</th>
</tr>
</thead>
<tbody>
<tr>
<td>( \bar{x}_j )</td>
<td>1.81</td>
<td>1.27</td>
<td>1.41</td>
</tr>
<tr>
<td>( \bar{x} )</td>
<td></td>
<td>1.50</td>
<td></td>
</tr>
<tr>
<td>( \bar{x}_j - \bar{x} )</td>
<td>.31</td>
<td>-.23</td>
<td>-.09</td>
</tr>
<tr>
<td>( \bar{y}_j )</td>
<td>2.42</td>
<td>1.71</td>
<td>1.48</td>
</tr>
<tr>
<td>( \bar{y} )</td>
<td></td>
<td>1.87</td>
<td></td>
</tr>
<tr>
<td>( \bar{y}_j - \bar{y} - b(\bar{x}_j - \bar{x}) )</td>
<td>2.16</td>
<td>1.90</td>
<td>1.55</td>
</tr>
<tr>
<td>( \bar{y}' )</td>
<td></td>
<td>1.87</td>
<td></td>
</tr>
</tbody>
</table>

\( b = .828 \)

TABLE XII
F RATIOS OF ADJUSTED GROUP MEAN GPA COMPARISONS

<table>
<thead>
<tr>
<th>Contrasted Groups</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Counseled Group (C) vs. Aware Group (A)</td>
<td>1.13</td>
</tr>
<tr>
<td>Counseled Group (C) vs. Unaware Group (U)</td>
<td>6.35*</td>
</tr>
<tr>
<td>Aware Group (A) vs. Unaware Group (U)</td>
<td>2.64</td>
</tr>
</tbody>
</table>

* \( p < .05 \)
FIGURE 3

Comparison of pre- and post-group mean GPA's
C = COUNSELED GROUP
A = AWARE GROUP
U = UNAWARE GROUP

PRE-MEAN GPA

POST-MEAN GPA

MEAN GPA

C = COUNSELED GROUP
A = AWARE GROUP
U = UNAWARE GROUP
13.37 and 9.97. Table XIII shows these data together with the number of subjects in each group.

The analysis of covariance of the data on absences revealed no significant differences among the groups. The $F$ ratio obtained was 2.62 with 2 and 46 degrees of freedom for the numerator and denominator respectively (See Table XIV).

The analysis of variance of the subjects' absences during the previous schoolyear showed significant differences among the groups ($F = 3.93$). The analysis of variance of the subjects' absences during the semester in which the study was conducted also showed significant differences among the groups ($F = 4.05$). In both cases the counseled group had the lowest mean number of absences.

The adjusted mean absences for the counseled group, the aware group and the unaware group were 6.47, 6.68, and 10.55 respectively. These are shown in Table XV together with the pre- and post-mean absences of the groups and the coefficient of the within-class regression ($b = .411$).

The pre- and post-mean absences of the three groups are graphically illustrated in Figure 4. The negative slopes of the solid, broken, and dotted lines representing the pre- and post-mean absences of the counseled, aware, and unaware groups, respectively, indicate a decrease in absences in the three groups. The lowest position of the solid line on the absence scale shows that the counseled group had the lowest mean absences both before and after the experiment.
## TABLE XIII

**PRE- AND POST-MEAN NUMBER OF ABSENCES, STANDARD DEVIATIONS, AND N'S OF TREATMENT GROUPS**

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean</th>
<th>S.D.</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre</td>
<td>Post</td>
<td>Pre</td>
</tr>
<tr>
<td>Counseled Group (C)</td>
<td>6.00</td>
<td>3.88</td>
<td>5.98</td>
</tr>
<tr>
<td>Aware Group (A)</td>
<td>17.19</td>
<td>8.69</td>
<td>13.57</td>
</tr>
<tr>
<td>Unaware Group (U)</td>
<td>13.71</td>
<td>11.12</td>
<td>13.37</td>
</tr>
</tbody>
</table>

## TABLE XIV

**ANALYSIS OF COVARIANCE OF SUBJECTS' NUMBER OF ABSENCES**

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>df</th>
<th>SS&lt;sub&gt;x&lt;/sub&gt;</th>
<th>SS&lt;sub&gt;xy&lt;/sub&gt;</th>
<th>SS&lt;sub&gt;y&lt;/sub&gt;</th>
<th>SS&lt;sub&gt;y'&lt;/sub&gt;</th>
<th>df</th>
<th>MS&lt;sub&gt;y'&lt;/sub&gt;</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Means</td>
<td>2</td>
<td>1050.81</td>
<td>544.13</td>
<td>444.97</td>
<td>173.44</td>
<td>2</td>
<td>86.72</td>
<td>2.62</td>
</tr>
<tr>
<td>Within</td>
<td>46</td>
<td>6155.97</td>
<td>2530.53</td>
<td>2526.95</td>
<td>1486.73</td>
<td>45</td>
<td>33.04</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>48</td>
<td>7206.78</td>
<td>3074.66</td>
<td>2971.92</td>
<td>1660.17</td>
<td>47</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
TABLE XV

ADJUSTED POST-GROUP MEANS ON ABSENCES

<table>
<thead>
<tr>
<th>Group C</th>
<th>Group A</th>
<th>Group U</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\bar{x}_j$ = 6.00</td>
<td>17.19</td>
<td>13.71</td>
</tr>
<tr>
<td>$\bar{x}_j - \bar{x}$ = -6.30</td>
<td>4.89</td>
<td>1.41</td>
</tr>
<tr>
<td>$\bar{y}_j$ = 3.88</td>
<td>8.69</td>
<td>11.12</td>
</tr>
<tr>
<td>$\bar{y}'_j = \bar{y}_j - b(\bar{x}_j - \bar{x}) = 6.47$</td>
<td>6.68</td>
<td>10.55</td>
</tr>
</tbody>
</table>

$b = .411$
FIGURE 4

Comparison of pre- and post-group mean number of absences
Attempts to find effective and viable techniques, following a nondirective or an eclectic approach, to induce achievement behavior or components of achievement behavior have met with contradictory results. The treatment variables were not clearly specified or operationalized in many of the studies following a nondirective or an eclectic approach.

This study was concerned with the problem of finding specific treatment conditions which will induce academic achievement behavior among male high school underachievers. The general aim of this study, to induce academic achievement behavior among a definable group of male high school underachievers, was expressed in terms of the following specific objectives:

(1) to improve the subjects' academic motivation to achieve;
(2) to improve the subjects' study habits and skills;
(3) to improve the subjects' grade-point average; and
(4) to improve the subjects' school attendance.

Academic Motivation

Prediction 1, which states that subjects who have received planned group-reinforcement counseling will score higher on a motivation criterion test than subjects in either the aware or unaware group, was confirmed by the results. This confirmation of Prediction 1 gives support to Hypothesis 1 which states that planned group-reinforcement counseling is effective in improving the academic motivation to achieve of male high school underachievers.
The demonstrated effectiveness of planned group-reinforcement counseling in improving the subjects' academic motivation to achieve is consistent with the finding of another study using a behavioral approach (Batrawi, 1964) in which it was found that the subjects in the experimental group scored significantly higher than those in the control groups on the Achievement, Order, and Endurance subtests of the Edwards Personal Preference Schedule.

In this study, the subjects in the counseled group did not differ significantly from those in the aware and unaware groups in their motivation to achieve at the beginning of the study which means that they were not better motivated to achieve initially than those in the aware and unaware groups. The significant improvement in the academic motivation to achieve of the subjects in the counseled group at the end of the study was therefore attributed to the counseling treatment.

Since planned group-reinforcement counseling was shown in this study to be effective in inducing academic motivation to achieve regardless of the initial motivational state of the subjects, planned group-reinforcement counseling will most probably be also effective in inducing achievement behavior among non-volunteer underachieving subjects. Ryan (1967) had already demonstrated the efficacy of reinforcement counseling in improving the study behavior and grade-point average of non-volunteer normal college students.

**Study Habits and Skills**

The results of the analyses of the data on the Study Habits Inventory support Hypothesis 2 which states that planned group-reinforcement counseling is effective in improving the study habits and
skills of male high school underachievers. These results are in accord with the findings of Ryan (1967, p. 36) who concluded that "reinforcement counseling is a viable technique for improving study behavior and for increasing scholastic achievement of college students." The significant improvement in the study behavior of the subjects in the counseled group, as indicated by the results of this study, is quite encouraging since underachievers have been described as having ineffective study habits and skills which is presumably a major reason for their inadequate academic performance (Diener, 1960).

The absence of a significant difference between the aware and unaware groups on the study habits and skills criterion points up the inadequacy of a motivational technique used in other studies (Baymur & Patterson, 1960; Calhoun, 1956; Serene, 1953) consisting of simply informing the underachieving individual of his academic potential hoping that this treatment will induce him to improve his study habits and skills. Planned group-reinforcement counseling has been shown in this study to be a viable technique for improving the study habits and skills of underachieving male high school students.

Grade-point Average

Grade-point average has been used in many research studies as a dependent variable indicating academic achievement. It is generally regarded as a valid index of academic performance (Baymur & Patterson, 1960; Bosdell, 1962; Broedel et al., 1960; Chestnut, 1965; Dickenson & Truax, 1966; Guthrie & O'Neill, 1953; Raph, Goldberg, & Passow, 1966; Searles, 1962; Sheldon & Landsman, 1950; Shouksmith & Taylor, 1964; Spielberger & Weitz, 1962; Thelen & Harris, 1968; Winborn & Schmidt;
The results of the analyses of the subjects' grade-point average support Hypothesis 3 which states that planned group-reinforcement counseling is effective in improving the academic achievement of male high school underachievers as measured by grade-point average (GPA). Prediction 3, which states that subjects who have received planned group-reinforcement counseling will have a higher grade-point average than subjects in either the aware or unaware group, was partially confirmed. The subjects in the counseled group had a significantly higher mean grade-point average than subjects in the unaware group but not significantly higher than subjects in the aware group.

It appears that being made aware of their academic potential to achieve had some effect on increasing the subjects' grade-point average, but this increase in the mean grade-point average of the subjects in the aware group was not significant when compared to the mean grade-point average of the subjects in the unaware group. Table XIII shows that there was no significant difference between the adjusted mean grade-point averages of the aware and unaware groups.

