A developmental program for the modification of self-selected behaviors with elementary school children.

Robert Goshko

University of Massachusetts Amherst

Follow this and additional works at: http://scholarworks.umass.edu/dissertations_1

Recommended Citation
http://scholarworks.umass.edu/dissertations_1/2679
A DEVELOPMENTAL PROGRAM FOR THE MODIFICATION OF SELF-SELECTED BEHAVIORS WITH ELEMENTARY SCHOOL CHILDREN

A Dissertation Presented
by
ROBERT GOSHKO

Submitted to the Graduate School of the University of Massachusetts In Partial Fulfillment of the Requirements For the Degree of DOCTOR OF EDUCATION
May, 1973

Major Subject: Counseling and Human Relations
A DEVELOPMENTAL PROGRAM FOR THE MODIFICATION
OF SELF-SELECTED BEHAVIORS WITH
ELEMENTARY SCHOOL CHILDREN

A Dissertation Presented
by
ROBERT GOSHKO

Approved as to style and content by:

Dr. Dwight W. Allen
Dean, School of Education

Dr. Allen E. Ivey
Committee Chairman

Dr. Russell Kraus
Committee Member

Dr. Susan LaFrance
Committee Member

Dr. Ronald H. Fredrickson
Committee Member

May, 1973
ACKNOWLEDGEMENTS

Thanks and appreciation is extended to Dr. Allen E. Ivey, Chairman of my Committee for his time and help throughout my studies as well as his support in the writing of this dissertation.

I wish to further express my gratitude to those who served as members of my Committee, Dr. Susan LaFrance, Dr. Ronald Fredrickson, and special thanks to Dr. Russell Kraus for all the extra time and help that he provided.

Finally, to my wife, Janice and daughter, Erica, thank you both for providing me a place to come, work and be myself.

Robert Goshko
TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. PURPOSE OF THE STUDY</td>
<td>1</td>
</tr>
<tr>
<td>The Need for a Developmental Model</td>
<td>1</td>
</tr>
<tr>
<td>A Behavioral Approach to Developmental Counseling</td>
<td>5</td>
</tr>
<tr>
<td>Criticism of Behavior Counseling in Schools</td>
<td>8</td>
</tr>
<tr>
<td>Microcounseling - Media Therapy</td>
<td>8</td>
</tr>
<tr>
<td>Proposed Model</td>
<td>10</td>
</tr>
<tr>
<td>Summary</td>
<td>11</td>
</tr>
<tr>
<td>II. REVIEW OF LITERATURE</td>
<td>13</td>
</tr>
<tr>
<td>Behavior Modification with Children</td>
<td>14</td>
</tr>
<tr>
<td>Development of Prosocial Behavior</td>
<td>19</td>
</tr>
<tr>
<td>The Role of Modeling</td>
<td>22</td>
</tr>
<tr>
<td>Self-Observation as a Behavioral Change Agent</td>
<td>24</td>
</tr>
<tr>
<td>Microcounseling and Media Therapy</td>
<td>27</td>
</tr>
<tr>
<td>Summary</td>
<td>30</td>
</tr>
<tr>
<td>III. METHOD</td>
<td>32</td>
</tr>
<tr>
<td>Overview of Project</td>
<td>32</td>
</tr>
<tr>
<td>Sample</td>
<td>35</td>
</tr>
<tr>
<td>Setting</td>
<td>35</td>
</tr>
<tr>
<td>Training Procedure for Behavior Identification</td>
<td>36</td>
</tr>
<tr>
<td>Instructional Modules</td>
<td>37</td>
</tr>
<tr>
<td>Module #1</td>
<td>37</td>
</tr>
<tr>
<td>Module #2</td>
<td>38</td>
</tr>
<tr>
<td>Module #3</td>
<td>38</td>
</tr>
<tr>
<td>Module #4</td>
<td>39</td>
</tr>
<tr>
<td>Media Training</td>
<td>40</td>
</tr>
<tr>
<td>Training Session 1</td>
<td>40</td>
</tr>
<tr>
<td>Training Session 2</td>
<td>41</td>
</tr>
<tr>
<td>Training Session 3</td>
<td>41</td>
</tr>
<tr>
<td>Training Session 4</td>
<td>42</td>
</tr>
<tr>
<td>Post-Test</td>
<td>43</td>
</tr>
<tr>
<td>Design Consideration</td>
<td>43</td>
</tr>
<tr>
<td>Operant Measurement</td>
<td>44</td>
</tr>
<tr>
<td>Single Subject or Case Study Research Design</td>
<td>45</td>
</tr>
<tr>
<td>Research Questions</td>
<td>47</td>
</tr>
<tr>
<td>Summary</td>
<td>47</td>
</tr>
</tbody>
</table>
Table Of Contents (Continued)

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>IV. RESULTS AND DISCUSSION</td>
<td>49</td>
</tr>
<tr>
<td>Individual Comparisons of Comparison</td>
<td></td>
</tr>
<tr>
<td>Group Subjects</td>
<td>63</td>
</tr>
<tr>
<td>Limitations</td>
<td>68</td>
</tr>
<tr>
<td>Implications</td>
<td>69</td>
</tr>
<tr>
<td>V. SUMMARY</td>
<td>72</td>
</tr>
<tr>
<td>Child-Determined Behavior Change</td>
<td>74</td>
</tr>
<tr>
<td>Does It Work</td>
<td>76</td>
</tr>
<tr>
<td>Implications for Counselors</td>
<td>78</td>
</tr>
</tbody>
</table>

APPENDIX

I. Letter to Parents for Student Volunteers and Parental Permission Form | 81   |
II. Samples of Subject Responses to Role Played Behaviors               | 84   |

BIBLIOGRAPHY                                                             | 91   |
## LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Overview of Project</td>
<td>34</td>
</tr>
<tr>
<td>2.</td>
<td>Summary of Responses to Role Played Behaviors</td>
<td>51</td>
</tr>
<tr>
<td>3.</td>
<td>Self-Selected Behaviors</td>
<td>54</td>
</tr>
</tbody>
</table>
# LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Percentage of Correct Responses to Roleplayed Behavior</td>
<td>50</td>
</tr>
<tr>
<td>2.</td>
<td>Percentage of Correct Female Responses</td>
<td>50</td>
</tr>
<tr>
<td>3.</td>
<td>Percentage of Correct Male Responses</td>
<td>52</td>
</tr>
</tbody>
</table>
CHAPTER I
PURPOSE OF THE STUDY

The purpose of this study is: (1) to demonstrate that elementary school children can be taught to observe their own behavior within a behavior modification context; and (2) modify self-selected behaviors through the use of micro-counseling and media therapy techniques.

Traditionally, behavioral approaches in elementary guidance have been based on the assumption that children are to be directed in their change efforts by others. Further, much of teaching and counseling practice with elementary children is based on adult's determining what children should do. If it is found that children can determine the direction of their own change, this will provide evidence for challenging some basic assumptions about the guidance and counseling process with young children. Instead of teacher or counselor direction, can we give the child more responsibility in determining his own future?

The Need for a Developmental Model

There are many rationales and justifications for counseling with children. Generally these can be broken down into functions which pertain to remediation of maladjustment or functions which work at the development of potential in an effort to prevent maladaptive behavior.
It is a sobering fact to realize that our prisons and mental hospitals are all filled with ex-elementary school children. In addition to crime, alcoholism and drug addiction are becoming more prevalent. These people too were at some point pupils in the elementary school. There are also countless numbers of people who have moved through our schools, people who lead unhappy, unproductive lives, that are never classified as "maladjusted."

Statistics reported in terms of millions of Americans or in percent of the population are often easy to depreciate or keep from having much personal meaning. Let us look at maladjustment in this country in a slightly different way. Let us suppose that things do not get any better or any worse but remain just as they are for the next twenty years......let us also assume that you are viewing the "average American elementary school classroom" of about 30 students, on the basis of our best predictions and judgments, this is what we will see. One or two of the students are or will become seriously neurotic. Four of them already have emotional and behavioral problems. Seven of their marriages will end in divorce. One will become a problem drinker or alcoholic, and if the present trend continues, three of them will be hospitalized at some time for mental illness. (Dimick & Huff; 1970, p. 19)

The literature shows that within the field of mental health there has been a growing awareness that the present model, with emphasis on curative efforts, has rapidly become an impossible way of attempting to meet the growing demand for services. In recent years there has been a strong push towards a developmental model of counseling in the primary grades (Dreikurs, 1967; Dinkmeyer and Caldwell,
This model focuses on prevention rather than remediation, it stresses educational rather than therapeutic approaches, and it is based on the assumption that clients are capable of choosing the desired direction of their own development.

Developmental counseling, which can be contrasted with adjustment or crisis counseling, is not always problem-oriented in terms of assuming the child has some difficult problem....this type of counseling, then, becomes personalized learning, not individualized teaching. The child learns not only to understand himself but to become ultimately responsible for his choices and actions. (Dinkmeyer; 1966)

This type of counseling places a premium on facilitating human effectiveness. It becomes a part of the total educational enterprise. As Blocher (1968) has stated:

Elementary school counselors have for several reasons a unique opportunity to advance their field. First, as newcomers to the profession they may escape many of the distorted role expectations that have been built up during the years and in which counselors in other settings have floundered along without any real professional identity. Secondly, they are entering, in the elementary school, the one institution in American education that has constantly demonstrated a commitment to the concept of developing the full range of effective human behavior in its children.

Unfortunately for the developmental counselor, as Maslow (1954) points out, modern psychology has until recently been concerned solely with the study of maladaptive behavior. One can find volumes about symptoms and possible cures for thousands of inappropriate behaviors; but very little about the behaviors of the millions of people who lead satisfying effective lives.
Developmental counseling is primarily self-initiated. However, counseling can also be encouraged by teachers or other significant adults. This model is contrasted to counseling that is based on the referral model, where adults define a child's problem and send him for remediation.

The goals of developmental counseling are to help children:

1. to know and understand themselves and how they relate with others; to develop self-awareness,
2. to develop self-acceptance, a sense of personal worth, a sense of self-confidence and competence,
3. to develop methods of solving life tasks in a realistic way,
4. to develop increased self-direction, problem solving and decision-making abilities,
5. to develop responsibility for choices and actions and to consider the consequences when making a decision,
6. to modify faulty concepts and convictions; to be able to perceive reality as defined by others. (Adapted from Dinkmeyer and Caldwell, 1971.)

Blocher (1968) sums up this author's views about developmental counseling when he states:

It is not merely aimed at helping individuals escape from or adjust to stressful situations. Instead, its goals are the development of coping and mastery behaviors which will lead to control over the environment. (p. 167)
Here the concern is helping the child be aware of his choices and alternatives and helping him to recognize that he is competent and can change. The student realizes he has chosen his behavior, and he also realizes there are alternative ways of behaving.

**A Behavioral Approach to Developmental Counseling**

A major question is how to organize and implement this type of developmental program so that counselors can move away from the view that counseling is an art and only a chosen few have the mystical qualities to be successful. One possibility of implementation is based on a behavioral model of counseling,* a model that would focus on a direct approach to behavior change.