The aware group had the lowest mean grade-point average (1.27) at the start of the study. At the end of the experiment, the aware group increased its mean grade-point average to 1.71. Adjustment made due to the initial differences among the groups and the regression effect, which was significant beyond the .01 level (F = 22.58), further increased the aware group's mean grade-point average to 1.90. The mean grade-point average of the subjects in the counseled group increased from 1.81 to 2.42 at the conclusion of the study. Statistical
adjustment performed on account of the initial differences among the
groups and the significant among the groups and the significant regres-
sion effect reduced the counseled group's mean grade-point average to
2.16.

The finding of this study that subjects in the group who had
received planned group-reinforcement counseling significantly improved
their grade-point average when compared with subjects in the unaware
group is in agreement with the findings of Ryan (1967), Batrawi (1964),
and Phillips and Wiener (1966) who also used a behavioral approach to
improve the subjects' academic achievement as measured by grade-point
average. The counseling method or technique using reinforcement has
been shown to be consistently effective in improving the academic
achievement of the counselees.

School Attendance

The data on the school attendance criterion expressed in terms of
number of absences failed to support Hypothesis 4 which states that
planned group-reinforcement counseling is effective in improving the
school attendance of male high school underachievers. There were no
significant differences among the groups after adjustment for the
effect of the covariate had been made. Analysis of variance of the
post-absences only revealed significant differences among the groups in
favor of the counseled group.

An indication that the treatment had some effect on the school
attendance of the counseled group is the observed finding that the
counseled group's mean number of absences decreased further in spite of
its being close to the baseline of perfect school attendance. The
regression phenomenon alone would have caused the counseled group's mean number of absences to increase if the treatment had no effect whatsoever.

**General Implications**

The generally significant positive results obtained in this study indicate that planned group-reinforcement counseling is a viable technique for inducing achievement behavior among male high school underachievers. The partial confirmation of Prediction 3 which states that subjects which have received planned group-reinforcement counseling will have higher grade-point average than subjects in either the aware or unaware group, and the lack of confirmation of Prediction 4, which states that subjects who have received group counseling will have fewer number of unexcused absences than subjects in either the aware or unaware group, could be due partly to some effect of the treatment condition wherein the subjects were made aware of their potential to achieve.

The general results of this study are consistent with those obtained by other investigators who also used a reinforcement approach in modifying achievement-oriented or achievement-related behaviors (Batrawi, 1964; Hansen, Miland, & Zani, 1969; Krumboltz & Shroeder, 1965; Krumboltz & Thoresen, 1964; Phillips & Wiener, 1966; Ryan, 1967, 1968; Ryan & Krumboltz, 1964). The results of this study contradict the assertion that underachievement is not an easily modifiable surface or behavioral phenomenon (Shaw & McCuen, 1960).

The results of this study also indicate the feasibility of utilizing the classroom as a setting for a behavioral approach in
counseling. As mentioned earlier, the use of the classroom in this study was an adaptation of the counseling setting used by Broedel and his associates (1960). These investigators, following a non-behavioral approach, obtained significant results in favor of the control group. It is the type of counseling approach used that makes the setting an effective environment for inducing achievement behavior as shown in this study.

Although previous studies have shown that underachievement has a cumulative detrimental effect starting from the first grade in school (Barrett, 1957; Frankel, 1960; Shaw & McCuen, 1960), the general results of this study demonstrate that underachievement, even in the eleventh and twelfth grades, is not a hopeless case. The significant results of this study on the criteria of academic motivation to achieve and study habits and skills are quite encouraging since these factors are generally assumed to be primary determinants of achievement behavior. Shortly after the conclusion of this short-term study, these factors had already begun to demonstrate their effect as revealed in the significantly higher mean grade-point average of the subjects in the counseled group as compared to the mean grade-point average of the subjects in the unaware group.

The literature on underachievement is replete with reports of attempts to assist underachieving students perform up to their capacity (Baymur & Patterson, 1960; Bosdell, 1962; Broedel et al., 1960; Calhoun, 1956; Dickenson & Truax, 1966; Gilbreath, 1967; Miller, 1961; Ohlsen & Proff, 1960; Roth et al., 1967; Searles, 1962; Serene, 1953; Sheldon & Landsman, 1950; Winborn & Schmidt, 1962; Winkler et al., 1965). These
attempts often used traditional means or a combination of various techniques without any basic supporting theory. This study offers a promising alternative to the traditional methods used in these previous studies attempting to solve the problem of underachievement. It is founded on a coherent theoretical rationale supported by empirical evidence (Krumbo1tz, 1966; Krumbo1tz & Thoresen, 1969).

The behavioral approach to counseling has already been demonstrated to be effective in modifying various types of human behavior (Greenspoon, 1962; Hansen et al., 1969; Krasner, 1958; Krumbo1tz & Schroeder, 1965; Krumbo1tz & Thoresen, 1964; Ryan, 1967, 1968; Ryan & Krumbo1tz, 1964) using generally normal subjects. This study, on the other hand, focused on an area that has been only peripherally explored by other studies also using a behavioral approach. The results of this study and their implications are important in the field of education where the primary goal is to develop the human material to its full capacity.
CHAPTER V
SUMMARY AND CONCLUSIONS

The problem of underachievement has been labeled as extremely complex and not easily modifiable (Shaw & McCuen, 1960). If an effective solution to this problem is found, both the underachieving individual and society will mutually benefit from the solution.

Research findings have revealed that underachievement exists in 10 to 25 per cent of a given population (Dizney, 1963; Kowitz & Armstrong, 1961; National Education Association, 1958). Society has become increasingly aware of this accumulated loss in human resources (McClelland et al., 1958; Miller, 1961; Wrenn, 1962) and interest in the development of effective methods that will solve the problem of underachievement has mounted in the last decade (Baymur & Patterson, 1960; Bosdell, 1962; Broedel et al., 1960; Calhoun, 1956; Dickenson & Truax, 1966; Gilbreath, 1967; Miller, 1961; National Education Association, 1956; Ohlsen & Proff, 1960; Searles, 1962; Sheldon & Landsman, 1950; Winborn & Schmidt, 1962). The urgency of searching for an effective solution or solutions to the problem of underachievement has been heightened by research findings which indicate that underachievement starts as early as the first grade in school and continues to increase, unless checked, as the individual grows older, (Barrett, 1957; Frankel, 1960; Shaw & McCuen, 1960).

Numerous attempts have been undertaken to close the gap between actual and potential academic performance but these attempts have met with mixed, inconclusive, and oftentimes contradictory results (Baymur & Patterson, 1960; Bosdell, 1962; Broedel et al., 1969; Calhoun, 1956;
Chestnut, 1965; Dickenson & Truax, 1966; DiMichael, 1943; Entwistle, 1960; Guthrie & O'Neill, 1953; McKeachie, 1961; Messano, 1968; Raph, Goldberg, & Passow, 1966; Searles, 1962; Serene, 1953; Sheldon & Landsman, 1950; Shouksmith & Taylor, 1964; Spielberger & Weitz, 1962; Winborn & Schmidt, 1962; Winkler et al., 1965). A major shortcoming of many of these studies was the lack of specificity of the treatment variable or variables they employed.

The Problem

This study was concerned with finding an answer to the question: What are the specific treatment conditions which will induce academic achievement behavior among male high school underachievers? The aim of this study, to induce academic achievement behavior among a definable group of male high school underachievers, is expressed in terms of the following specific objectives:

1. to improve the subjects' academic motivation to achieve;
2. to improve the subjects' study habits and skills;
3. to improve the subjects' grade-point average;
4. to improve the subjects' school attendance.

Statement of Hypotheses

The rationale for this study is founded on the general theory that achievement behavior is determined by environmental stimuli affecting the individual and that outside intervention is necessary in order to create an environment that is conducive to bringing about adaptive changes in one's pattern of behavior. The intervention employed in this study was a planned group-reinforcement counseling program designed to
induce achievement behavior among male high school underachievers. This study therefore sought to confirm the following hypotheses and predictions:

Hypothesis 1. Planned group-reinforcement counseling is effective in improving the academic motivation to achieve of male high school underachievers. A prediction derived from this hypothesis is:

Prediction 1. Subjects who have received planned group-reinforcement counseling will score higher on an academic motivation criterion test than subjects in either the aware or unaware group.

Hypothesis 2. Planned group-reinforcement counseling is effective in improving the study habits and skills of male high school underachievers. A prediction derived from this hypothesis is:

Prediction 2. Subjects who have received planned group-reinforcement counseling will score higher on a criterion test of effective study habits and skills than subjects in either the aware or unaware group.

Hypothesis 3. Planned group-reinforcement counseling is effective in improving the academic achievement of male high school underachievers as measured by grade-point average. A prediction derived from this hypothesis is:

Prediction 3. Subjects who have received planned
group-reinforcement counseling will have a higher grade-point average than subjects in either the aware or unaware group.

Hypothesis 4. Planned group-reinforcement is effective in improving the school attendance of male high school underachievers. A prediction derived from this hypothesis is:
Prediction 4. Subjects who have received planned group-reinforcement counseling will have fewer number of unexcused absences than subjects in either the aware or unaware group.

Findings

Academic Motivation

The results of the analyses of the data on the academic motivation criterion confirmed Prediction 1 which states that subjects who have received planned group-reinforcement counseling will score higher on a motivation criterion test than subjects in either the aware or unaware group. Confirmation of Prediction 1 gives support to Hypothesis 1 which states that planned group-reinforcement counseling is effective in improving the academic motivation to achieve of male high school underachievers.

There were no significant differences among the groups at the beginning of the study which means that neither of the groups was initially better motivated to achieve academically. The significant improvement in the academic motivation of the subjects in the counseled group at the end of the experimental period was attributed to the counseling
treatment.

**Study Habits and Skills**

The results of the analyses of the scores on the Study Habits Inventory support Hypothesis 2 which states that planned group-reinforcement counseling is effective in improving the study habits and skills of male high school underachievers. There was no significant difference between the aware and unaware groups and there were no significant differences among the groups on the study habits and skills criterion at the beginning of the study. The significant difference found among the groups at the conclusion of the study was attributed to the counseling treatment.

**Grade-point Average**

The data on grade-point average support Hypothesis 3 which states that planned group-reinforcement counseling is effective in improving the academic achievement of male high school underachievers as measured by grade-point average. Prediction 3 which states that subjects who have received planned group-reinforcement counseling will have a higher grade-point average than subjects in either the aware or unaware group was partially confirmed. The subjects in the counseled group had a significantly higher mean grade-point average than subjects in the unaware group but not significantly higher than subjects in the aware group. There was no significant difference between the aware and unaware groups in grade-point average at the conclusion of the experiment.
School Attendance

The data on the school attendance criterion expressed in terms of number of absences failed to support Hypothesis 4 which states that planned group-reinforcement counseling is effective in improving the school attendance of male high school underachievers. There were no significant differences among the groups after adjustment for the effect of the covariate had been made on the group means. Analysis of variance of the post-absences indicated significant differences among the groups in favor of the counseled group.

Conclusions

The results of this study have generated further questions relative to the extent to which planned group-reinforcement counseling is effective in solving the problem of underachievement under different experimental conditions, different subjects, and different counselors. As one of the conclusions of this study, it is proposed that further research be done to implement the following suggestions:

1. Since this study dealt with subjects that were both volunteers and nonvolunteers, it is suggested that this study be replicated using either volunteer or nonvolunteer subjects to determine whether planned group-reinforcement counseling is effective with volunteer subjects only, nonvolunteer subjects only, or with both. The use of both volunteer and nonvolunteer subjects in this study has been recognized as a limitation although some research findings indicate that volunteering for, not volunteering for, or declining counseling is not a relevant variable to the effectiveness of counseling (Arbuckle, 1961; Calhoun, 1956; Davis, 1959; Gilbreath, 1967; Hansen et al., 1969; Roth et al., 1967;
Spielberger et al., 1962; Thelen & Harris, 1968; Williams, 1962).

In the replication of this study, the groups who either have declined counseling or were not given counseling during the experimental period should be provided counseling during the semester immediately after the termination of the experimental period as part of the regular school program. These subjects can then serve as their own controls.

2. This study can also be expanded to include underachieving female high school students as subjects and employing women as counselors. More information can be obtained on the effectiveness of planned group-reinforcement counseling by including variables such as sex of subjects, sex of counselors, and if the study is simultaneously conducted in several schools, "school" should also be included as a variable. The study would be multivariate in design with treatment, sex of subjects, sex of counselors, and school as the independent variables and academic motivation, study habits and skills, grade-point average, and school attendance as the dependent variables. The results of this type of study will have greater generalizability.

3. It is also important to investigate the nature of the cueing procedure used with subjects that have been identified as not highly verbal. Are specific cues more effective in eliciting achievement-oriented responses than general cues with not highly verbal subjects? With highly verbal subjects, are general and specific cues equally effective in eliciting achievement-oriented responses? These are some of the questions that need to be investigated in future research along the line following the behavioral approach to counseling.
4. The viability of planned group-reinforcement counseling as a technique for inducing achievement behavior needs to be further explored in the elementary grades. Experimentation in the lower grades is important since underachievement has been shown to start as early as the first grade in school (Barrett, 1957; Frankel, 1960; Shaw & McCuen, 1960). It would be a significant contribution to the field of education if an effective specific method is found by which underachievement can be arrested at its incipient stage.

5. A long-term study is called for starting at the elementary grades to determine the point or points where the treatment effect begins to decline, which will indicate the necessity for resumption of the counseling treatment. In this way, the efforts of the counseling staff can be concentrated on those students that need counseling most.

6. Research studies have shown that the behavior of parents is significantly related to the academic achievement of their children (Hilliard & Roth, 1969; Kimball, 1953; Kurtz & Swenson, 1951; McClelland et al., 1953; Morrow & Wilson, 1961; Pierce, 1961; Strodbeck, 1958). Further research is necessary to determine the extent to which parents can be induced to learn certain behaviors that are designed to induce achievement behavior among their children. Planned group-reinforcement counseling with parents as subjects needs to be investigated in future research. This investigation would determine the specific conditions in which this approach would be effective in inducing parents to learn behaviors that would promote achievement behavior in their children.

Finally, the generally significant positive results obtained in this study warrant three further conclusions: (1) planned group-
reinforcement counseling is a viable technique for improving the academic motivation to achieve of male high school underachievers; 
(2) planned group-reinforcement counseling is a viable technique for improving the study habits and skills of male high school underachievers; 
(3) planned group-reinforcement counseling is a viable technique for improving the academic achievement of male high school underachievers.

The implications of the results of this study are important in the field of education where the primary objective is to develop the human material to its full capacity. The results of this study indicate that planned group-reinforcement counseling is a promising solution to the problem of underachievement.
APPENDIX A
TOPICS DESIGNED TO ELICIT ACHIEVEMENT-ORIENTED RESPONSES IN A GROUP COUNSELING SETTING

1. Setting Up Goals
2. Understanding How People Compete in Modern Society
3. How to Prepare to be on One's Own
4. What to Learn from Successful People
5. Learning More About Jobs
6. How to Establish Good Relations with People and be Able to Influence Them
7. How I See Myself
8. Facing the Future With Confidence
9. How to Plan a Schedule
10. How to Pass Exams Successfully
11. How to Take Notes Accurately
12. How to Read Efficiently
13. How to Write Intelligently
14. Effective Ways of Communicating Verbally
CUES FOR ELICITING RESPONSES RELEVANT TO EACH COUNSELING TOPIC

Topics Related to Motivation to Achieve

1. Setting Up Goals

If you were granted just three wishes, what would you like to have or do?

What do you consider as your most important goals in life?

What are short-range and long-range goals? Could you give us some examples of each?

What are some of the ways by which you can achieve your long-range goals?

Any ideas as to what further schooling has to do with your long-range goals in life? Why do you think counselors, teachers, and parents try to encourage you to continue your education?

2. Understanding How People Compete in Modern Society

How do people get ahead nowadays if they want to improve their lot?

If one does not have a good education, does he have an equal chance in getting a good job?

What do you have to have nowadays to have a good job and live a better life?

How should one prepare himself for a job interview? Why?

What do employers usually look for in applicants for a job?

How should one behave during the interview?

Do people then compete with one another in order to get ahead? In what ways?

What would you say would be the surest way to get ahead in life?
3. How to Prepare to be on One's Own

What do you think about not having to depend on your parents anymore for your pocket money someday?
Do you look forward to the day when you can be completely on your own?
In what ways can one be said to be independent and on his own?
Have you ever heard of or have known some people who cannot make their own decisions with regard to important things?
What do you think of these people? How do you think should people be trained to become independent?
In what ways can you be independent?
What do people mean when they say that you are mature for your age?
How do you think mature people behave?
Any ideas as to how to make sure that you will be on your own, that is, self-supporting for the rest of your life?
How would you prepare to be on your own for the rest of your life?

4. What to Learn from Successful People

Let's see, who would you say are the two people you most admire in school? Why?
Who are some of the people in your community that you look up to? Why? How about in the State of Hawaii? In the whole United States? In the whole world?
What have these persons done to make them famous and admired?
Could you name some of the characteristics or qualities of some successful people that you admire?
Do you think we could also do the same or similar things that these
people have done if only we have the courage, the determination, and the education needed?

5. Learning More About Jobs
Any ideas on how to go about selecting the job you would like to have later in life?
Would you try to find out in advance what abilities or skills the job requires? How would you go about doing this?
How would you find out whether you have what it takes to do the job?
What would be the advantage of seeing your school counselor?
What are some of the important things that you would like in a job of your choice? How about opportunities for promotion?
How about the kind of people you would be working with?
What are some of the most important things that one should consider in thinking about a job in the near future?
Why is better education the best preparation for any job?
How will good grades in school help you get a better job in the future?
What kinds of jobs are more satisfying to people of higher ability?

6. How to Establish Good Relations with People and be Able to Influence Them
Any ideas on how to get along well with others? -- your teachers? your friends? your parents? your brothers and sisters?
Who do you think are the people necessary or important to your success?
How do you impress other people? Do you think remembering their names the next time you meet them makes them feel that you are really interested in them? How about doing what they expect you to do?

How about doing what you think will make them happy?

Does your show of respect for other people also make them respect you?

How about praising or congratulating them for something special that they have done? What effect could this have on your relationship?

Would you say that recognizing the special things that others have done is a sign that you are becoming more mature? Why? What is becoming more mature?

To summarize our discussion, could you state some general rules for establishing good social relations which could apply to your parents, teachers, friends, and other people who are important to your success?

7. How I See Myself

What are some of the good things that your best friends, teachers, or parents say about you?

How do you think your idea of yourself would affect your behavior or performance?

Putting modesty aside, could you tell us some of the things that you are good at?

Which subjects in school do you find interesting? Which ones did you get at least a C or better?

In which subjects do you think you can do better if you know and
use effective study techniques?

What are some of the things that you did in the past that you can feel quite proud of?

8. Facing the Future with Confidence

What are some of the possible things that you will probably be doing after graduating from high school?

What do you have to have nowadays to succeed in any field that you have chosen to go into? Why?

What are some of the opportunities that are available to you to enable you to continue your education?

Would you say that your best investment in your whole life is getting more and more education? Is this possible in our free and open society?

Could you name some of the principles or guidelines that we have discussed in the past sessions that would be helpful to remember always in order to get ahead in the future?

9. Review

Of all the topics that we have talked about, which would you say were the most helpful and valuable?

What particular things have you learned from our discussions?

How do you think did our discussions help you? In what ways?

By way of review, what are some of the advantages of having long-range goals?

How should we prepare ourselves to surely succeed in the future?

What about getting along well with others? What did we discuss
regarding this?

What are some of the things that you would consider in looking for a job? How should you prepare for one?

What are some of your tentative long-range plans after finishing high school?

**Topics Related to Effective Study Habits and Skills**

1. How to Plan a Schedule

Any ideas as to why a schedule is worthwhile?

In planning a schedule, what do you think about planning time for recreation?

How does a schedule help you have more fun?

What about planning time and place for study?

Any ideas how to make up a schedule for a day, a week, or even a whole semester?

What do you think about leaving time for emergencies?

What about planning some time for regular reviews?

How can you make a schedule that works and is still flexible?

What do you think is the best time to set aside for study?

Where do you think is the best place to study?

Any ideas about how much time to set aside for study?

Any other ideas?

2. How to Pass Exams Successfully

How can a person go about getting ready for exams in advance rather than waiting for the last minute?

How does it work to break your preparation for exams into two
periods -- the long stage with lots of little refreshers, and the short stage with a big final push?

What advantage is there to making an outline of the content or things that will be covered in an exam?

How can you use reciting, reviewing, and practice-testing to prepare for big exams? What are the advantages of reciting, reviewing and practice-testing?

What about making up a set of sample questions that you think might be on the test?

What about such things as making a list of terms; having a get-together session with well-prepared friends?