In defining behavior modification, Watson (1962, p. 19), notes that behavior modification includes different techniques related to the field of learning "but learning with a particular intent, namely clinical treatment and change."

The major aspect of behavioral counseling is the direct focus on behavior. As Watson notes (1962, p. 16) "Skinner made it possible to see verbal behavior as a response in its own right." Whether it is verbal or

*Behavioral counseling and behavior modification will be used interchangeably to describe a model which deals directly with changing behavior.
non-verbal, whether it reflects biological, social, or symbolic need the focus is always on behavior.

When a counseling goal (behavior change) is formulated in behavioral counseling it must meet three criteria (Krumboltz and Thoresen, 1969, p. 1):

1. It must be a goal desired by the client;
2. The counselor must be willing to help the client achieve this goal;
3. It must be possible to assess the extent to which the client achieves his goal.

These criteria will allow the client and counselor to work together in helping the client not only to change the inappropriate behaviors he might exhibit (remedial), but to allow clients to build new skills (developmental) and make decisions about how many behaviors or how much of a new behavior (careful measurement) he desires to learn.

The rationale for focus on behavior has been best stated by Eysenck (1959):

Learning theory does not postulate any..."unconscious causes," but regards symptoms as simple learned habits; there is no neurosis underlying the symptom but merely the symptom itself. Get rid of the symptom and you get rid of the neurosis.

Behavior modification according to Ullman and Krasner (1965) is merely the application of learning theory and experimental psychology to the problem of altering maladaptive behavior. The focus is on overt behavior, in terms of both development and change.
There are several advantages for a counselor to focus on modification of overt behaviors. First the counselor can begin more quickly to demonstrate to the client that he can help. Rather than spend several sessions in which the client and counselor talk about the problem, a behavioral counselor can leave the client with the feeling that something can be done, and done soon.

Second, since the behavior modifier is not tied to a single technique (Krumboltz and Thoresen, 1969), he can alter or change a particular technique so that maximum behavior change is encouraged.

The client who begins work in behavioral counseling and sees his behavior begin to change becomes reinforced in his effort to continue this change process (Krumboltz and Thoresen, 1969; Ullman and Krasner, 1965). The stressing of specific goals and devising set routes in which one can attain these goals allows the client to be constantly aware of the progress he is making. This is especially clear when one thinks of the emphasis on successive or progressive approximations (Skinner, 1971). According to this strategy the client moves through a series of small, easily negotiable steps to the goal behavior. Since the steps are designed to insure success the person has a sense of continued progress. This, in turn, moves him further along.

Lastly, the combination of the counselor's philosophy
(that the client merely has learned inappropriate behavior) allows the client to view himself as someone who is not "sick" or deficient as a person. When the client can view himself as someone who has learned some behaviors that have disadvantages to him and sees that he can change, he begins to feel more powerful and in control of his total life (Ivey, 1969).

Criticism of Behavior Counseling in Schools

The two major criticisms that have arisen about behavior modification techniques as practices in schools today are: (1) teacher, counselors, and parents decided what behavior the child has to change. The child's needs are interpreted for him with no real understanding or desire to change on the part of the child; and (2) behavior modifiers are trying to merely "socialize" children. Children are referred to counselors so that they can learn to adjust to the school/classroom situation. Behavior modification, according to this view, is not concerned with growth and development, but rather with devising strategies for making children conform to externally imposed standards.

Microcounseling - Media Therapy

The model proposed in this thesis is an attempt to use the advantages of the behavioral process, while avoiding
its drawbacks, to work with elementary school children. This is a direct outgrowth of the microcounseling (Ivey, 1971), and media therapy (Higgins, Ivey, Uhlemann, 1970) models. In this model, specific self-selected behavioral skills are taught one at a time in an organized fashion with immediate video feedback.

Microcounseling (Ivey, 1971, Ivey et al., 1968) was originally developed as a method for counselor training. It is simply a scaled down interviewing situation in which a beginning counselor talks with a volunteer client about real problems. Through the use of videotape feedback it focuses attention on specific counselor behaviors "rather than attempting to teach all the skills of counseling at once" (Ivey, 1971). The single skill concept with instant video feedback is the essence of the model. The opportunity for trainee self-observation on videotape is a powerful and meaningful experience.

Media therapy grew from the application of microcounseling concepts to work with mental patients. An addition to the basic microcounseling model was suggested by Rudman (1970) who suggested that patients not be taught prescribed skills, but rather than patients be permitted to select those skills which they wish to work at improving (Ivey, 1971).

Thus, the major focus on efforts with media therapy in a psychiatric facility has centered on finding
ways in which patients can define and program their own course toward recovery. This recent work in media therapy may represent an important turning point in the applications of microcounseling and media therapy. While developing skill units with well defined behaviors may be useful, the most appropriate method of using the concepts may be in concert with the wishes or desires of the counselor trainee, the para-professional, and the individual who wishes to learn to communicate with others. There is at least clinical evidence that individuals learn and generalize best what they want to learn. (Ivey, 1971; my underline)

Proposed Model

The object of this research was to test the effectiveness of the media therapy model with elementary school children. There were several deviations, however, from the original media therapy study (Ivey, 1971). First, in this research the subjects were normal students who had not been previously designated by teachers or counselors as children with problems.

Second, the subjects in the study spent four one-half hour modules learning about behavior and behavior discrimination. This was done first to ascertain if children in this age group could deal in terms of discreet behavior; and second, to insure that they would be able to quickly engage in meaningful self-observation.

Finally, the main thrust of this study was not an attempt to change maladjustive, or inappropriate behavior, but rather to allow children to change, improve, or add new behaviors as they saw fit. The child would select the
behavior and work with the counselor in devising strategies of change.

**Summary**

This study was an attempt to determine if elementary school children could learn the skills of self-observation and then select and modify behavior of his own choice. The primary tool for change was the use of immediate video feedback.

There has recently been a serious outcry for a model of counseling that has its rationale based on education and prevention rather than remediation. This model is referred to in the literature as developmental counseling (Blocher, 1968). Within the developmental framework emphasis is placed on helping clients to expand their behavioral repertoire so that they will be better prepared to deal with problems and stress as they grow and develop.

The behavioral model, based on learning theory, is one way to implement a developmental counseling program. By focusing on discreet behavior the counselor and client have several advantages. The client meets with obvious success early and often in counseling. This provides him with incentive to continue on toward completion of his goal and/or the formation of new and more difficult goals.

The counselor, by focusing on behavior, is not tied to any one method (Krumboltz and Thoresen, 1969). He also
can more accurately monitor the client's change and know when he needs to intervene more or less in the change process.

However, there are some serious criticisms of behavioral counseling. The two most prominent being: (1) behavior modification (especially with children) is merely a conforming process; and (2) the behavior children are to change is determined by adults.

The model proposed in this study attempts to use behavioral techniques with developmental rationale and at the same time avoid these criticisms.

Students were taught the basic skills of behavioral observation. They then viewed themselves on videotape and made their own choices as to behavioral change. Using a model derived from microcounseling and media therapy techniques, students then planned and used video feedback in their own change efforts.
CHAPTER II
REVIEW OF LITERATURE

Up until a few years ago therapy and counseling models applied in elementary school settings have almost exclusively emphasized a variety of techniques and approaches which emanated mainly from psychoanalytic though (Bijou & Sloane, 1966). Other prevalent models included client-centered approaches, play therapy, and in some cases family-centered therapies. Most of these treatment models use didactic procedures within a didactic relationship; the therapist usually being a school psychologist, counselor, or social worker. Treatment goals have often been ill-defined, or too general, i.e., improved self-understanding, better self-acceptance. Very often the child is referred by a teacher because of some improper behavior in the classroom, the expectation being that counseling will somehow get rid of the problem behavior and the child will now behave properly in the classroom.

The remainder of this Chapter will examine those relevant studies which: (1) demonstrate that behavior modification techniques are effective in increasing adaptive or pro-social behavior; (2) review those studies that focus on observational learning, especially through the use of videotape feedback; and (3) closely examine the microcounseling and media therapy studies which form the
Behavior Modification with Children

The rising concern with the importance of early childhood education along with much discontent with the effectiveness of the traditional approaches to counseling and psychotherapy have led psychologists and educators to pay more attention to the application of behavioral principles to the problems of children particularly in elementary schools. The problems governing the effectiveness of counseling and therapy with children are directly related to questions raised by Eysenck (1952) in relation to therapy with adults.

Levitt (1957, 1963) using a procedure similar to Eysenck concluded that available studies did not furnish reasonable evidence that traditional psychotherapeutic models aided in the recovery from emotional difficulties in children. Within the term traditional models Levitt included guidance, counseling, placement and recommendations to parents and schools, as well as therapy.

Peck (1961) suggested that techniques that do not rely on insight must be considered more important in child counseling than in work with adults. He points out that since speech is relatively poorly developed in children (the younger the child, the less complete the development) it is safe to assume that speech mediated therapy is most
valuable from adolescence onwards. Peck concludes that child therapists might be wise to view emotional disturbance within a learning theory context. Emotional problems could be divided into lack of learning problems; inappropriate learning problems; or learned conflict problems.

Other questions centering around the effectiveness of traditional counseling approaches with children were raised by Lebo (1960) and Heinike (1960). Lebo pointed out that play therapy did not really consider the influence of such variables as age or amount of pathology. As a result, studies of non-directive play therapy generally indicate that all children undergo the same process.

At about the same time, Rachman (1962) listed the advantages gained in using learning theory principles in treatment procedures. Some of the most important included: (1) strict control of variables; (2) quantification of operations; (3) exclusion of clinician variables; (4) emphasis on single case investigations; and (5) better use of non-verbal operations. Rachman further pointed out that while most problems with adults arise from unwanted responses, i.e., compulsions, emotional problems in children can most often be viewed as arising from inadequately learned responses as in enuresis. In other words childhood disturbances often represent behavioral deficits.

It is an interesting question why the application of learning theory has not been more seriously used in the
treatment of emotional and behavioral problems in children. It is not a new approach, but as Kalish (1965) points out "...the development of behavior therapy as an explicit set of rules for practice has been exceedingly slow relative to the amount of time that the principles of learning and conditioning have been in existence" (p. 1230). Some of the factors contributing to this delay were the separation of theory and practice, reluctance to use the clinic as a laboratory, and most important the continued uncritical acceptance of the traditional methods of psychotherapy.

In reviewing early research efforts attempting to link learning theory to psychology one notices that the use of environmental influences to solve psychological concerns has a long history that can be traced back to Watson and Rayner (1920) and the early work of Mary Culver Jones (1924). Following Pavlov's work with dogs, Watson demonstrated that human neuroses could result from similar processes. His research showed that maladaptive behavior (generalized fear of objects) is learned in much the same way any behavior is learned.

By employing conditioning procedures opposite to those employed by Watson, Jones (1924) was able to eliminate fear in children and directly recondition them to desired responses. Jones was able to reverse maladaptive conditioning (fear of animals) by pairing the anxiety producing stimulus (rabbit) with a pleasure producing stimulus (food).
By making the pleasure stimulus gradually stronger, Jones weakened and finally extinguished the bond between anxiety and animals. This case probably represents the first recorded example of reciprocal inhibition applied to children.

Although these early experiments demonstrated that human emotional problems could be learned and unlearned, clinicians have only recently begun utilizing these principles in counseling and therapy. Further, it has been even more recent, within the past 10 to 12 years, that psychologists and counselors in school settings have begun adapting behavioral modification paradigms in the treatment of emotional and behavior problems in the school setting (Kelly, 1970). As Franks (1968) states:

There is every reason for the school and child psychologist to become acquainted in some detail with the approaches of the behavioral clinician. In the first place, the techniques and underlying philosophies stem from the traditions of the psychologist rather than the psychiatrist. Second, the use of conventional psychotherapy must be restricted by limitations of time, money, verbal communication, and the patient's sophistication and intelligence. Third, and most important as far as the school is concerned, the incidence of behavioral problems seems to be on the increase. And despite the emphasis upon behavior therapy with adults there is still a body of experimentation which could be applied by the school and child psychologist.

Woody (1966) also shares Franks' conclusions. He feels that many of the principles and techniques are directly applicable to the school situation, i.e., reciprocal inhibition, positive reinforcement, reward and
Other investigators (Quay, Werry, McQueen, and Sprague (1966) echo the pleas of others who are intent on furthering behavioral approaches to counseling in the schools. They write:

On the basis of present evidence, it appears that children's behavior disturbances can be viewed most profitably, both in diagnosis and remediation, in terms of problem behavior itself rather than in terms of deviant personality types or disease entities. It is further assumed that it is most useful to attempt to conceive of problem behavior in terms of external observable events, rather than internalized hypothetical constructs like ego, unconscious, and so on.

They also emphasize that in behavioral counseling the goal is the elimination of the problem behavior, and when this is achieved, the child is no longer viewed as having a problem.

Gelfand and Hartmann (1968) have published a comprehensive review of the literature dealing with the application of behavior modification with children. They put forth a number of compelling arguments supporting the use of behavioral counseling and therapy for children's emotional or behavior problems. Among the most important are: (1) the comparative brevity of treatment; (2) the relative ease with which children's social environments can be controlled; (3) the types of maladjustments for which children are often referred for treatment; and (4) the required environmental control is often easier to achieve
for children in their homes and schools than for the typically more varied social interactions of non-institutionalized adults.

It is increasingly evident that school psychologists and counselors have become more receptive to behavioral approaches. Results of studies with a wide variety of subjects has been reported by a number of authors (Grossbert, 1964; Krasner and Ullman, 1967; Ullman and Krasner, 1966; Wolfe, 1958, 1969; Krumboltz and Thoreson, 1969; Bandura, 1969; and Yates, 1970).

**Development of Prosocial Behavior**

The emphasis of this research is not so much concerned with the problem of reducing or eliminating of some specific undesirable behavior, but rather on developing or strengthening prosocial behavior. Wahler (1966) states: "Teachers and counselors must seek not only to modify or ameliorate specific deviant behavior, but must also develop socially acceptable behavior patterns in children."

Before examining specific techniques effective in modifying behavior it should be stated that attention itself has been demonstrated to be a powerful tool in developing prosocial behavior. Allen, Hart, Buell, Harris, and Wolf (1964) demonstrated that teacher attention could teach nursery school children to interact with other children in school situations. Kennedy and Thompson (1967)
used attention to reduce hyperactive behavior in a first grade child. Whitley and Sulzer (1970) helped classroom teachers to reduce disruptive student behavior by selective use of attention. Bandura (1969), Phillips and Kanfer (1969), and Ullman and Krasner (1965) provide an extensive review of the studies that demonstrate how important attention is to the modification of behavior.

Attempts at developing prosocial behavior in elementary school settings have proved effective with children exhibiting a wide range of behavioral problems. In the area of motor skills Harris, et al. (1964) used positive social reinforcement by teachers to reinforce walking behavior in a nursery school girl who had reverted to crawling behavior. In this case since the child already had the requisite behavior in her repertoire, minimal successive approximations were needed. Within two weeks of the start of treatment her behavior was indistinguishable from her peers as far as walking was concerned.

Johnson, et al. (1966) also used social reinforcement to change an unusually low rate of physical activity to a rate consistent with other children. Their results suggest that systematic social reinforcements of a specific activity can be generalized to related activities such as increased interaction with peers.

Behavior modification techniques have also proved successful in situations in which the child manifests
verbal deficits (Reynolds and Risley, 1968).

Increased classroom attention and improved study habits have also been goal behaviors in behavior modification. Techniques have included social reinforcements by teachers (Valett, 1966), contingency contracts (Cantrell, Cantrell, Huddleston, and Wooldridge, 1969), and procedures using peers (Surratt, Ulrien, and Hawkins, 1969).

Bushell et al. (1968) point out that a token system has much to offer in a school setting. School activities such as recess, early dismissal, extra-curricular activities, etc. might be used to develop and maintain goal behavior. Further, the classroom teacher, responsible for the behavior and learning of many children can more easily manage a token system than rely solely in verbal praise or social reinforcers, since these require constant monitoring of individuals. This is an important consideration for any classroom teacher attempting to use behavior modification techniques.

Part of the answer to this problem might rest in the possibility of using other students in an attempt to alleviate some of the teacher's work. Surratt, Ulrich, and Hawkins (1969) demonstrated that a fifth grader could effectively increase study behavior in first grade students.

While it has been extensively demonstrated that operant conditioning techniques are well suited for the development of prosocial behavior in children manifesting low levels of
responding or moderate behavior deficits, a requisite for effective treatment seems to be that the child has the capability to perform the desired behavior, that is, the behavior is in his repertoire. What if the child does not have the desired behavior in his repertoire? What if he is not exhibiting behavioral deficit but rather, the target behavior is alien to him?

The Role of Modeling

Reinforcement theorists contend that any prosocial behavior can eventually be obtained through the process of successive approximations or shaping. A rather important drawback involved in this procedure is the amount of time it might take—particularly in a school setting where other factors press for positive results in a relatively short period of time. Or as Bandura (1969) states:

While operant conditioning methods are well suited for controlling existing responses, they are often exceedingly laborious and inefficient for developing new behaviors. (p. 313)

A technique that seems very well suited in the behavior modification process with children who lack particular prosocial behavior would be procedures based on social modeling (Bandura and Walters, 1963).

Exposure to the behavior of models may have three effects on the frequency or magnitude of a child's behavior. First, the child may learn new responses that did not exist in his repertoire. Second, observations of models may
strengthen or weaken inhibitory responses. Third, it is possible that observation of models can elicit previously learned matching responses in the observer simply because perceiving of certain kinds of behavior acts as a releaser of responses in the same class (Bandura, 1969).

This study is primarily concerned with the first modeling effect, the establishment of new responses.

Modeling techniques can be presented in a variety of formats. The counselor can deliberately use himself as a live model to illustrate certain behaviors to his clients. Or, peers of the client may serve as models, either in group settings or via movie or videotape. In light of studies demonstrating the value of peers as reinforcing agents it may be highly advantageous to employ classmates as models, "...as the behavior of a peer is far more appropriate to the client's problem than that of the counselor himself" (Krumboltz and Thoreson, 1969, p. 167).

O'Conner (1969) suggests that modeling may be particularly effective in cases where gross behavior deficits are apparent, in other words, where the desired behavior is not in the child's repertoire. In his work with groups of severely withdrawn children the group that was subjected to live models (Us films of cartoon characters) showed an increase in social interaction that was significantly greater.

Myrick (1970) used a variety of modeling techniques in
the treatment of an effeminate nine-year-old boy. In one instance the physical education teacher modeled desired behavior, and later the boy was paired with the most popular, most athletic male student with the intention of providing an opportunity for identification.

Modeling procedures seem warranted in cases where the child does not display the desired behavior to any discernible degree; later operant procedures should be used to maintain the effects of the observational learning. Or as Bandura (1969) concludes:

It is evident from informal observation that vicarious learning experiences and response evidence procedures involving both symbolic and live models are utilized extensively in social settings to short-circuit the acquisition process. (p. 145)

And as Krumboltz and Thoreson (1969, p. 163) point out:

Counselors can deliberately make use of modeling procedures even though much remains to be learned about the process involved. Social modeling techniques have relevancy and promise for all problems confronting counselors. Often a live picture is worth thousands of counselor words.

**Self-Observation as a Behavioral Change Agent**

Behavior modification procedures often require subjects to self-observe their own behavior. This systematic self-observation has been shown to be an important tool in behavior change programs (Johnson & White, 1971; Johnson, 1970).

While self-observation has been a common factor in
behavior modification programs (Ferster, Nornberger, and Levitt, 1962; Rehm, and Marston, 1968; Rutner and Bugle, 1969; Stuart, 1967), it has rarely been investigated independently. A study by Rutner (1967) suggests that self-observation may be a factor in decreasing smoking behavior. Johnson and White (1971) demonstrated that college students' studying behavior could be increased by the use of systematic self-observation and record keeping. In a separate but similar study these authors also were able to change dating behavior in college students, again by using self-observation as the sole change agent.

However, both Johnson and White (1971) and McFall and Hammen (1971) present strong evidence that the subject's value orientation toward the observed behavior is of immense importance. That is, if the subject feels or is made to feel that the particular behavior should be changed because a change will benefit him in some way, the prognosis for change is greatly enhanced.

The recent use of videotape feedback has carried the theme of self-observation to the point where feedback to the client is instant, objective and completely accurate.

The progress of videotape recording of clients and then playing back the videotape so that the client can study his own behavior has shown to be an effective method for facilitating self-study and awareness and for allowing clients to experiment with new behavior (Berger, 1970;

Most of the research of videotape techniques in counseling has been done at universities, but innovative uses are now being devised in elementary and secondary schools (Aldrige, 1971).

The special services program of the Camden, New Jersey public schools has developed a method to use videotape feedback in facilitating counseling for emotionally disturbed children in elementary school special classes. With the aid of a visual record of their recent classroom behavior, even highly non-communicative children have been able to talk more freely about their feelings and behavior (Kagan, 1970).

Stoller (1967) has indicated that people in the actual act of confronting themselves behave somewhat differently than when they are dealing with verbal reflections.

Highly perceptive and articulate people are often struck dumb when confronted with their own image on the elevation monitor; it is as if their capacity for perceptiveness suddenly undergoes a loss. Self-confrontation is somehow a different experience for most people than that is met in traditional psychotherapy. (p. 360)

Stoller sees the lack of experience people have in confronting themselves as an opportunity for real impact and then change. This self-confrontation is a new experience and individuals in this unique situation fail to employ their usual defenses. It is therefore possible to have real contact and use this technique to give maximum
objective feedback to the client.

While the use of videotape for self-observation seems to offer great possibilities, merely exposing a person to video feedback is often insufficient for change.