3. How to Take Notes Accurately

What value do you see in taking notes?

Do you think notes help at all in learning materials? How?

How do you go about organizing material so that it is worth something?

Have you ever tried the parallel system of note-taking? That is, arranging your notebook so that you have lecture notes and reading notes on the same topic together in your notebook? What do you think about this system? What about the summary system? Where you keep separate sets of lecture and reading notes using a kind of summary form for both? What do you think of this idea?

How about trying either one of these systems?

Any ideas about different kinds of notebooks, or note-taking gimmicks?

How can you tell what is important?
How do you know important part of a lesson?
What about reading assignments -- what is important?
What do you think about going over your notes at regular intervals?
What do you think about re-writing them at times?
Do you think taking notes helps at all to keep your mind on what you are reading or what the teacher is saying?

4. How to Read Efficiently
Any ideas on how to read assignments well?
Do you think a person's reading ability has something to do with how much he gets out of a class?
What about increasing your understanding of what you read?
Do you think skimming something before reading in detail is helpful? How?
What about trying to get the overall picture of something before reading for details? How would this help in increasing understanding or comprehension? How can you get the overview? Does it help to go over the headings first?
Does it help in increasing understanding if you have some particular purpose for reading an assignment?
What do you think about trying to turn each heading into a question before you read the section? Would this help in remembering?
What about underlining? Writing in margin?
What about re-reading assignments? Any ideas on this? How and when does re-reading help?
What about review? Any ideas on effective reviewing?
What about reciting? Telling somebody else what you've read?
Does this have any value?

Any ideas on ways to increase reading speed? What about making a reading chart?

Having a practice session -- 5 minutes a day?

5. How to Write Intelligently

Any ideas on some of the advantages from writing clearly?

How can a person keep from rambling when you have something to write?

Do you think an outline helps?

What about things like grammar, punctuation, spelling? How do you know if you are using good grammar? What about punctuation? What if a person has trouble spelling?

What do you think about making a rough draft of something you have to write?

What about writing themes? Anything special about these?

Do you think appearance has anything to do with effective writing?

What do you think are some of the most common faults that are made when it comes to expressing ideas in writing? What about long, awkward sentences? How can you correct this? What about misuse of words?

Any ideas on ways of organizing materials so your writing is clear?

What about introduction, body, and conclusion?

Do you think there is any value in re-reading what you've written to see how it sounds?

What do you think a person should look for in going over rough drafts to get it ready for the final writing?
6. Effective Ways of Communicating Verbally

What are some of the advantages of having good speech habits?
How does your speech show your personality or the kind of person you are or the kind of training or education you have received?
What does having good speech habits got to do with getting a good job?
What are some of the ways you can get your ideas across more effectively?
How can one develop good pronunciation and enunciation?
Why would keeping eye contact with your audience be important?
Why should one speak more slowly when speaking before a big audience?
What are some of the advantages of knowing your audience in advance?
How would you make your voice sound interesting to your listeners?
How should one dress for a speaking engagement? Why?
What would be the value of correct gestures in speaking?
Could you mention some effective ways of presenting your argument to convince your audience?

7. Review of Effective Study Techniques

What do you think were the important things we talked about in our session on planning a schedule?
What do you think were the good points we discussed on note-taking?
What do you think were the main points of our discussion on taking and passing exams successfully?
What were the important points we talked about reading and writing effectively?
Any other ideas on effective study techniques?

What about some effective ways to communicate your ideas across to others?

Which of the study techniques have you used thus far? How did they help you in the teachers' tests?

Which of these techniques did you find most helpful in learning your lessons?
LIST OF SUGGESTED COUNSELOR REINFORCEMENT RESPONSES

1. Good idea!
2. Wonderful!
3. Very good!
4. Great idea!
5. Good!
6. Sounds like a good idea to me!
7. You have a very good point there, (name of student).
8. I think you really got the point there, (name of student).
9. That's an idea I never thought of. Sounds great!
10. I really agree with you on that.
11. I think your idea is worth trying.
12. I found that works.
13. You think that . . . (repeat, reflect, or paraphrase what the subject has said) . . . . That really sounds fine to me.
14. Excellent idea!
15. Uh-hum.
16. That's good! That's really a good idea!
17. What you just said sounds very reasonable.
18. I really think you're right on that.
19. Your idea is quite logical.
20. A perfect solution!
APPENDIX D
DIRECTIONS FOR ADMINISTERING THE GUIDANCE INVENTORY

(Pretest)

When the students are ready to take the Inventory, say:

"This year (name of school) is launching a program which will enable the counselors to understand you better in order for them to help you more effectively in the future with regard to your problems in school, problems in getting a good job or problems in getting into college, technical or business school after graduating from high school.

"To understand you better, we would like to know your interests, likes and dislikes and your preferences or the way you like to do things. We have a number of questions here to ask you individually, but if we ask you one by one it will take so much time. We have therefore decided to let you read and answer the questions by yourself."

Distribute the Inventory and after each has received a copy, say:

"This is not a test and there are no right or wrong answers. But every honest answer you give will contribute to your own benefit since you will be better understood by your counselor. The results of this inventory will be kept in your personal school file for future reference. You have about 45 minutes to do this inventory, but if you work fairly rapidly, you will be able to finish it in less than 45 minutes.

"This inventory is made up of four parts. The first part is called 'The Generalized Choice Inventory' which starts on page 1. The second part is called 'Word Rating List' which starts on page 5. The third part is called 'Human Trait Inventory' which starts on page 7, and the last part is called 'Study Skills Inventory' which starts on
So that you can take the whole inventory without interruptions, let us go over the instructions together. Look at page 1 of your inventory. Read the instructions silently while I read them aloud.

'This is a survey of your choices. There are no right or wrong answers. The results will in no way affect your grades in school.

"The inventory is made up of pairs of statements. Read each pair carefully. Choose the one that you most prefer or like to do.

"Answer all questions as honestly and frankly as you can. Only in this way will the results be meaningful. Remember this inventory is about you and you alone. This is not a survey of what you can do, but of what you would like to do. Mark an 'X' on the number before your answer.' Do you have any questions? (Pause) If none, then turn your Inventory to page 5. Read the instructions silently while I read them aloud. 'Following is a list of words teachers may use to describe students. You are to rate yourself on each word as you think your teachers would rate you. Be sure to describe yourself as your teachers would, not as you would describe yourself. The rating number 1 means that the word would never describe you. Number 2 means that the word sometimes describes you. Number 3 means that the word usually describes you, and number 4 means that the word always describes you. After you decide how your teachers might rate you, mark an 'X' on the number corresponding to your answer. For example, on page 6, question number 61 reads: 'Teachers feel that I am . . . patient.' If your answer is 'never', cross out No. 1; and if 'always', cross out No. 4. Do you have any questions? If none, then turn your Inventory to page 7. Read the instructions silently. They are similar to the previous ones but
this time they concern how you feel about yourself. (Pause) Are there any questions? If none, then turn your Inventory to page 9. Read the instructions silently. They are also similar to the preceding instructions. (Pause for about a minute.) Are there any questions? (Pause) If none, then you may start answering the Inventory from the beginning. If you come across a question or a word that you do not understand, please raise your hand and I will explain it to you. You may now begin."
EXPLANATORY NOTE

(Posttest directions attached to each Inventory)

As part of the school's ongoing program to understand its students, you are being requested to provide up-to-date information about yourself so that your counselors can understand you better and can help you more effectively in making your future plans.

At the beginning of this school year you perhaps still remember having filled out an inventory of your choices, job preferences, how you saw yourself then and how you thought your teachers saw you, and finally how you approached your study problems. Many things have happened since then and you may have changed many of your choices or views about things as a result of certain special experiences that you have had since then. Or perhaps you have remained the same with regard to your choices, job preferences, and views about yourself. We would like you therefore to fill out again the same inventory of your choices, interests, how you see yourself now and how you think others see you now, and how you approach your study problems in the last 3 or 4 months only. This is necessary for your counselors to know in order for them to have an up-to-date understanding of you so that they can adjust to you personally and meet your needs more effectively.

Please answer all the questions as frankly as you can so that your counselors will be able to understand you as you are today. This will be to your own benefit. The results of this inventory will be kept confidentially in your personal school file for future reference.

The instructions for taking this inventory are the same as before.
But please read them before answering the questions. When you are through with the inventory, check to see if you have done every page before turning your paper in. You may now begin.
I. THE GENERALIZED CHOICE INVENTORY

This is a survey of your choices. There are no right or wrong answers. The results will in no way affect your grades in school.

The inventory is made up of pairs of statements. Read each pair carefully. Choose the one you would most prefer or like to do.

Answer all questions as honestly and frankly as you can. Only in this way will the results be meaningful. Remember this inventory is about you and you alone. This is not a survey of what you can do, but of what you would like to do. Mark an X on the number before your answer.

If you have any questions, raise your hand. If not, then begin answering the questions. Do not skip any questions. Work as rapidly as you can and do not spend too much time on any one item.

Remember this is not a survey of what you can do but of what you would prefer to do.