Without some prior training in the skills of dealing with discrete behavior, clients still attempt to tackle large problems and can again be overwhelmed by the task they choose.

One of the very few attempts at teaching the skills of behavioralizing large problems has been Ivey’s work in microcounseling and media therapy (Ivey, 1971). In his work Ivey has taken significant steps in the combination of working with observable behavior and instant video feedback. Both the microcounseling work (done with counselor trainees) and the media therapy study (done with mental patients) have a direct bearing on the philosophy and methodology of this study.

**Microcounseling and Media Therapy**

Since the practicality of videotape has only recently been established there is not a great deal of expensive research. However, some of the earliest and most interesting work has been reported by Ivey and his colleagues (Ivey, 1971; Ivey et al., 1968).

The original microcounseling model developed by Ivey, Normington, Miller, Morrill, and Haase (1968) is basically
a scaled down sampling of counseling in which counselor-trainees were taught specific counseling skills. Counselor and client talked for a brief period of time in a counseling session which was videotaped. Following this taped session, the counselor-trainee was given instructions in a preselected skill. He also reviewed the initial tape. An instructor worked with the trainee to promote and encourage the acquisition of the sought after skill. "By modeling encouragement, and praise the trainer-supervisor reinforced the neophyte counselor's efforts" (Aldrige, 1971). Following this training period the same client was again interviewed for another brief period of time.

It may be seen that the microcounseling model makes use of "cue discrimination and specific suggestions for improvement, video models (Bandura, and Walters, 1963), written materials, and supervisors' comments" (Ivey, 1971, p. 7). Operant techniques also come into play when the supervisor stresses and rewards appropriate behavior with recognition and praise.

Allen, Clark, Cooper, Stroud, and Fortune (1967) used microteaching as an effective teacher training model. Bandura and Walters (1963) and Bandura (1969) demonstrated the importance of modeling and cue discrimination as a factor in learning. Skinner (1963 and 1968), Ullman and Krasner (1965) have presented a sound case supporting the value of operant conditioning and reinforcement in teaching,
learning and behavior modification.

Moreland (1971) found that the microcounseling model, when compared to traditional training methods, was more effective. Second year medical students in an introductory psychiatry course, trained in microcounseling skills, showed greater improvement in attending behavior and reflection of feeling than those trained in traditional methods.

Haase and DiMattia (1970) used the microcounseling model to train paraprofessional counseling personnel in the skills of attending behavior, expression of feeling and reflection of feeling.

Sadker (1971) combined the microteaching model with a token economy at the elementary school level. She demonstrated that children could be taught to ask higher order questions that require evaluation, problem solving, cause and effect and divergent open-ended thinking.

Media therapy (Ivey, 1971, 1968) was derived as a systematic video program in behavior change for psychiatric patients. Patients engage in short video taped interactions with a consultant/facilitator. These interactions are then viewed and the patient, with consultant's help, identifies specific behaviors which he would like to change (Ivey, 1971). Then using a combination of microteaching and microcounseling methods patients have the opportunity to practice each target behavior until it is learned. The counselor's role consists mainly of observing, commenting on strengths
and weaknesses, and providing suggestions and support that promote interpersonal skills.

As one reviews the literature it can easily be seen that research strongly supports the thesis that by focusing on specific behaviors, counselors and therapists can demonstrate and document positive change. This holds true whether one uses traditional learning theory models or the most innovative video feedback methods. One point may be noted from the research however, all behavior modification studies with children, and the overwhelming majority of those with adults deal only with the remediation of behavior designated maladaptive.

Summary

While the literature in behavior therapy is extensive and varied it clearly demonstrates several points. First, behavior modification techniques have been proven successful in the elementary school setting. Second, the techniques have proven of value in the initiation of new prosocial behaviors, as well as the elimination of maladaptive behaviors. Third, video feedback, which makes use of modeling, cue discrimination and self-observation is a new innovation which has been used with great success in effecting behavior change.

One particular innovative use of video feedback has been the microcounseling media therapy model developed by
Ivey (1971). This allows for the teaching of discretely defined behaviors relevant to counselor training or as in the media therapy study elimination or remediation of maladaptive behavior.

The objective of this study was to investigate the possibility of training elementary school children to use videotape self-observation in the selection and modification of specific behaviors.

In working with elementary school children in a developmental framework it would seem that successful behavioral techniques could be put to good use in helping children to strengthen their interpersonal relationships and learning to become responsible for the modification of their own behavior. Training in self-observation using video feedback to demonstrate that change has taken place and should allow children to feel more responsible and more powerful as individuals.
CHAPTER III

METHOD

This experiment was designed to investigate the effectiveness of videotape feedback as a means of facilitating behavior change in elementary school children. This study is based on similar research done by Ivey (1971) with institutionalized mental patients. It differs from the original media therapy study in several significant ways. The subjects in this research were considerably younger, there were both boys and girls and these subjects were given brief, but systematic training in self-observation.

Overview of Project

1. Sixteen students were selected from a single classroom from 24 volunteers.

2. These students were given four one-half hour, informal instructional modules in observation and identification of behavior. These modules were designed to familiarize the students with the idea of verbal and non-verbal behavior, what a discrete behavior is, and how to observe and identify behavior in others and themselves. Students were videotaped in these modules and viewed the tapes in an effort to give them practice in observation.

3. The students were then randomly videotaped during
normal classroom activities. These tapes were approximately 30 minutes in length.

4. Next the student was shown the videotape and asked to select any behavior he would like to change, or to choose a behavior he did not exhibit but would like to learn.

5. After the student selected the behavior, he/she and the counselor decided on an individual plan for change.

6. Before beginning any change training each videotape was reviewed and frequency counts were made for each behavior chosen by the students.

7. The students were then randomly divided into two groups. One group met individually with the trainer for four, 30 minute sessions to work at changing the selected behavior. All of these sessions followed a media therapy format. That is, all sessions are videotaped and at designated intervals sections of the tape are played back to the student so that he can monitor his own behavior change. The second group received no further training and returned to their regular classroom routine.

8. One week after completion of all training sessions all students were again randomly videotaped during normal class activities.

9. The second videotape was reviewed and frequency counts were recorded of the behaviors selected in Step 4.
Comparisons of these frequency counts were made with those on the original videotape to determine if behavior in the classroom had changed.

**TABLE 1**
OVERVIEW OF PROJECT

```
SUBJECTS SELECTED

ALL SUBJECTS PARTICIPATE IN INSTRUCTIONAL MODULES ON BEHAVIOR OBSERVATION AND IDENTIFICATION

ALL SUBJECTS VIDEOTAPED IN REGULAR CLASSROOM

SUBJECTS VIEW VIDEOTAPE INDIVIDUALLY AND MAKE SELECTION OF BEHAVIOR THAT THEY WISH TO MODIFY

INDIVIDUAL FREQUENCY COUNTS ARE MADE FOR EACH BEHAVIOR SELECTED

RANDOM DIVISION INTO TWO GROUPS

COMPARISON AND CONTROL GROUP

BACK TO REGULAR CLASS ROUTINE

EXPERIMENTAL GROUP

FOUR MEDIA TRAINING SESSIONS

BACK TO REGULAR CLASS

ONE WEEK FOLLOWING COMPLETION OF MEDIA TRAINING ALL SUBJECTS AGAIN VIDEOTAPED IN CLASS

COMPARISON FREQUENCY COUNTS CONTROL

COMPARISON FREQUENCY COUNTS EXPERIMENTAL
```
Sample

The sample consisted of 16 male and female fifth and sixth grade students. All subjects were enrolled and attending the Wildwood Elementary School, Amherst, Massachusetts, during the spring term of the 1971-72 school year. The age range for subjects was 9 years 10 months to 11 years 8 months.

Subjects were volunteers. They were randomly selected from a larger list of volunteers that had been screened by the school counselors and principal so as to eliminate students with severe emotional problems or students taking medication. Five students were removed from the initial list of 32. Students were told that this study was designed to find out whether children could learn to change their own behavior without adults telling them how to do it. They were also told that they would be videotaped at various times during the study.

All volunteers (prior to the final selection) were given a form letter describing the purpose of the study and the time required of each student. This letter contained a parental permission slip that was signed by all parents (Appendix I).

Setting

The training components of the study were done in the closed circuit television studio of the Audio Visual
Department of the Wildwood School. All the self-observation modules and the training sessions were conducted in the studio.

Four video sessions were taped in the subject's classroom. Wildwood Elementary School has large open classrooms called quads. Quad G was the home classroom for all subjects in this study.

This quad contained 82, 5th and 6th grade students. The students were further broken down into 4 groups of approximately 20 students each for rotating small group activities (i.e., music, art, library, etc.). Quad G had three teachers and two teacher aids.

Video tapings were made in the quad as the students were seated at small tables, with one teacher conducting a social studies lesson.

Each subject was also observed for 90 minutes in the classroom setting. These observations were made by 4 University students trained by the experimenter. The observers were instructed to alternately observe the subject for a five-minute period without recording and then record the frequency of the target behavior for a five-minute duration. There was no communication between the observers and the subjects.

**Training Procedure for Behavior Identification**

All sixteen subjects experienced four one-half hour
training modules in observation and identification of behavior. The purpose of this training was to determine if subjects of this age could conceptualize and deal with discrete behaviors.

An elementary school teacher trained by the investigator worked as the instructor in all modules. This was done to further demonstrate that elementary school teachers and counselors would have little trouble implementing this program in any school. At the end of the training period all subjects were shown a role played video tape from which they were asked to identify at least four behaviors. A summary of the training procedure follows:

### Instructional Modules

All instructional modules were videotaped.

**Module #1** The subjects were given an orientation to the study. In this initial module the definition of terms was presented in concepts that children could grasp.

Subjects were provided with basic definitions of what was meant by behavior (all the things we do and say).

Definitions and examples for the following were discussed:

- a. Verbal and non-verbal behavior
- b. Observation and identification
- c. Self observation
- d. Recurring behavior
Subjects practiced looking at and listening to (observation) each other and picking out (identification) those who said "you know" (verbal behavior) or perhaps curled their hair (non-verbal behavior) over and over (recurring behavior).

At the conclusion of Module #1 examples were solicited from subjects to insure their understanding.

Module #2 Subjects were asked to summarize Module #1. The instructor then introduced the concept of frequency and frequency counts in its most simple form.

The students were then sent to the school cafeteria to observe for 15 minutes and make a frequency count of one specific behavior. Following this observation period, the students shared observations and counts. Some examples were: how many times Mr. F. stroked his beard; how many times student A. dropped his fork; how many times Mr. T. told someone to pick up the trash.

Subjects were given the assignment of making a frequency count of one behavior they observed at home.

Module #3 The subjects were asked to summarize Module #1 and Module #2. All of the subjects' frequency counts were reviewed and any questions or problems were discussed. Charting of verbal behavior was also discussed.

Subjects were shown the videotape of Module #1 and asked to observe themselves and identify one specific non-verbal behavior they were demonstrating (i.e., fingers in
mouth, twirling hair, etc.).