I would prefer to:

1. 1) Avoid failing in school, or
   2) Do well in school

2. 1) Receive a grade on the basis of how well I did on the teacher's test, or
    2) Get a grade on the basis of how hard I tried

3. 1) Have the best teachers in the state in my school, or
    2) Have a large recreation center in my school
4. 1) Buy a car, or  
    2) Continue my education  
5. 1) Be well prepared for a job after graduation from high school, or  
    2) Be well prepared to continue learning  
6. 1) Have the teacher give everyone the same grade at the beginning of the semester and know I had passed, or  
    2) Take chances of getting a higher or lower grade at the end of the course  
7. 1) Develop a new product which may or may not be good, or  
    2) Make a product as good as the best one available  
8. 1) Receive money for my good grades, or  
    2) Be allowed to take any course I wanted because of good grades  
I would prefer to:  
9. 1) Be successful in finishing a job, or  
    2) Finish a job  
10. 1) Get excellent grades because I have a great deal of ability, or  
    2) Get average grades because I have average ability  
11. 1) Be graded at the end of a course with the possibility of making an "A", or  
    2) Get a "C" at the beginning of a course along with everyone else  
12. 1) Make quick decisions and sometimes be right and sometimes be wrong, or
2) Deliberate or think carefully over decisions and usually be right

13. 1) Be allowed to take extra courses before or after school, or
2) Just take courses offered during the school day

14. 1) Complete a job which I recognize as difficult, or
2) Complete a job which others recognize as difficult

15. 1) Do as well as most of my classmates, or
2) Do better than most of my classmates

I would prefer to:

16. 1) Be considered as being strong but not very smart, or
2) Be considered as being weak but smart

17. 1) Be known as a person with much ability, or
2) Be known as a person with adequate or enough ability

18. 1) Work at many less important jobs which I know I could finish, or
2) Work at one very important job which may never be entirely finished in my life-time

19. 1) Be paid for how well I did a job, or
2) Be paid the same amount no matter how I did the job

20. 1) Work rapidly just "skimming" along, or
2) Work slowly with great thoroughness

21. 1) Have a better job than my father has, or
2) Have a job like my father has

22. 1) Have a great deal of money, or
2) Be an expert in my favorite school subject

23. 1) Have average ability and be liked by many people, or
2) Have superior ability but not be liked by as many people

I would prefer to:

24. 1) Have everybody in the class get a "C" at the beginning of the course, or
   2) Be graded at the end of the course with the possibility of getting a higher or lower mark

25. 1) Receive a grade on the basis of how much my teacher thinks I have learned, or
   2) Take a course from a teacher who gives "C"'s

26. 1) Be paid for the amount of work I did, or
   2) Be paid by the hour

27. 1) Study my assignments during study time, or
   2) Wait until the mood strikes me

28. 1) Think of an idea that nobody has ever thought of, or
   2) Set a world's speed record

29. 1) Do what I think is right, or
   2) Do what others think is right

30. 1) Work overtime to make more money, or
   2) Get more schooling to make more money

I would prefer to:

31. 1) Inherit a great deal of money, or
   2) Earn a great deal of money

32. 1) Wait until I had finished college and make a better salary, or
   2) Get a job right after high school and make a good salary

33. 1) Plan my life in advance, or
   2) Live my life from day to day
34. 1) Study to go to college or technical school, or
   2) Study to get out of high school
35. 1) Have a great deal of influence over people, or
   2) Have a great deal of ambition
36. 1) Carry out the plans of others, or
   2) Create something of my own
37. 1) Be known as being a "good guy", or
   2) Be known as a person who "does things well"
38. 1) Be very happy, or
   2) Have lots of money

I would prefer to:

39. 1) Be known as a person who knows his own mind, or
   2) Be known as a person who gets help in making decisions
40. 1) Do something like everyone else, or
   2) Do something outstanding
41. 1) Put together a new object, or
   2) Develop new ideas
42. 1) Be demanding on myself to do good work, or
   2) Be demanding on my friends so that they will do good work
43. 1) Do something that I have done before, or
   2) Do something that I never have done before
44. 1) Discover a gold mine, or
   2) Discover a new medicine
45. 1) Have one of my children win a beauty contest, or
   2) Have one of my children win a college scholarship
46. 1) Have a job where I solve problems no one else can, or
   2) Have a job which permits me to take off days when I want
I prefer:

47. 1) A job where my opinion is valued
    2) A job where I could not be fired
48. 1) A job which does not tie me down
    2) A job which absorbs my interests
49. 1) A job where I could decide how the work is to be done
    2) A job where I make few if any decisions
50. 1) A job which does not tie me down
    2) A job where I could continue to learn the rest of my life
51. 1) A job where I could not be fired
    2) A job which absorbs my interests
52. 1) A job where I make few if any decisions
    2) A job where I solve problems no one else can
53. 1) A job where I could become known for outstanding accomplishments
    2) A job which requires little thinking
54. 1) A job which has high work standards
    2) A job where I make few if any decisions
55. 1) A job with short working hours
    2) A job where I solve problems no one else can
56. 1) A job which requires little thinking
    2) A job where my opinion is valued
57. 1) A job where I make few if any decisions
    2) A job where I could become known for outstanding accomplishments
58. 1) A job where I could not be fired
II. WORD RATING LIST

Following is a list of words teachers may use to describe students. You are to rate yourself on each word as you think your teachers would rate you.

Be sure to describe yourself as your teachers would, not as you would describe yourself.

Rating Number

1 . . . . . . . . This word would never describe me
2 . . . . . . . . This word sometimes describes me
3 . . . . . . . . This word usually describes me
4 . . . . . . . . This word always describes me

After you decide how your teachers might rate, mark an X on your answer.

If you have any questions, raise your hand. If not, turn to the next page and begin rating all of the words. Do not skip any words. Work as rapidly as you can and do not spend too much time on any one word.
RATINGS: 1 = Never  2 = Sometimes  3 = Usually  4 = Always

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III. HUMAN TRAIT INVENTORY

Following is a list of statements about YOU. Read each statement carefully. Then decide whether this statement is how you always feel, usually feel, sometimes feel or never feel.

RATING NUMBER

1 . . . . . . . This statement would never describe the way I feel

2 . . . . . . . This statement sometimes describes the way I feel

3 . . . . . . . This statement usually describes the way I feel

4 . . . . . . . This statement always describes the way I feel

Please answer each statement. Do not leave any blank. There are no right or wrong answers. The answers only apply to you. The way you answer these statements will not affect your school grades in any way.

Mark an X on the number that best describes how you feel.

RATINGS: 1 = Never 2 = Sometimes 3 = Usually 4 = Always

111. I worry about my grades

112. I have been quite independent and free from family rule

113. When I have an opinion, I stand up for it
114. It is difficult for me to keep interested in most of my school subjects
115. I have difficulty working under strict rules and regulations
116. I flirt
117. Most of my school subjects are a complete waste of time
118. Most of my school subjects are useful
119. I find it difficult to find the time to study my assignment for the next day
120. I have done something that is considered dangerous just for the thrill of it
121. When I was a youngster, I stole things
122. Even when I sit down to study, I find that my mind tends to wander
123. I have to be in the mood before I can study
124. I like to make the best grades possible
125. I like to study
126. I like to plan very carefully what courses I will take in school
127. I have played hooky from school in the last five months
128. I plan my activities in advance
129. I want very much to be a success
130. I work under a great deal of tension
131. I have trouble waiting for a class to be over
132. I get disgusted with myself if I don't do as well as I should | 1 2 3 4
133. I feel that I haven't any goals or purpose in life | 1 2 3 4
134. I like to be consistent in the things I do | 1 2 3 4
135. I like to go to the movies more than once a week | 1 2 3 4
136. I would like to belong to a motorcycle club | 1 2 3 4
137. I take on more work than I should | 1 2 3 4
138. While on buses, I strike up a conversation with a stranger | 1 2 3 4
139. I belong to a crowd that tries to stick together through thick and thin | 1 2 3 4
140. I like to keep people guessing what I'm going to do next | 1 2 3 4
141. The questions on school tests often confuse me because I don't know what they are driving at | 1 2 3 4
142. I like large noisy parties | 1 2 3 4
143. I learn slowly | 1 2 3 4
144. It would be worthwhile to belong to several clubs | 1 2 3 4
145. I think I would like the work of a teacher | 1 2 3 4
146. I would be happier if I were able to travel around the country | 1 2 3 4
147. I feel cross and grouchy without good reason | 1 2 3 4
148. I like being with people in social gatherings | 1 2 3 4
149. I think teachers are wrong many times and
  won't admit it 1 2 3 4
150. The way I do things is misunderstood by others 1 2 3 4

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IV. STUDY SKILLS INVENTORY

Following is a list of statements concerning study skills. Using the key below, answer each statement by marking an X on the number that corresponds to the statement which most nearly describes your present studying behavior. Answer every item.

USE THE FOLLOWING KEY

1 . . . . . . . . This statement never describes what I do
2 . . . . . . . . This statement sometimes describes what I do
3 . . . . . . . . This statement usually describes what I do
4 . . . . . . . . This statement always describes what I do

Rating Key: 1 = Never 2 = Sometimes 3 = Usually 4 = Always

151. I study during the day
152. I average eight hours sleep a night
153. I get some kind of physical exercise regularly
154. I have regular periods for recreation
155. I use a daily schedule
156. I have a regular place to study
157. I schedule study close to classtime
158. I schedule reports and special projects
159. I schedule weekly reviews
160. I schedule social activities to balance study

N S U A
1 2 3 4
1 2 3 4
1 2 3 4
1 2 3 4
1 2 3 4
1 2 3 4
1 2 3 4
1 2 3 4
161. I allow break time from study 1 2 3 4
162. I study when I will be least distracted 1 2 3 4
163. I schedule study time 1 2 3 4
164. I schedule time for the unexpected 1 2 3 4
165. I make a flexible schedule 1 2 3 4
166. I follow a schedule 1 2 3 4
167. I schedule study time just before class 1 2 3 4
168. I schedule daily reviews 1 2 3 4
169. I make a written schedule 1 2 3 4
170. I stick to a schedule 1 2 3 4
171. I keep my notes in a notebook 1 2 3 4
172. I keep plenty of paper on hand 1 2 3 4
173. I take notes in ink 1 2 3 4
174. I have a system for taking organized notes 1 2 3 4
175. I concentrate on the teacher's lecture 1 2 3 4
176. I write down formulas and equations accurately 1 2 3 4
177. I space notes so that they are not crowded 1 2 3 4
178. I look up things I don't understand 1 2 3 4
179. I organize notes so that major headings stand out 1 2 3 4
180. I keep notes separated by subjects 1 2 3 4
181. I rewrite notes to make them clear 1 2 3 4
182. I review my notes daily 1 2 3 4
183. I review my notes weekly 1 2 3 4
184. I underline important points 1 2 3 4
185. I know the important points to write down 1 2 3 4
186. I use some kind of shorthand for notes
187. I avoid doodling on the pages of notes
188. I borrow notes of other students if I miss a class
189. I take notes from reading assignments
190. I sit either at a desk or table while reading
191. I choose a quiet place to study
192. I study my most difficult subject first
193. I have a purpose for each assignment
194. I skim the chapter for an overview first
195. I review at regular intervals
196. I keep notes of main ideas from outside reading
197. I build a list of unfamiliar terms
198. I take regular breaks when I am reading
199. I discuss with others what I have just read
200. I underline important points as I read
201. I make notes in the margin of my book
202. I outline main points of reading assignments
203. I turn the heading of each section into a question
204. I try to increase my reading speed
205. I read the summary before reading the entire assignment
206. I skim before reading an assignment
207. I schedule time for writing theme papers
208. I think of the title as a question
209. I write a rough draft of my theme paper
210. I make corrections on the rough draft 1 2 3 4
211. I hand in theme papers on the due date 1 2 3 4
212. I try to figure out test questions in advance 1 2 3 4
213. I review periodically during the semester 1 2 3 4
214. I try to find out the kind of exam to be given 1 2 3 4
215. I recite to myself when going over notes 1 2 3 4
216. I make up sample questions 1 2 3 4
217. I review quizzes to find my mistakes 1 2 3 4
218. I make a master outline of all main points 1 2 3 4
219. I write out all answers to sample questions 1 2 3 4
220. I follow test directions exactly 1 2 3 4
221. I budget my time during exams 1 2 3 4
222. I check my test answers before handing them in 1 2 3 4
223. I answer easiest questions first 1 2 3 4
224. I guess if I don't know the answer 1 2 3 4
225. I watch for key words like "always" 1 2 3 4
226. I leave my first answers on objective test; unchanged 1 2 3 4
227. I finish exams in the time allotted 1 2 3 4
228. I make an outline before answering essay questions 1 2 3 4
229. I read all essay questions before I begin to write 1 2 3 4
230. I ask the teacher if I don't understand the question 1 2 3 4
Part I: M-Scales

Responses are scored either 1 or 0. A response which appears inside the parentheses is scored 1 and a response that is not inside the parentheses is scored 0.