The videotape showing was repeated and subjects were asked to observe themselves and identify one specific verbal behavior they were engaging in (i.e., repeating phrase "you know," voice too soft, excessive use of "um" and "ahs."

Module #4 Subjects were shown a videotape on which six previously agreed-upon behaviors were role played. They were asked to observe the videotape, select at least four specific behaviors, and try to count the frequency of these behaviors.

The 16 minute videotape was played a total of 3 times and subjects were to identify at least four specific behaviors. This was to determine if subjects at this grade level could deal with the concept of single discrete behaviors.

Following these instructional modules the subjects were videotaped in the classroom while participating in a normally scheduled social studies lesson. The only deviation from regular classroom procedure was that the subjects met as a single group from which other members of the quad were excluded. Since students at Wildwood School are on many occasions observed, visited and put on videotape the subjects and other members of the quad related quite normally to the investigator coming into the room, setting up video equipment and taping a classroom lesson.
Once again the lesson was conducted by a qualified elementary school teacher.

Following the taping of a classroom lesson the subjects were randomly assigned into two groups. The first group was to receive media training in behavior change. The second group would receive no further training.

**Media Training**

Eleven subjects met individually with the investigator to observe the videotape of the classroom lesson. Each subject was asked to observe themselves on the tape and select one behavior that he/she would like to change. By change, the subject was told one could improve (do something better), lessen (do something as much), increase (do something more), eliminate (get rid of), or learn a new behavior that was not on the tape.

Subjects selected for further training were then scheduled for 4 one-half hour media training sessions. Those subjects not selected for media training had their behavior selections recorded, were thanked by the investigator for participating in the modules and returned to their regular school activity schedules. These students now functioned as a control group for comparison with those who were to receive further training.

**Training Session 1**

Subjects met with trainer individually and viewed
portions of their classroom videotape. During the viewing, discussion focused on observing if selected behavior occurred continuously, at predictable intervals or randomly.

Following the videotape subjects were asked to model or try out new behaviors they wished to learn. This was videotaped and played back to the subject. At this point the subject could view himself exhibiting the new behavior and was able to respond that this was how he wished to act, or make adjustments, which were videotaped and played back, until he/she was satisfied.

Training Session 2

At the beginning of this session subjects were reminded to work at demonstrating their particular, new behavior throughout the meeting.

Trainer and subject engaged in a videotaped interaction in which the topic of how people change was discussed. During this discussion the subject with the trainer's help was asked to formulate a strategy that would help him work at keeping his/her new behavior in the classroom.

After 10-12 minutes the discussion was ended and the videotape was shown to the subject. At this time the subject observed himself and the tape and counted the frequency of his old and new behavior and noted any improvement he had made.

Training Session 3

This session begins with the subject being videotaped
while he demonstrates first his old behavior (to be modified) and then contrasts this by demonstrating the new behavior. This is then viewed by the subject.

Following this the trainer and subject interact with a discussion of whether the subject's new behavior has been noticed outside the training session. Have his parents, teachers, and friends reacted? This discussion lasts about ten minutes and is videotaped. The tape is shown to the subject who can again see himself and how he looks while engaging in his new behavior.

Training Session 4

In this final session subjects are asked to review with the trainer their participation in the study (again this is videotaped). The training in behavior identification, self-observation procedures, selection of a behavior, an individual strategy for change and the work and practice they went through is discussed. Any final questions are answered. Finally, the subject is shown the original classroom videotape and portions of the tape of this final meeting. This is done so that the subject again receives video feedback demonstrating how successful he has been at changing his own behavior.

During the training session the trainer attempts to keep the atmosphere informal and comfortable for the subject. He serves both as an observer and as a consultant. He observes the subject's behavior and makes comments and
Suggestions for any alterations in behavior or strategy that will help the client reach his/her selected goal.

Post-Test

Upon the completion of the final media training session, the students returned to their regular school routine. One week later a University student briefed by the investigator and with the consent of the classroom teacher videotaped all the subjects in their quad during a regularly scheduled social studies lesson. The camera operator was not known to the subjects and was not identified as working with the media training study.

Design Consideration

This study is an evaluation of a video training program. It uses direct measurement techniques that are derived from those used in operant conditioning. Since this study is an evaluation and not a true research study, some of the differences between evaluation and research are stated below. Following this will be a discussion of the reasons for using operant measurement techniques.

According to McIntyre (1970, "...evaluation is the basis for decision making, and as such, includes both description and judgment, and collection of pertinent data on which to base judgments" (p. 213). Five characteristics are listed by McIntyre (1970) that differentiate evaluation
from research. The first involves generality. This need not be of great concern since the effectiveness of the program being evaluated is usually specific to a particular setting. "Secondly, the validity measures in evaluation are internal, not external, since we don't need to consider other populations and settings" (McIntyre, 1970, p. 215). Thirdly, a complete description of the event studied is needed. Fourthly, "...evaluation cannot control relevant parameters, but it can and must describe them" (McIntyre, 1970, p.216). Lastly, rather than inferential statistics, often descriptive statistics, frequency counts, either/or tabulations, and chi square are used.

**Operant Measurement**

The type of evaluation used in this study generally involves the direct approach of defining the behavior that each student wishes to modify and measuring the extent to which he/she was able to demonstrate the desired behavior. In order to make the data concurrent, frequency of occurrence measures were used in this study. Behaviors of interest were operationally defined, then systematically observed and recorded.

Operant measurement techniques were chosen to record behavior change for several reasons. First, they provide a direct measure of the behavior being modified. Second, they record individual and continuous data on each subject.
Third, they provide a measure that is sensitive to environmental change.

Operant measurement calls for a definition of the designated behavior in observable terms prior to the start of measurement procedures (Bijou, et al., 1968). Since operant measurement is continuous, it cannot begin until a behavior to measure has been designated. In order for direct measurement of the behavior to take place, it has to be defined in such a way that the observer knows when it has occurred.

**Single Subject or Case Study Research**

Evaluation of single subjects is by no means unique in behavior therapy (Krumboltz, 1969; Bachrach, 1964; Sidman, 1960; Chassan, 1960).

The major difficulty with comparison group designs is that it makes it very difficult to make meaningful statements in regard to individual subjects in the quest for change in the individual.

On the other hand, the single subject design (N=1) capitalizes on variability within a given subject. Furthermore, since each subject serves as his or her own control, important variables such as age, sex, amount of behavioral deficit, etc. which are serious threats to internal validity are controlled.

While questions can be raised about the generalizability
of results obtained from single case studies it would seem logical, at this time, to insure adequate internal validity in the design. Even if one advocates the use of comparison designs because of the chance of greater external validity, Edgington (1967) has put forth an interesting argument:

The belief that you cannot statistically generalize to a population of individuals on the basis of measurements from only one subject is certainly correct. However, it is also correct that you cannot statistically generalize to a population from which you have not taken a sample (random), and this fact rules out statistical generalization to a population (at least a population of some importance) for initially all psychological experiments, those with large samples or small. (Yates, p. 382)

**Design**

The design employed in this study was a series of sixteen single subject studies (N=1). All subjects completed four training modules in self-observation and identification skills. The subjects were then tested to determine their mastery of these skills. Following this a random assignment was made as to whether a subject would receive media training (experimental) or would get no further training (control). Each group was comprised of eight subjects.

The primary evaluation in this study was conducted on the effect of media training in demonstrated behavior change between those who received video feedback and those who didn't. Comparisons were also made as to frequency of
occurrence, predictability of direction of change, between those who received training and those who did not.

**Research Questions**

The objective of this study was to determine whether elementary school age children: (1) could engage in self-observation and selection of behavior; and (2) if the techniques of microcounseling and media therapy (Ivey, 1971) could be used to modify these self-selected behaviors.

These hypotheses gave rise to the following research questions:

- Were subjects able to master the skills of behavioral observation and identification?
- Were subjects who received media training successful in modifying their behavior?
- Were their any differences between the group who received training and those who did not?

**Summary**

This study was an attempt to investigate the effectiveness of video feedback as a means of facilitating behavior change in elementary school children.

The sample consisted of sixteen elementary school children in the fifth and sixth grade. All subjects were volunteers and were screened to exclude students diagnosed as severe emotional problems.
Prior to media training, subjects participated in four instructional modules on behavior identification and self-observation.

Subjects were then videotaped during their normal classroom routine. After viewing the tape, each subject selected a behavior to be modified. Following this the subjects were randomly assigned into two groups; one group received media training and the other group received no further training. One week after the conclusion of the training, all subjects were again videotaped in their classroom.

Since this study is an evaluation of a new video training program, it uses direct measurement techniques derived from those used in operant conditioning. Operant measurement provides a direct measure of the behavior to be modified.

Frequency counts were taken of the selected behavior from the original videotape and compared with the frequency of behavior from the final tape to assess any behavior change and in what direction.

The design employed in this study was a series of sixteen case studies (N=1). Each subject's behavior being compared both before and after systematic video feedback. The primary evaluation was concerned with the effect of media training on demonstrated behavior change.
CHAPTER IV
RESULTS AND DISCUSSION

This Chapter will present the finds of the study and assess their meanings and implications.

The first premise of this study was the elementary school children can engage in self-observation and selection of behavior. The subjects were asked, upon completion of four instructional modules on behavioral principles, to identify at least four recurring behaviors from a videotape. The videotape shown to the subjects had six preselected, role played behaviors that reoccurred throughout the tape (see Table 2 for list of behaviors).

All sixteen subjects (100%) were able to meet the minimum criteria of identifying four behaviors. Twelve of the sixteen or 75% of the subjects correctly identified five of the six behaviors, and two subjects were able to identify all the behaviors shown on the videotape (Figure 1).

Closer analysis of these results shows that of the nine female subjects 100% met the minimum criteria; six (66.6%) exceeded the minimum by identifying five behaviors; and one or 11.1% of female subjects was able to identify all of the six behaviors on the videotape (Figure 2).
There were seven male subjects in this study. All seven (100%) were able to meet the minimum criteria. Six
TABLE 2
SUMMARY OF RESPONSES TO ROLE PLAYED BEHAVIORS

<table>
<thead>
<tr>
<th>Role Played Behavior</th>
<th># of Boys Noting Behavior</th>
<th># of Girls</th>
<th>Total of Subjects</th>
<th>% of Boys</th>
<th>% of Girls</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hand to Head*</td>
<td>7</td>
<td>9</td>
<td>16</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Pencil to Mouth*</td>
<td>7</td>
<td>9</td>
<td>16</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Crossing/Uncrossing Legs</td>
<td>4</td>
<td>7</td>
<td>11</td>
<td>57</td>
<td>78</td>
<td>69</td>
</tr>
<tr>
<td>Dropping Pencil+</td>
<td>3</td>
<td>3</td>
<td>6</td>
<td>43</td>
<td>33</td>
<td>37.5</td>
</tr>
<tr>
<td>Interrupting+</td>
<td>6</td>
<td>4</td>
<td>10</td>
<td>86</td>
<td>44</td>
<td>62.5</td>
</tr>
<tr>
<td>Moving Hands While Talking+</td>
<td>5</td>
<td>8</td>
<td>13</td>
<td>71</td>
<td>89</td>
<td>81</td>
</tr>
</tbody>
</table>

* These behaviors were roleplayed by one individual shown alone on the videotape.

+ These behaviors were roleplayed by two individuals shown conversing together.
(85.7%) correctly identified five behaviors (one over the minimum), and one subject (14.3%) was able to correctly identify all demonstrated behaviors (Figure 3).

Figure 3--Percentage of Correct Male Responses

<table>
<thead>
<tr>
<th>% of Males Correctly Identifying Role Played Behavior</th>
<th>4 Behaviors</th>
<th>5 Behaviors</th>
<th>6 Behaviors</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>90</td>
<td>80</td>
<td>70</td>
</tr>
<tr>
<td>90</td>
<td>80</td>
<td>70</td>
<td>60</td>
</tr>
<tr>
<td>80</td>
<td>70</td>
<td>60</td>
<td>50</td>
</tr>
<tr>
<td>70</td>
<td>60</td>
<td>50</td>
<td>40</td>
</tr>
<tr>
<td>60</td>
<td>50</td>
<td>40</td>
<td>30</td>
</tr>
<tr>
<td>50</td>
<td>40</td>
<td>30</td>
<td>20</td>
</tr>
<tr>
<td>40</td>
<td>30</td>
<td>20</td>
<td>10</td>
</tr>
<tr>
<td>30</td>
<td>20</td>
<td>10</td>
<td>0</td>
</tr>
</tbody>
</table>

This data tends to offer strong evidence that elementary school children are capable of learning the skill of behavior identification. Table 2 points to the fact that these subjects were especially proficient at observing and identifying behavior when they were observing only one person at any given time. Every subject was able to focus on the individual and correctly identify each recurring behavior that was demonstrated. When the videotape presented two individuals engaged in an ongoing conversation, there seemed to be greater difficulty in focusing on discrete behavior.

Following the instructional modules, the subjects were
filmed in their classroom (see Table 1, Chapter III). Each subject then viewed himself on the videotape and selected a behavior he/she wished to modify. It was necessary to this study to determine whether or not the behaviors selected by the subjects were exhibited in their naturalistic setting, that is, in their everyday school activities. The investigator wanted to eliminate the selection of a behavior by the subject which occurred only with the videotape or was selected by a desire on the subject's part to please the investigator, and was temporary or insignificant. In order to do this, trained University students made observations in the subjects' classroom. These observers watched subject's behavior for five-minute durations without recording, the recorded frequency or duration of specified behavior for five minutes. This alternating observation and recording was done for 90 minutes (Table 3). It should be noted that all direct observation of the subject was done by trained observers. All frequency counts from the videotape recordings were made by the investigator.

It was determined that all behaviors chosen for modification by the subjects were indeed behaviors they engaged in in their general school activities. These classroom observations further support the contention that the subjects not only were able to observe themselves and make behavioral observations, but that their choices were not casual or foolish; that is, they chose to modify behaviors
TABLE 3
SELF-SELECTED BEHAVIORS

<table>
<thead>
<tr>
<th>Behavior Selected</th>
<th>Classroom Observation*</th>
</tr>
</thead>
<tbody>
<tr>
<td>$S_1$--Not attending to the teacher</td>
<td>5 observed times Total of 25 minutes</td>
</tr>
<tr>
<td>$S_2$--Constant use of phrase &quot;you know&quot;</td>
<td>Total of 18 times</td>
</tr>
<tr>
<td>$S_3$--Chewing on pencil or pen</td>
<td>6 observed times Total of 16 minutes</td>
</tr>
<tr>
<td>$S_4$--Interrupting</td>
<td>Total of 7 times</td>
</tr>
<tr>
<td>$S_5$--Head down in hands looking down at desk</td>
<td>6 observed times Total of 30 minutes</td>
</tr>
<tr>
<td>$S_6$--Elbows on desk and head resting on hands</td>
<td>5 observed times Total of 21 minutes</td>
</tr>
<tr>
<td>$S_7$--Fingers in mouth</td>
<td>6 observed times Total of 12 minutes</td>
</tr>
<tr>
<td>$S_8$--Tilting chair off ground</td>
<td>7 observed times Total of 35 minutes</td>
</tr>
<tr>
<td>$S_9$--Playing with hair</td>
<td>6 observed times Total of 18 minutes</td>
</tr>
<tr>
<td>$S_{10}$--Talking too softly to be heard</td>
<td>Only spoke once in 90 minutes. Had to repeat.</td>
</tr>
</tbody>
</table>

* Classroom observation consisted of alternately observing for five minutes and recording for five minutes.
TABLE 3--Continued

<table>
<thead>
<tr>
<th>Behavior Selected</th>
<th>Classroom Observation*</th>
</tr>
</thead>
<tbody>
<tr>
<td>$S_{11}$--Wiggling in seat</td>
<td>9 observed times</td>
</tr>
<tr>
<td></td>
<td>Total of 45 minutes</td>
</tr>
<tr>
<td>$S_{12}$--Does not speak in</td>
<td>Did not speak during 90 minute</td>
</tr>
<tr>
<td>group discussion</td>
<td>observation</td>
</tr>
<tr>
<td>$S_{13}$--Curling ends of hair</td>
<td>7 observed times</td>
</tr>
<tr>
<td></td>
<td>Total of 14 minutes</td>
</tr>
<tr>
<td>$S_{14}$--Hands on face</td>
<td>5 observed times</td>
</tr>
<tr>
<td></td>
<td>Total of 18 minutes</td>
</tr>
<tr>
<td>$S_{15}$--Wiggling and shaking feet</td>
<td>6 observed times</td>
</tr>
<tr>
<td></td>
<td>Total of 30 minutes</td>
</tr>
<tr>
<td>$S_{16}$--Tearing at soles of sneakers</td>
<td>5 observed times</td>
</tr>
<tr>
<td></td>
<td>Total of 25 minutes</td>
</tr>
</tbody>
</table>

that they demonstrated in their everyday functioning.

Subjective interpretation of the behaviors chosen suggests that all subjects selected behaviors that could be judged as inappropriate behavior, i.e., not attending to the teacher, talking too softly, interrupting. While it was made explicit that subjects could choose to select a behavior they would like to get better at, or learn a new behavior, all subjects seemed to select those behaviors that adults, especially teachers and parents would want
them to change. This observation would seem to support Bandura's (1969) contention that children are acutely aware of the societal norms and their first choice in behavioral change is to conform to these norms. It may be expected that since significant adults (parents and teachers) are the primary reinforcers and models of children, that subjects of this age (5th and 6th grade) will attempt to modify their behavior to gain approval from these significant adults (Bandura, 1969; Bushell, et al., 1968; Peck, 1961).

A second observation of the investigator was that at the end of the instructional modules, all of the subjects were more observant of behavior in others. It was not uncommon for individual subjects to comment how often a teacher repeated a particular phrase or gesture, or subjects would frequently be overheard reminding each other about a particular behavior that might be annoying or uncalled for. Perhaps the best example of these new-found observation skills can be summed up by one of the subjects, who, upon entering the third module, exclaimed, "My Mother is always telling me not to fiddle around with my hair, but if she only knew how many times she did the same thing at dinner yesterday, she'd die!"

Premise 2: The techniques of microcounseling and media therapy could be used to modify self-selected behaviors.

All of the eight subjects selected for media training (St₁ through St₈) demonstrated that they could modify their
self-selected behavior in the direction they wished. Seven of the eight subjects (87.5%) in the training group completely eliminated or reduced their target behavior so that it was considered insignificant (less than one minute duration). The eighth subject in the training group did succeed in modifying her behavior in the predicted direction, but only reduced the frequency of the behavior by one-third (see Graph St3).

Each subject was videotaped in his classroom during a routine social studies lesson. The cameraman was instructed to keep four students on camera for a five-minute period and then move on to four others for the next five minutes and so on through the group. The final four subjects would be taped for five minutes and then another five minutes as the camera moved back through the group in reverse order, 5 minutes at a time. This would give each subject 10 minutes of video time. However, due to seating arrangements beyond the control of the study, four subjects received an unequal amount of time on the pre-training and post-training tapes. Three subjects (St2, St3, St6) appear one extra minute on the pre-training videotape. One subject (St6) appears one extra minute on the post-training tape.

St1 chose to modify the behavior of holding his head in his hands and looking down at the desk. On the pre-training videotape he engaged in this behavior for a full nine minutes. During the classroom observation he was seen
engaging in this behavior for thirty minutes. Following the media training and one week back in the classroom, this subject had reduced the frequency of his target behavior to thirty seconds on the post-training tape. The subject had ten minutes of tape time on both pre and post tapes.

St₂ chose as his target behavior resting his head in his hands with his elbows on the desk. The initial tape showed a behavioral duration of eight minutes. The classroom observation totaled twenty-one minutes of the target behavior. On the post-training tape this subject reduced his behavior to one ten-second duration. This subject has ten minutes video time on the pre-training tape and eleven minutes videotime on the post-training tape.
St₃ chose as a target behavior tilting her chair backward off of the floor. The pre-training tape showed a behavior duration of eight minutes. The classroom observation totaled thirty-five minutes of engaging in the target behavior. The post-training tape showed a total absence of the target behavior. This subject had ten minutes of tape time on both the pre and post tapes.

St₄ chose as the target behavior her habit of putting her fingers in her mouth. The pre-training tape showed that this behavior occurred on six distinct occasions. The
classroom observation also recorded six different recurrences of this behavior. The post-training tape showed a reduction of the behavior in the desired direction, but the behavior did recur four times on this tape. Since this behavior was judged to be discrete in the sense that it had an easily observable beginning and end, and was not continuous, its frequency of occurrence was measured rather than percent of time it occurred. The subject had 10 minutes of tape time on both the pre and post-training tapes.

<table>
<thead>
<tr>
<th>Frequency of Behavior per Minute of Tape (In Tenths of a Minute)</th>
<th>.8</th>
<th>.7</th>
<th>.6</th>
<th>.5</th>
<th>.4</th>
<th>.3</th>
<th>.2</th>
<th>.1</th>
<th>.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Training Group Case Study 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.6/min.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tape 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tape 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.4/min.</td>
</tr>
</tbody>
</table>

St₅ chose as her target behavior the habit of curling the ends of her hair. The pre-training tape showed this to be a continuous type of behavior and it was counted in duration of minutes. The target behavior was recorded for a total of six minutes on the pre-training tape. The classroom observation totaled fourteen minutes duration. A viewing of the post-training tape showed that the target behavior was eliminated.
St₆ selected the target behavior of keeping his hands on his face. The pre-training tape showed that he engaged in this behavior for a total of five minutes. Classroom observation revealed a time duration of eighteen minutes of the behavior. The post-test training showed that this subject had reduced his behavior to only one brief occurrence of 20 seconds. Since this subject had 10 minutes of tape time on the pre-training tape and eleven minutes of tape time on the post-training tape, the results are shown in percent of time behavior occurred on the tapes.
St_{7} selected as the target behavior his wiggling and shaking of his feet as he sat in his chair. The pre-training tape showed he engaged in this behavior for eight minutes. The classroom observation recorded a total of thirty minutes of demonstrating this behavior. The duration of the target behavior on the post-training tape was reduced to a duration of 50 seconds. This subject had ten minutes of tape time on both the pre and post-training tapes.