1. (2) 21. (1) 41. (2) 61. (3,4) 81. (1,2)
2. (1) 22. (2) 42. (1) 62. (3,4) 82. (1,2)
3. (1) 23. (2) 43. (2) 63. (3,4) 83. (3,4)
4. (2) 24. (2) 44. (2) 64. (3,4) 84. (1,2)
5. (2) 25. (1) 45. (2) 65. (3,4) 85. (3,4)
6. (2) 26. (1) 46. (1) 66. (3,4) 86. (1,2)
7. (1) 27. (1) 47. (1) 67. (3,4) 87. (3,4)
8. (2) 28. (1) 48. (2) 68. (3,4) 88. (1,2)
9. (1) 29. (1) 49. (1) 69. (3,4) 89. (1,2)
10. (1) 30. (2) 50. (2) 70. (3,4) 90. (1,2)
11. (1) 31. (2) 51. (2) 71. (3,4) 91. (3,4)
12. (2) 32. (1) 52. (2) 72. (3,4) 92. (3,4)
13. (1) 33. (1) 53. (1) 73. (1,2) 93. (3,4)
14. (1) 34. (1) 54. (1) 74. (3,4) 94. (3,4)
15. (2) 35. (2) 55. (2) 75. (1,2) 95. (3,4)
16. (2) 36. (2) 56. (2) 76. (3,4) 96. (3,4)
17. (1) 37. (2) 57. (2) 77. (3,4) 97. (3,4)
18. (2) 38. (1) 58. (2) 78. (3,4) 98. (3,4)
19. (1) 39. (1) 59. (2) 79. (3,4) 99. (3,4)
20. (2) 40. (2) 60. (1) 80. (3,4) 100. (3,4)
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Part II: Study Habits Inventory

The responses in this test are assigned the score of 0 for "never", 1 for "sometimes", 2 for "usually", and 3 for "always."
Sept. 5, 1969

Dear

A special program will be offered this semester especially for students who show promise of successful performance in school subjects. Your score on the School and College Ability Test (SCAT) shows that you have ability to succeed in school and therefore you qualify to participate in this program.

Participation in this special program will help you whether you go to college or to a technical or business school or apply directly for a job after graduation from high school. This program will help you learn better study techniques so that you can pass exams successfully. It will also improve your skills in talking with people, build up your self-confidence, and help you in planning your future.

This is a short-term program and will be conducted by an experienced, qualified counselor from the University of Hawaii. He was a high school teacher and counselor for over three years and has studied at Harvard and Michigan State University. The special program will be held here in McKinley High School twice a week for about half an hour each session during student time. It will start at the beginning of this semester and will be over in about 2 1/2 months.

The counselor, Mr. Kendel Tang, will meet the students who qualified for this program in Room ___ of the __________ Building on __________. He will answer questions about this special
program and will further explain it to you.

This special program is limited to only two groups of 15 male students in each group. If more than 30 students want to participate in this program, lots will be drawn to determine who the lucky 30 will be.

This is a rare opportunity and I therefore strongly encourage you to take advantage of it. Your participation in this program will be recorded in your personal school file which will be used later in making future recommendations for you.

Sincerely,

Edmund Toma
Principal
CERTIFICATE OF PARTICIPATION

To whom it may concern:

This is to certify that ________________________________ has participated in a special program which was open only to students whose scores on the School and College Ability Test show that they are capable of achieving better grades than the grades they obtained last schoolyear.

The program primarily consisted of group discussions on various topics including effective study techniques, decision-making, proper job interview behavior, and other topics designed to help the participants realize their potentialities.

The program began on September 23, 1969 and ended on December 10, 1969. It was conducted by Mr. Kendel Tang, a staff member of the Education Research and Development Center, University of Hawaii.

_________________________________  _______________________
Edmund Toma                           Kendel Tang
McKinley High School                  University of Hawaii
McKinley High School
1039 South King Street
Honolulu, Hawaii 96814

Sept. 23, 1969

PARTICIPANTS' AGREEMENT

We have agreed to participate in a special program which will be held this semester here in McKinley High School. We understand that this program is only for those students who are qualified because their scores on the School and College Ability Test (SCAT) show ability to succeed in school subjects. We also understand that our participation in this program will be recorded in our personal school file which will be used later for recommendation purposes.

PARTICIPANTS:

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SPECIAL PROGRAM

FOR

POTENTIALLY CAPABLE STUDENTS

McKINLEY HIGH SCHOOL

PARTICIPANTS:

David Akiyoshi
Thomas Aoyagi
Kenneth Jen
Richard Kaneshiro
Masa Kinjo
Thomas Kurashima
Claude Matsui
Alan Nagasawa

Ted Nakagawa
Arthur Soderstrom
Wayne Sumida
Clyde Teruya
Alan Tokumura
Mark Towata
Michael Ushara
Paul Wallis

COUNSELOR: Mr. Kendel Tang
SPECIAL PROGRAM

OUTLINE: SESSION 1

TOPIC: SETTING UP GOALS

I. Goals of the special program
   1. To master study techniques in order to improve grades
   2. To develop skill in talking with people
   3. To build up self-confidence
   4. To learn to plan and make decisions for the future regarding careers or jobs and how to prepare for them

II. Means to achieve the goals of the special program
   1. Group discussion
   2. Demonstration or role playing
   3. Information-giving on the part of the counselor
   4. Visit from one or two university professors

III. Things to further think about
   1. What are your personal goals in life?
   2. Are they long-range or short-range?
   3. What are some of the possible ways by which you can achieve them?
   4. How does further education help you in getting better jobs?
   5. How will your grades in school affect your future?
TOPIC: HOW TO PLAN A SCHEDULE

I. SCHEDULING CAREFULLY

A. Why Make a Schedule?

1. A schedule saves you time.
   a. A schedule helps budget your time so that you can get all of your studying completed.
   b. A schedule shows how much time you have for study.
   c. A schedule shows how much time you spend studying.

2. A schedule helps accomplish more.
   a. A schedule shows how much time you spend studying wisely.
   b. A schedule organizes all of your time efficiently.
   c. A schedule organizes time so it is simple to tell your folks what you do and when you do it.

3. A schedule helps you have more fun.
   a. A schedule shows when you have time for things you like to do.
   b. A schedule helps you find more time for the fun things.
   c. A schedule helps you make every minute of your fun time count.
   d. A schedule helps you get to bed at a reasonable hour so that you can enjoy the fun things.
B. How to Make a Schedule.

1. Plan for the week.
   a. Schedule recreation and social hours.
   b. Schedule your work time.
   c. Schedule hours that you have filled with definite commitments.
   d. Make a "high priority mark" (***) by activities that must be done without fail.

2. Set your goal.
   a. Keep track of the time you spend studying.
   b. See if the time you set matches your goal.

3. Schedule weekly reviews of your "schedule".
   a. Make your schedule flexible
   b. Allow time for emergencies or the unexpected.

C. How to carry out your schedule.

1. Where to study.
   a. Plan to study where you will not be too comfortable.
   b. Study in the afternoons or evenings -- less noise.
   c. Study in the library.
   d. Study where there is enough light.

2. When to study.
   a. Schedule study time close to class time.
   b. Study your notes for at least 5 minutes before and after each class.
   c. Allow break time -- 10 minutes every hour or 5 minutes every half-hour.
   d. Plan to study during free hours during the day.
When not to study.

a. Schedule time to do your washing, ironing, visiting, and telephoning.

b. Do not study right after a meal.

c. Do not study when you are tired.

d. Do not study when you are over excited.

e. Plan for enough sleep at night -- at least 8 hours.

How to keep from dozing while studying.

a. Do not cross your legs.

b. Inhale deeply once in a while to keep your blood supplied with enough oxygen.

c. Take regular breaks and walk around.

d. Do not study where you will be too comfortable, such as in bed or in a sofa.
SPECIAL PROGRAM

SUMMARY: SESSION 3

TOPIC: UNDERSTANDING HOW PEOPLE COMPETE IN MODERN SOCIETY

In this session we talked about how people in our society compete for a living. It was pointed out by members of the group that people compete in many ways -- in things they own like cars, in education, in getting a job, and in almost everything. Education and training have been considered as the most important qualifications for any job. How you were educated and trained as shown by your grades in school also affects the kind of job you will get.

What employers look for in job applicants

1. High qualifications
2. Confidence
3. Neatness and proper attire or dress for the job
4. Willingness to learn and to work hard
5. Conscientiousness or honesty

How to behave during the interview

1. Come in confidently.
2. Give the interviewer a firm handshake when he shakes your hand.
3. Sit down only when told to do so and say "thank you".
4. While talking to the interviewer look at him straight in the eye most of the time.
5. Mention your qualifications for the job or your strengths rather than your weaknesses.
6. Be definite or determined to show that you have made up your mind.
7. If you happen to say something that will be counted against you,
say that you will be willing to learn while on the job to make up for it.