St_{8} chose the behavior of picking and tearing at the soles of his sneakers. A habit which had cost his parents the price of new sneakers about once a month. The pre-training tape demonstrated that he engaged in this behavior for seven minutes. Classroom observation revealed that the subject showed this behavior for a total of twenty-five minutes. However, the post-test tape showed that this subject had eliminated his target behavior. Tape time was ten minutes for both the pre and post-tapes.
While there was no true control group, one-half of the original sixteen subjects were randomly assigned to a comparison group. The comparison group made selections of behavior to be modified but received no media training. This was done to determine if the new awareness gained in the instructional modules would be of equal value to the media training in achieving behavior change.

The results offer evidence that those who comprised the comparison group (Sc₁ through Sc₈) were not able to utilize their knowledge of behavior change principles to develop and maintain modifications of their self-selected behavior.

**Individual Comparisons of Comparison Group Subjects**

Sc₁ chose as a target behavior not attending to the teacher. The initial tape (tape 1) revealed that six minutes were spent in non-attending behavior. Classroom observation showed a total of 25 minutes not attending. Observation
from the final taping (tape 2) showed five minutes of the
target behavior. The subject had 10 minutes of tape time
on each tape.

% of Time
Behavior Occurs
on Tape

Comparison Group
Case Study 1

Tape 1  Tape 2

Sc_2 chose for modification the constant use of the
phrase "you know." Tape revealed a frequency of eight
times the behavior was demonstrated. Classroom observation
recorded a frequency of eighteen uses of the phrase. Tape
2 observations counted a frequency of eight repetitions of
the behavior. This subject had eleven minutes of tape time
on tape 1 and 10 minutes of time on tape 2. The adjusted
figures are shown in frequency per minute of tape time.

Frequency Per
Minute of Tape
in Tenths of a
Minute

Comparison
Group
Case Study 2

Tape 1  Tape 2
Sc₃ selected the behavior of chewing on his pencil or pen. The initial tape showed this behavior occurred for 7 minutes. Classroom observation recorded sixteen minutes of this behavior. Tape 2 observation showed that the subject was exhibiting this behavior for a total of five minutes. There were ten minutes of tape time on tape 1 and tape 2.

<table>
<thead>
<tr>
<th>% of Time</th>
<th>Comparison Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Behavior Occurred</td>
<td>Case Study 3</td>
</tr>
<tr>
<td>on Tape</td>
<td></td>
</tr>
<tr>
<td>Tape 1</td>
<td>70%</td>
</tr>
<tr>
<td>Tape 2</td>
<td>50%</td>
</tr>
</tbody>
</table>

Sc₄ selected interrupting others as the behavior to be modified. Tape 1 showed a total of four interruptions. The classroom observation recorded seven interruptions. The final videotape showed a decrease to three interruptions. Tape time was ten minutes on both tape 1 and 2.

<table>
<thead>
<tr>
<th>Frequency of Behavior Per Minute of Tape Time (In Tenths of a Minute)</th>
<th>Comparison Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tape 1</td>
<td>.9</td>
</tr>
<tr>
<td>.8</td>
<td></td>
</tr>
<tr>
<td>.7</td>
<td></td>
</tr>
<tr>
<td>.6</td>
<td></td>
</tr>
<tr>
<td>.5</td>
<td></td>
</tr>
<tr>
<td>.4</td>
<td>.4/Min</td>
</tr>
<tr>
<td>.3</td>
<td>.3/Min</td>
</tr>
<tr>
<td>Tape 2</td>
<td></td>
</tr>
<tr>
<td>.2</td>
<td></td>
</tr>
<tr>
<td>.1</td>
<td></td>
</tr>
<tr>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>
Sc₅ selected the behavior of playing with her hair. The initial tape showed this behavior occurred for a duration of six minutes. The classroom observation recorded eighteen minutes of the target behavior. Tape 2 showed the behavior occurred a total of five minutes. Subject had ten minutes of tape time on both tape 1 and tape 2.

<table>
<thead>
<tr>
<th>% of Time Behavior Occurs on Tape</th>
<th>100</th>
<th>90</th>
<th>80</th>
<th>70</th>
<th>60</th>
<th>50</th>
<th>40</th>
<th>30</th>
<th>20</th>
<th>10</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comparison Group Case Study 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>60%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tape 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>50%</td>
</tr>
<tr>
<td>Tape 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sc₆ chose speaking too softly as a target behavior. Tape 1 revealed that the subject spoke twice and was asked to repeat both times. The classroom observation recorded only one instance of speaking by subject. The second tape had one instance of speaking and it too had to be repeated. This subject had eleven minutes on tape 1 and 10 minutes on tape 2.
Sc7 chose the behavior of wiggling in the chair. Tape 1 showed a behavior duration of ten minutes. Classroom observation found the subject engaging in this behavior for forty-five minutes. The final videotape found the behavior occurring for a ten-minute duration. Subject had 10 minutes of tape time on tape 1 and tape 2.

Sc8 selected for change the behavior of not speaking in group discussion. The initial tape found this subject had only one response and that occurred when he was called upon. The classroom observation recorded no responses by the subject. The final tape showed that this subject
responded one time when called upon. Subject had 10 minutes of tape time on tape 1 and tape 2.

<table>
<thead>
<tr>
<th>Frequency of Behavior Per Minute of Tape (In Tenths of a Minute)</th>
<th>.9</th>
<th>.8</th>
<th>.7</th>
<th>.6</th>
<th>.5</th>
<th>.4</th>
<th>.3</th>
<th>.2</th>
<th>.1</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comparison Group Case Study 8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The above data give sufficient evidence to support the assumption that the training group was not only successful in modifying their self-selected behavior, but that it was far superior than the comparison group.

**Limitations**

It is important to note that there are some limitations to this study as it is reported. The behavioral change training and the measurement of any behavior change in the classroom took place in a twenty-five day period (March 10, 1972 to March 26, 1972). While the primary concern of the investigation was aimed at determining the feasibility of media training with elementary school children, this study was not able to determine or measure any long term behavior change in its subjects.

A second limitation is the fact that no contact was
maintained with those subjects who comprised the comparison group. These subjects were told to try to remember to work at modifying the behavior they had selected and returned to their regular activities. Had this project been more concerned with comparing media training with other techniques of behavior modification it would have been essential to provide some other technique, placebo, or Hawthorne type attention to those subjects not receiving media training.

A third factor, which while not necessarily a limitation to this study or its design, is the fact that no effort was made to provide ongoing reinforcement in the subject's classroom or home situation. Any behavior change will be more successful and of greater duration when it is reinforced in a consistent and reoccurring manner (Bandura, 1969; Ullmann & Krasner, 1963). Had teachers and parents been made aware of the child's target behavior and instructed in the proper use of positive reinforcement, there is little doubt that greater and more permanent behavior change could result.

Implications

Three major implications arise from this study: First, counselors and teachers can use these techniques to help children solve problems; second, self-selection of behavior can provide opportunities for the setting up of training
laboratories to teach many different skills in human interaction; and finally, this model can begin to allow children to determine what happens to them in their everyday environments, rather than reacting to the cues and reinforcement given by others, they could provide their own satisfaction by acting on the environment.

It was determined quite early in this study that children are capable of learning the skills of behavior identification and modification. Teachers and counselors might help children solve large and seemingly complex problems by breaking them down into simple behaviors that can be worked on one by one. This allows the child to be successful in his change efforts, offers him evidence of his ability to change, and provides reinforcement for him to continue or go on to other changes in his behavior.

Too often, schools only provide help for a child when he or she manifests symptoms of extreme psychological difficulty. What is referred to as remedial help. The model proposed in this study offers a bridge from remediation to positive action, developmental methods. It would be possible to establish training areas in positive human interaction. Models of other children exhibiting desired skills in interpersonal behavior could be developed on videotape, film, or audiotape. Students could then self-select behaviors or skills they wished to learn or improve. Examples could include the behaviors of making friends,
study behavior, or how to talk with adults. Aldridge (1971), for example, found that junior high school students were able to learn simple counseling skills through a similar microcounseling model. Students could enter such a laboratory on their own and develop their own approaches to behavior change.

Finally, what comes from this study is an opportunity to develop individuals who have the ability to act on their environment rather than react to it. This person possesses the ability to alter his behavior so that he generates reinforcement from others by initially displaying appropriate behavior. This individual has been called an intentional individual. The intentional individual as defined by Ivey (1969) is "a person who can generate alternative behaviors in a given situation and come at the problem from different vantage points as he receives environmental feedback."
CHAPTER V
SUMMARY*

Traditionally, behavioral approaches in elementary school counseling have been based on the assumption that children are to be directed in their change efforts by others. This project was concerned with discovering whether children can learn the language of behavior modification, identify their own behaviors, and determine the type of behavior change they want to happen. Instead of teacher or counselor direction, can children assume more responsibility in determining their own futures?

The behavioral model offers an important alternative in psychological education. By focusing on discrete behavior, the client and the counselor have several advantages. First, counselors can demonstrate more quickly that they can help, that something can be done and done soon. Those who begin to see change occur are reinforced in efforts to continue the change process. Perhaps most important, the behavior modifier helps people view themselves not as a "sick" or deficient, but as individuals who have learned some behaviors that have disadvantages, who see that they can

*The Summary Chapter was developed as a journal article (Child Determined Behavior Change..An Adaptation of the Microcounseling and Media Therapy Paradigms) and appears in the May 1973 issue of The American Personnel and Guidance Journal.
change, and begin to feel more powerful and in control of their own lives.

However, there are some serious criticisms of behavioral counseling. The two most prominent being: (1) behavior modification (especially with children) is a conforming and constricting process; and (2) the behavior to be changed is most often determined by someone other than the individual. Simply put, adults are always deciding how kids should behave.

The conceptual framework for self-directed behavior change came from Ivey's (in press) "media therapy" work with hospitalized psychiatric patients. In media therapy patients are videotaped for short periods of time, self-select observable behaviors which may be changed, and then with the consultant-trainer develop individualized plans for systematic behavior change. Based on training in communication skills as outlined in microcounseling (Ivey, 1971), media therapy has proven to be a useful behavioral adjunct to the therapeutic process.

The project was an attempt to determine if elementary school children could learn similar skills of self-observation and then select and modify behavior of their own choice. Here, however, the goal is educational rather than therapeutic. The primary tool for change was the use of immediate video feedback as used in media therapy and microcounseling. The objective was not to change
maladjustive or inappropriate behavior, but rather to allow children to change, improve, or add new behaviors as they saw fit. The child was to select the behavior and work with the counselor in devising strategies for change.