Toward the end of the session a job interview demonstration was presented with the participants using the above guidelines.
SPECIAL PROGRAM

OUTLINE: SESSION 4

TOPIC: HOW TO PASS EXAMS SUCCESSFULLY

A. How to prepare for exams.
   1. Start studying right after the last class session. Do not wait until the night before.
   2. When you take notes in class, take time to go over them immediately after class.
   3. Organize your materials.
      a. Make a study outline.
      b. Get your materials in order.
   4. Make a final effort before the test.
      a. Just before the test have everything reviewed so you can take a quick glance over your material.
      b. Reread underlined parts of the book.
      c. Go over your notes.
      d. Start the final effort a week before the test.
      e. Review a little each day.
   5. Practice before the test.
      a. Practice writing sample questions you would ask if you were the teacher or read the questions at the back of the book or at the end of each chapter.
      b. Practice writing answers to questions the teacher asks in class or students ask him or try answering the questions at the end of each chapter.
c. Practice by telling somebody else how you organized your material.

d. Practice talking out loud about the topics.

e. Use practice lists of people, terms and definitions.

6. Have a system for memorizing.

a. Make up little key words to help you remember lists of things. Use the first letter in the first word of each thing in the list. Juggle the letters around to make a word or coined word to help you remember. Or make up a sentence that will help you remember the rule to be used.

b. Memorize in small bits and pieces, then put the pieces together.

c. Repetition is necessary.

7. Seminar with well-prepared friends.

a. Go over your notes by yourself first.

b. Know the material before you seminar.

c. Get together with others in the class.

d. Exchange ideas.

e. Ask each other questions.

f. Keep your mind on the topic.

8. Study the right material.

a. Find out what kind of exam it will be.

b. Find out what material it will cover.

c. Get old tests by the same teacher from other students, if you can, and study them.
   a. Get a good night's sleep.
   b. Eat a light but good breakfast.
   c. Be on time for the test.
   d. Get there a little early to get settled.
   e. Go to the bathroom first so that you will not be interrupted during the test.
   f. Have plenty of supplies -- paper, pens, pencils, ink.

B. How to take tests.
1. Read the instructions.
   a. Read all the questions before answering any of them.
   b. Watch for sneaky things in the directions.
   c. Check how many points different questions are worth.
   d. Do the easiest ones first.

2. Allow enough time for the whole test.
   a. Figure out how much time for each question.
   b. Save time for checking the complete test before your time is up.

3. Tips for essay tests.
   a. Make an outline before you begin writing the essay.
   b. Write essay questions just like writing little themes.
   c. Define your topic and give the main points. Have a short introduction, a body, and an ending or conclusion.
   d. Give illustrations. If you can't describe the problem in technical terms, an illustration or example may serve the purpose.
e. Don't ramble.

4. Tips for objective tests.
   a. Usually don't change answers once you have written them down.
   b. Watch for clues to answers in the questions.
   c. Guess when you are not sure (unless it is right minus wrong).
   d. Do the ones you know quickly and then go back to the ones you were unsure of.
   e. With multiple choice test, eliminate the answers that are clearly wrong and then take the best one of the remaining ones.
   f. With true-false test, watch for double negatives.
   g. With fill-in-the-blanks test, try to remember the italicized words in the textbook or simply complete the sentence so that it makes sense.
   h. Watch for words like "always," "never," "everyone," "all," and other absolute terms. Immediately think of exceptions. Statements containing these words are usually false.
TOPIC: HOW TO PREPARE TO BE ON ONE'S OWN

We considered different ways by which one can be independent or on one's own. We came up with three ideas concerning personal independence; namely, 1) personal independence in financial matters, 2) personal independence in making decisions, and 3) personal independence or maturity with regard to emotional behavior.

We also explored the means by which we can achieve personal independence in each of the three areas mentioned above. These means are listed below under each area.

1. Personal independence in financial matters
   a. Get a good education (the best type of qualification).
   b. Build up your savings.
   c. Invest your money wisely (Consult a good stock broker).
   d. Get early insurance.
   e. Get a job that has good opportunities for promotion.

2. Personal Independence in making decisions
   a. Get all the facts before making a decision.
   b. Gather information from libraries, school counselors, friends, and from prospective employers.
   c. Weigh all the facts carefully.
   d. Make a decision based on the facts and on your stated goals.
   e. Think ahead as to the results if you make such a decision.
f. Profit from others' decisions.

3. Personal independence or maturity in emotional behavior
   a. Develop self-control.
   b. Use reason to guide your behavior.
   c. Associate with mature people.
   d. Learn to take responsibility.
TOPIC: HOW TO TAKE NOTES EFFECTIVELY

A. Why take notes?

1. Notes help you learn
   a. Taking notes helps you understand the lessons or lectures.
   b. Taking notes helps you understand the reading assignments.
   c. Taking notes helps you remember.
   d. Taking notes helps you with exams.

B. How to take notes.

1. Be prepared.
   a. Take notes on reading assignments as you read. Summarize paragraphs on margins. This will help you understand the lesson.
   b. Have enough paper and ink with you in class.
   c. Write in pen. Notes in ink are more legible and less smeary than pencil.
   d. Be ready to start when the teacher begins the lesson.
   e. Keep your mind on what the teacher is explaining.

2. Be organized.
   a. Date your notes.
   b. Decide for yourself the important points.
   c. Take notes in some systematic way. Use a system of your own.
d. Keep notes separated by courses.

e. Keep notes in a large notebook or loose-leaf binder.

f. Organize notes so major headings stand out.

g. Organize notes by outlining or by sentence and paragraph sections.

h. Keep notes up-to-date.

i. Borrow missing notes from classmates.

3. Use special note-taking techniques.

a. Check formulas and equations for accuracy.

b. Use different colored pens for special emphasis.

c. Watch for "special emphasis" points. Some teachers write important items on the board. Some emphasize by repeating, "This is important."

d. Space your notes so they are not crowded.

e. Use some form of shorthand. (You can make up your own.)

1) No-vowel shorthand

2) Use symbols for common words

f. Rewrite or retype your notes. Organize them by major topics when you rewrite or retype them. Re-organizing your notes helps in learning them better.

g. Doodlers should keep a scratch pad handy. Doodles do not go on notes.

h. Write so you can read it.
4. Review your notes regularly.
   a. The best written notes are useless if they are not reviewed soon after class.
   b. Review your notes to find points that need further explanation.
   c. Rewrite or retype each set of notes the day you take them down.
   d. Review notes before class.
TOPIC: WHAT TO LEARN FROM SUCCESSFUL PEOPLE

At the beginning of the session several successful graduates of McKinley High School were mentioned. Two of the most prominent ones at present are Senators Daniel K. Inouye and Hiram L. Fong of the U. S. Congress.

It was noted that most of these successful persons had to overcome great difficulties to get ahead. They were ambitious, hard-working, able to get along well with others, systematic, well-educated, and most of all they had the ability to postpone certain immediate pleasures in order to have more of them in the future. They therefore had foresight or the ability to look ahead and consider various opportunities open to them. Like Olympic athletes they sacrificed little comforts in order to win the contest.

It was also brought out that successful persons usually marry later and have fewer children than the average people. Their children therefore tend to have better education and a brighter future.
TOPIC: HOW TO READ EFFICIENTLY

A. Why read assignments?
   1. Reading helps you learn.
      a. Reading gives you information and knowledge the teacher may
         never cover.
      b. Reading helps you understand the lesson or lecture.
      c. Reading gives some meaning to the course.
      d. Reading helps you achieve good grades.
      e. Reading helps you to be intelligent.

B. How to Read Assignments.
   1. Find a place to read.
      a. Read where it is quiet.
      b. Read at a desk or table.
      c. Read where you are comfortable -- but not too comfortable.
      d. Read where you have good lighting.
      e. Read where you won't be disturbed.
   2. Select the material to read.
      a. Read the least interesting first.
      b. Read what you want to read.
      c. Read all the assignment.

C. Reading Techniques to Use.
   1. Read for an overview.
      a. Skim the headings and subheadings first.
2. Read with a Purpose.
   a. Read carefully.
   b. Turn each heading into a question -- What? Who? Why?
      How? Where? When?
   c. Try to answer the questions as you read.
   d. Underline the answer to the question.
   e. Concentrate. Read for a purpose.
   f. Write down headings and main points.
   g. Make notes in the margin.
   h. Underline main points.

   a. Go over the underlined parts.
   b. Make up sample questions.
   c. Answer the questions.
   d. Answer questions at the end of the chapters.
   e. Review your outline within 24 hours.
   f. Review by going over each major heading and saying,
      "What . . . ?" Answer the question.
   g. Review each week.

4. Recite the main ideas.
   a. Recite the main points to yourself.
b. Tell the main points to someone else.

c. Seminar or get together with 2 or 3 well-prepared friends.

5. Retain what you read.

a. Underline the main points that you want to remember.

b. Make notes in the margin of the things you want to remember.

c. Write a short summary of each section.

d. Tell someone what you have read -- even if you tell yourself.

6. Improve your reading rate.

a. Read phrase by phrase instead of word by word.

b. Keep your head still when you read.

c. Don't move your lips when you read silently.

d. Concentrate on what you read.

e. Don't let your mind wander.

f. Practice reading.

g. Read whenever you can.

h. Read all kinds of materials.

i. Read newspapers and magazines.

j. Read comic strips and Dear Abby.

k. Read novels and biographies.

7. Comprehend what you read.

a. Remember to ask a question when you begin each section.

b. Reread the section if you cannot answer the question when you finish.
c. Keep a scratch pad handy. If your mind wanders to something else -- STOP. Write down whatever is on your mind. Then go back to your reading.
SPECIAL PROGRAM

SUMMARY: SESSION 9

TOPIC: LEARNING MORE ABOUT JOBS

Several kinds of jobs were discussed together with the prestige attached to them. A list of classified jobs was given to each participant to examine. It was shown that one form of job classification uses amount of education or training required for the job. According to this classification, jobs are either professional, semi-professional, skilled, semi-skilled, or unskilled. Another form of job classification uses the kind of work being done. There are eight types of jobs according to the second form of job classification, namely: service, business contact, organization, technology, outdoor, science, general-cultural, and arts and entertainment (See chart).

In making a decision about a future job, several considerations have to be made, namely:

1. Education and training required
2. Salary
3. Prestige or status
4. Opportunities for promotion
5. Working conditions
6. Security and benefits
7. Kinds of people one would be associating with
8. Personal satisfaction in the job

It was also pointed out by one group member that all the above considerations are interrelated. The best job is that which meets all or most of these considerations satisfactorily.
Higher level jobs are generally more satisfying than lower level jobs, since the former enable you to keep on learning about the job for a longer time. Some higher level jobs even require a lifetime to master. Lower level jobs, on the other hand, quickly become routine and boring since they usually do not challenge your intelligence.