**Child-Determined Behavior Change**

Sixteen fifth grade students were selected from a single classroom from twenty-four volunteers. These students were given four one-half hour instructional modules in observation and identification of behavior. The modules (which themselves may be viewed as one type of psychological education) were designed to familiarize the student with the idea of verbal and non-verbal behavior, what a discrete behavior is, and how to observe and identify behavior in themselves and others.

**Module #1** The students were introduced to the counselor and were told that they were going to become "behavioral scientists." In this first module the children were introduced to the concepts of discrete behavior, recurring behavior, verbal and non-verbal behavior. Examples were given and the children role-played the various behaviors.

**Module #2** The children were asked to summarize

*The detailed learning modules used with the children are available from the author.*
Module #1 to insure their ability to work with basic concepts of behavior modification. The concept of frequency counts in its most simple form was introduced. The students were then given an assignment of observing one single behavior at school or at home and counting its frequency over a short period of time.

Module #3 All of the homework assignments were reviewed and discussed. The students were then shown a videotape of Module #1. After an initial viewing, a 10-minute segment was replayed and each student was asked to identify and count a single behavior he/she was demonstrating.

Module #4 All students were shown a specially prepared, role-played tape, with six distinct recurring behaviors. The students were asked to identify at least four specific behaviors from the tape.

After participating in the instructional modules, the students were videotaped during their normal classroom activities for 30 minutes. The students then met individually with the counselor, were shown the videotape and asked to select any behavior they would like to change, or to choose a behavior not exhibited which they would like to learn. Some of the students' choices included ... "I'm always looking at my feet when people talk to me" ... "I wish I could stop biting my fingernails" ... "Look how still Mary sits in her seat, I'm always rocking, rocking,
rocking, I want to sit quietly."

Once specific behavior to be modified or learned was determined by the child, an individual learning plan was initiated. A single student and the counselor met for one-half hour each day for one week to work at changing the behavior. All of the sessions were videotaped. During each session, five to ten-minute segments of the tape were replayed so that the student could monitor the behavior. An example of the use of video feedback is a student who worked at sitting quietly in her seat. At first she sat in a rigid fashion and was uncomfortable. After seeing the video of herself she realized that her behavior was unnatural and "funny looking." By experimenting, and role-playing she was soon able to see herself on tape and decide "that's the way I want to sit in my chair." This is what she worked at perfecting. Other students selected behaviors such as "time on task" or working with nervous habits such as fingernail biting.

One week after the training sessions the student was again videotaped in the classroom. This tape provided a comparison with the original tape to determine if the behavior had changed in the actual classroom situation.

Does It Work?

An important first question which counselors need to know is whether or not children can learn the concepts of
behavior modification. At the conclusion of the initial instructional modules, a role-played videotape was shown of two students first engaged in studying and then in conversation. It was found that all sixteen students could meet the minimum criteria of selecting and recording at least four of the role-played behaviors. The evidence seems clear that children can learn basic concepts of behavior modification.

To determine whether the training in videotape feedback was useful in actually changing classroom behavior, the children were divided into two groups after they had identified the behavior they would like to change. One group received media training as outlined above. The others were encouraged to change their behavior now that they had learned to identify it. Videotapes were taken and it was found that the children who had received the video training changed their behavior and exhibited it in the classroom. All of the students who had media training demonstrated that they could change their self-selected behavior in the direction they wished. Despite their knowledge of behavioral change principles, none of the children in the comparison group were able to utilize their knowledge to develop desired behavior changes.

A review of the behaviors chosen revealed that all the students chose to change a behavior they saw as "wrong" or "bad." This suggests that, at least initially, children
notice those behaviors that others have suggested need correction. This seems so despite the counselor's emphasis on the children choosing their own goals. However, it may be anticipated that children could at a later point start generating and practicing "positive action" behaviors as they become more secure in their ability to control their own actions.

**Implications for Counselors**

It was determined quite early in this project that children are capable of learning the basic skills of behavior identification and behavior modification. Counselors might well help children solve seemingly complex problems by breaking them down into simple behaviors that can be worked on one by one. Further, self-selection of behaviors provides the child with an opportunity to determine what will happen.

While children often selected negative behaviors to change, it seems important to realize that this may also represent a very real desire to win approval and that the more systematic methods of this study provide a way through which a child can "earn reinforcers." However, a bridge between the remedial aspects of behavioral approaches and the positive action methods of psychological education may be called for. Too often psychological education settles for ill-defined somewhat mystical goals. It would be
possible to establish behavioral training labs in positive skills of human interaction. Models of children (or adults, for that matter) exhibiting skilled human interaction could be developed on videotape, film or audio cassettes. Students could then take part in this behaviorally oriented curriculum. Examples could include listening and counseling skills, study skills, how to talk with a friend, or sharing one's emotions and feelings with parents. Aldridge (1971), for example, found that junior high students could learn basic counseling skills, through the microcounseling paradigm. Bizer (1972) has used basic attending skills as part of a parent training program. Students could enter such a laboratory on their own volition and with consultation from a counselor develop their own unique approaches to behavior change. The counselor in such a setting becomes a teacher of very important subject matter .... the self.

The parallels between this effort and work with psychiatric patients is fascinating. The problems and concerns of the patient and the normal child are very distant. Yet when defined from a behavioral perspective, many important structural similarities may be observed. Both groups seem to enjoy and profit from working on discrete observable behaviors. Both groups used similar learning frameworks and vocabularies, and all gained from observation of their behavior on videotape.
The concept of self-selected behavioral change seems basic if psychological education is to include behavioral methods within its scope. An assumption of psychological education is that the learners are to control their own behavior. From this work and the original media therapy study, it may be anticipated that behavioral methods will prove powerful aspects of the psychological education movement.
Appendix I
Letter to Parents for Student Volunteers
and
Parental Permission Form
March 14, 1972

Dear Parent:

Your son or daughter has volunteered to take part in a research study focusing on how children change their own behavior. This study will involve approximately 2 hours over a two week period and will be scheduled so that he or she will meet with other members of the quad. This will insure a minimum interruption of class time.

Some videotapes will be made in cooperation with the school counselors. These tapes will be used for analysis of data only, and in accordance with school policy be strictly confidential.

This study is being done as a doctoral research project under the direction of Dr. Allen E. Ivey, School of Education. Should you have any questions, as to this study, feel free to call Dr. Ivey at 545-0915.

In order to participate in this study, your son or daughter has been informed that the parent or guardian must sign the attached permission form and return it to the principal's office.

Sincerely yours,

Robert Goshko, M.Ed.

RG:rf
TO: PRINCIPAL'S OFFICE

WILDWOOD ELEMENTARY SCHOOL

Permission is given for my son or daughter ____________________________

Insert name here
to participate in the study as described in Mr. Goshko's letter of March 14, 1972

__________________________  ____________________________
Date                           Signature of Parent or Guardian

TO: PRINCIPAL'S OFFICE

WILDWOOD ELEMENTARY SCHOOL

Permission is given for my son or daughter ____________________________

Insert name here
to participate in the study as described in Mr. Goshko's letter of March 14, 1972

__________________________  ____________________________
Date                           Signature of Parent or Guardian
Appendix II

Samples of Subject Responses to

Role Played Behaviors
<table>
<thead>
<tr>
<th>Behavior</th>
<th>0°</th>
<th>20°</th>
<th>40°</th>
<th>60°</th>
<th>80°</th>
<th>100°</th>
<th>120°</th>
<th>140°</th>
<th>160°</th>
<th>180°</th>
<th>200°</th>
<th>220°</th>
<th>240°</th>
<th>260°</th>
<th>280°</th>
<th>300°</th>
<th>320°</th>
<th>340°</th>
<th>360°</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td><strong>✓</strong></td>
<td></td>
<td></td>
<td></td>
<td><strong>✓</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td><strong>✓</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Notes:**
### Frequency Count

<table>
<thead>
<tr>
<th>Behavior</th>
<th>0</th>
<th>20</th>
<th>40</th>
<th>60</th>
<th>80</th>
<th>100</th>
<th>120</th>
<th>140</th>
<th>160</th>
<th>180</th>
<th>200</th>
<th>220</th>
<th>240</th>
<th>260</th>
<th>280</th>
<th>300</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Peer Play</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>2. Talking to Self</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>3. Intermittent</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>4. Talk to Teacher</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>5. Come to Around</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

**Time:**

| 0" | 20" | 40" | 60" | 80" | 100" | 120" | 140" | 160" | 180" | 200" | 220" | 240" | 260" | 280" | 300" |
|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|
| ✓   | ✓   | ✓   | ✓   | ✓   | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    |

**Notes:**
<table>
<thead>
<tr>
<th>Behavior</th>
<th>0</th>
<th>10</th>
<th>20</th>
<th>30</th>
<th>40</th>
<th>50</th>
<th>60</th>
<th>70</th>
<th>80</th>
<th>90</th>
<th>100</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Putting hands on head</td>
<td>✔</td>
<td></td>
<td>✔</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Putting pencil by mouth</td>
<td>✔</td>
<td></td>
<td>✔</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Changing legs position</td>
<td></td>
<td>✔</td>
<td>✔</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Talking with hands</td>
<td></td>
<td>✔</td>
<td>✔</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Questions</td>
<td></td>
<td></td>
<td>✔</td>
<td>✔</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td></td>
<td></td>
<td>✔</td>
<td>✔</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Time:**
- 0
- 10
- 20
- 30
- 40
- 50
- 60
- 70
- 80
- 90
- 100
- 110
- 120
- 130
- 140
- 150

**Notes:**
<table>
<thead>
<tr>
<th>Behavior</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Rubbing eyes</td>
<td>✓</td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Pat red shins</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Tapping with hands</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. ??</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Tapping</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>6.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Notes:**

**Time:**

0 20 40 60 80 100 120 140 160 180 200 220 240 260 280 300 320 340 360 380 400

---
<table>
<thead>
<tr>
<th>Behavior</th>
<th>0</th>
<th>20</th>
<th>40</th>
<th>60</th>
<th>80</th>
<th>100</th>
<th>120</th>
<th>140</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Putting pencil in pouch</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Talking</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
</tbody>
</table>

Time: 0:00:10 20:40 60:80 100:120 140:160 180:210 240:270

Notes:
<table>
<thead>
<tr>
<th>Behavior</th>
<th>Time:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0&quot;</td>
</tr>
<tr>
<td>1.</td>
<td></td>
</tr>
<tr>
<td>2. lead</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td></td>
</tr>
</tbody>
</table>

Notes:
BIBLIOGRAPHY


Haase, R. and DiMattia, D. The application of the micro-counseling paradigm to the training of support personnel in counseling. Counselor Education and Supervision, 1970, 10, 16-22.


Kagen, N. Personal communication to A. E. Ivey. East Lansing, Michigan State University, 1970.


Phillips, J., & Kanfer, F. The viability and vicissitudes of behavior therapy. International Psychiatry Clinics, 1969, 6, 75-133.

Quay, H. C., Werry, J. S., McQueen, M. & Sprague, R. L. Remediation of the conduct problem child in the special class setting. Exceptional Children, 1966, 32, 8, 509-515.


Rudman, S. Personal communication. University of Massachusetts, 1971.