Higher level jobs also permit you to make your own decision most of the time based of course on the information obtained from your associates and subordinates, whereas lower level jobs practically make a servant out of you since all you can do is carry out others' orders. The lower is your job level, the fewer decisions you have to make. Only higher education and training will prepare you for higher level occupations.
SPECIAL PROGRAM

OUTLINE - SESSION 10

TOPIC: HOW TO WRITE INTELLIGENTLY

A. Why write?
   1. Write for knowledge.
      a. Writing supplements what you learn about topics covered in
         lectures and readings.
      b. Writing helps you learn new things.
   2. To aid in developing skills in writing.
      a. Writing develops skill in expressing your opinion.
      b. Writing develops skills in thinking and organizing.
      c. Writing develops skills needed for writing letters and
         job applications.

B. How to Write.
   1. Select a topic.
      a. Choose a topic that is interesting and one you will enjoy.
      b. Choose a topic on which you do not know all the facts.
      c. Choose a topic that is not too broad.
      d. Choose a topic that information can be found in the
         school library.
   2. Schedule your time.
      a. Make a note on the calendar when an assignment is due.
      b. Allow plenty of time so you will not be rushed at the end.
      c. Allow time for rereading, rewriting and typing (if it is
         to be typed).
3. Make bibliography cards.
   a. Go to the library and check the card catalog.
   b. Look for books, magazines, and newspapers.
   c. Get all the information on the bibliography card -- author, title, publisher, town or city of publication, and date.
   d. Use 3 x 5 cards for bibliography.

4. Make note cards.
   a. Use big cards for note cards.
   b. Make the first note cards general so you can change topics if necessary.
   c. Put one note on each card.
   d. Put the page number of quoted material.
   e. Keep note cards in order by date you took them.

5. Write an Outline.
   a. Use an outline to keep you from wandering off the topic.
   b. Write the major topics and subheadings.
   c. Make generalizations about topics under each subheading.

6. Write a rough draft.
   a. Organize notes by topic.
   b. Use notes to make rough draft.
   c. Use some of your own words.
   d. Keep note cards in the same order as your outline.
   e. Double space to allow space for changes and additions.
   f. Always give credit where credit is due on quoted materials.

7. Review the rough draft.
a. Lay the rough draft aside for a while.
b. Go back and check it for spelling and sentence structure.
c. Use scissors and scotch tape to reorganize and rearrange it.
d. Cut out anything that is unimportant.
e. Read the rough draft as if you were a teacher.

8. Type the final copy.
   a. Type the final copy or get it typed.
   b. Proofread final copy CAREFULLY!

C. What points make good writing?

1. Organization first of all!
   a. Good writing is organized.
   b. Good writing does not ramble.
   c. Well-written papers stick to the topic.
   d. Well-written papers make sense.

2. Well-written papers have correct spelling and punctuation.

3. Well-written papers are interesting.
   a. When you finish the paper ask yourself, "Is this subject still interesting to me?"
   b. Ask a friend to read it and give an unbiased opinion if he finds it interesting or uninteresting.

4. Well-written papers have an introduction, a body, and a conclusion.
SPECIAL PROGRAM

OUTLINE: SESSION 11

TOPIC: HOW TO ESTABLISH GOOD RELATIONS WITH PEOPLE AND BE ABLE TO INFLUENCE THEM

A. People who are important to your future success
   1. Parents
   2. Teachers
   3. Counselors
   4. Friends
   5. Other significant persons

B. How to establish good relations with
   1. Parents
      a. Respect them.
      b. Be honest with them.
      c. Understand their point of view.
      d. Do what is reasonably expected of you as a growing, responsible person.
      e. Volunteer to do certain things that would please them.
      f. Remember them on their birthdays and on other special occasions.
   2. Teachers
      a. Show interest in their subjects.
      b. Do your class assignments.
      c. Ask questions and talk with them (They are human too).
      d. Participate voluntarily in classroom activities.
e. Make them feel that they are successful in their work by getting good grades on their tests.

3. Counselors
   a. See them when you need information regarding any personal or occupational decision you have to make.
   b. See them just to talk to them as your special friends. (You must have something to talk about though.)
   c. Make them feel that they are useful to you and to other students.

4. Friends
   a. Make an extra effort in remembering names.
   b. Be considerate.
   c. Be helpful.
   d. Be thoughtful by remembering them on special occasions.
   e. Congratulate them for any outstanding things that they have done.
   f. Extend your condolence to them when they are bereaved of their loved ones.

5. Other significant persons
   a. Show interest in their work. Ask questions.
   b. Be polite.
   c. Show honest admiration for their achievements.
   d. Be considerate.

C. General Rules for Establishing Good Social Relationships

1. Do to others what you would like others to do to you if you were in their place.
2. Try to please people especially those who are important to your success.

3. Make people feel that they are worthy of your interest, attention, and respect.
SPECIAL PROGRAM

OUTLINE: SESSION 12

TOPIC: EFFECTIVE WAYS OF COMMUNICATING VERBALLY

A. Importance of Good Speech Habits
   1. They help you gain the respect of people.
   2. They help you get good grades.
   3. They enhance your personality.
   4. They enable you to get across your ideas effectively.
   5. They help you obtain good jobs.

B. Effective Ways of Communicating Verbally
   1. Enunciate the words clearly.
   2. Pronounce the words correctly. (Use the dictionary as a guide.)
   3. Maintain eye contact with the audience.
   4. Project your voice afar. (Controlled breathing helps.)
   5. Speak more slowly if you have a large audience.
   6. Prepare thoroughly what you want to say. (Know your topic.)
   7. Rehearse your speech. Use a tape recorder if possible.
   8. Know your audience.
  10. Adjust the length of your speech to the maturity level of your audience.
  11. Use appropriate gestures for emphasis.
  12. Modulate the tone of your voice.
  14. Change your body position occasionally.
15. Support your argument with solid evidence.

16. Understand and present both sides of the question and argue for your side.

17. Use comparisons and examples to illustrate your point.

18. Quote facts and opinions from respectable authorities or sources.

19. Summarize your points.

20. Draw your conclusion or let the audience do it if it is very obvious.
SUMMARY: SESSION 13

TOPIC: HOW I SEE MYSELF

It was pointed out by one participant that our idea of ourselves affects our performance. It is important therefore that we form an optimistic and positive idea of ourselves. This can be done by concentrating on our good points and capitalizing on them.

Another participant also pointed out that a good understanding of ourselves would help in better understanding others. It will therefore promote good personal and social adjustment. A positive rather than a negative idea of one's self would also contribute to personal happiness since a negative idea of yourself would make you feel depressed, while a positive idea of yourself would make you feel good.

During the session, the participants, including the counselor, talked about how they saw themselves and what prospects are in store for them in the future considering their present abilities. Putting modesty aside, the participants examined themselves and mentioned some areas of learning in which they are good at or are performing satisfactorily. The counselor confirmed their good points and told them that he honestly believed them to be serious, intelligent, interested, purposeful, responsible, dependable, confident, logical, good thinkers, and quite determined to succeed.
Dr. T. A. Ryan, professor of education at the University of Hawaii, was invited to attend this session. Dr. Ryan spoke briefly on her experiences on the U. S. Mainland while conducting similar programs intended to help students improve their study habits and develop their potentialities. Afterwards, she asked the participants how the special program that they are now attending has helped them. Some of the participants' responses are quoted below.

"I'm beginning to get better grades."

"I have learned how to schedule my time."

"This program has helped me prepare better for exams."

"Somehow my way of doing things has changed; I am not as sloppy now as I used to be."

"My participation in this program has made me more confident in talking with people."

"I have realized the value of education in getting better jobs."

"I've learned how important it is to have goals in life and to prepare to achieve those goals."

"I have learned how to develop good relations with people."

"I've become more concerned with my studies instead of being apathetic."

"I have become more conscious of my grades than before I joined the program."
"I have learned the value of postponing certain pleasures in order to get your higher goals in life."

Dr. Ryan was very much impressed by the maturity of the participants' responses. She expressed her confidence that this special program would really help them realize their potentialities as long as they continue to make use of what they have learned from this program.
SPECIAL PROGRAM

SUMMARY: SESSION 15

TOPIC: FACING THE FUTURE WITH CONFIDENCE

The participants explored the possibilities that are open to them after graduating from high school. They mentioned three possible areas that they could go into; namely, 1) college, 2) military service, and 3) work.

Then one participant read a news article in that day's newspaper in which President Cleveland of the University of Hawaii said in a speech before the Honolulu Rotary Club that anyone who would want to contribute satisfactorily to society needs education beyond the high school level on account of the increasing complexity of today's world.

The participants then examined the contents of a booklet, Get Ready and Go, published by the Educational Guidance and Opportunities, Educational Talent Search. They noted in it many opportunities available to them whether they go to college, the military service, or work after high school. If one decides to go to college, there are many scholarships, loans, grants, and part-time employment available to him to help him finish college. If one decides to enter the military service, there are also many opportunities there to continue one's education beyond the high school level. There are correspondence courses and specialized technical training available in the military service. After getting out of the service, one can continue going to college on the G. I. Bill. If, on the other hand, one decides to work immediately after high school, there are still many opportunities to
continue one’s education. One could go to night school or be a part-time student in a community college or even in a university. Further education is the surest way to obtain a promotion or find a better job.

The participants also discussed several principles or guidelines that were discussed in the past sessions which would be helpful to remember in the future. Some of these guidelines are the following:

1. Plan ahead (Set your goals.)
2. Follow some type of a planned schedule.
3. Postpone immediate pleasures that would interfere with the achievement of your set goals.
4. Avoid getting trapped in dead end jobs.
5. Don’t get married too early or postpone having children if you could not avoid getting married early.
6. Establish good relations with the right people.
7. Think highly of yourself to build up your self-confidence.


Chestnut, W. J. The effects of structured and unstructured group counseling on male college students' underachievement. *Journal of Counseling Psychology*, 1965, 12, 388-394.


DiMichael, S. G. The transfer of effects of a how-to-study course upon different I.Q. levels and various academic subjects. *Journal of Educational Psychology*, 1943, 34, 166-175.


Educational Guidance and Opportunities. *Get ready and go*. Honolulu, Hawaii: No publisher, no date.


Wagner, R. F. *Successful devices in teaching study habits*. Portland, Maine: J. Weston Walch, Publisher, Box 1075, 1961.


