THE EFFECT OF THE HUMAN DEVELOPMENT PROGRAM ON THE ATTENDING BEHAVIOR OF GRADE ONE, TWO, AND THREE STUDENTS

by

HARRY CHRISTIAN HAUGLAND

B.Ed., University of Victoria, 1974

A THESIS SUBMITTED IN PARTIAL FULFILLMENT

OF THE REQUIREMENTS FOR THE DEGREE OF

MASTER OF ARTS

in the Faculty

of

Education

ACCEPTED
FACULTY OF GRADUATE STUDIES
[redacted]
DEAN
DATE 29 Ma 81

We accept this thesis as conforming
to the required standard

[redacted]
Ronald E. Tinney, Ph.D.

[redacted]
Rey A. Carr, Ph.D.

[redacted]
Barbara McIntyre, Ph.D.

UNIVERSITY OF VICTORIA

SEPTEMBER, 1980

Supervisor: Dr. Ronald E. Tinney

ABSTRACT

The purpose of the study was to investigate the effect that regularly experiencing the Human Development Program at a grade one, two, and three level would have on the attention to task of children identified as having difficulty in this area.

Fifty-four grade one, two, and three students enrolled in nine classrooms of a town in central British Columbia were the sample used for this study.

The sample was equally represented with boys and girls. At each grade level there was a sample group experiencing the Human Development Program at least three times a week, a group experiencing Traditional Sharing Time three times a week, and a group having no special treatment. The study was carried out over a ten week period.

The data was collected using a time-sampling observation method. Five observers were used to collect the study data. Observations were made on each member of the groups in both their regular classroom sessions and also during their treatment sessions. The data was collected in April, five weeks later in May, and again five weeks following in June.

The In-Class and Treatment pre data were analysed using an Analysis of Variance to determine if there were significant differences between the groups before the treatment was experienced. Significant differences were found to exist, therefore an Analysis of Covariance

under the conditions of the present study. The Analysis of Covariance was followed by a post hoc Scheffe Multiple Comparison of Group Means. The post hoc test employed the adjusted means calculated through the Analysis of Covariance. From this analysis, significant treatment effect was found to exist for the grade three Human Development Program group in comparison to the grade three group which received no special treatment (P.05). Also the grade three Human Development Program group demonstrated significantly greater treatment effect on observations taken during their circul sessions than did the grade three Traditional Sharing Time group during their sharing sessions.

From these results, it was concluded that the decision to employ the Human Development Program as a means of increasing task attention in school is supported by this research at the grade three level, but not at the other two levels.

Suggestions for possible future research were included in the study.

Examiners: [redacted]

Ronald E. Tinney, Ph.D.

[redacted]

Rey A. Carr, Ph.D.

[redacted]

Barbara McIntyre, Ph.D.

TABLE OF CONTENTS

PAGE

LIST OF TABLES

LIST OF FIGURES

ACKNOWLEDGEMENT

I would like to thank my chairman, Dr. Ron Tinney, and the other members of my committee, Dr. Rey Carr and Dr. Barbara McIntyre, for their support, direction, and encouragement during the writing of this thesis. Dr. Muir's assistance with the statistical analysis was found to be extremely valuable and I would like to thank him for this support. I would like to mention the very dedicated assistants who aided me in the data collection: Mary Barnett, Darlene Halfnights, Pat Sanderson and Barbara Stahl. Also a mention is necessary for the teachers, who so willingly had the observers in their classrooms. A very special thank you to my wife, Jean, for her continuous encouragement and willingness to assist in any way possible.

DEDICATION

To my family, for through their love and caring,

I have grown.

CHAPTER I

INTRODUCTION

Statement of the Problem

A number of children have difficulty learning from regular classroom instruction, despite at least average intelligence. Attention to task is a problem area with many of these children (Ross, 1976; Ross, 1977; Stott, 1971). Hewett (1968) suggests "the ability to focus on relevant cues in the environment is fundamental in all learning" (Hewett, 1968, p.49). If the child does not focus on the relevant cues in the school environment, opportunities to learn new information are lessened. Swift and Spivack (1969) suggest an urgency for methods to help children develop attending behavior, for non-attending is very prevalent among underachievers. Sixty-nine percent of the children studied, who were displaying underachievement on both standardized tests and teacher grades on their report cards, were "those who quickly lose attention or behave in a manner which leads the teacher to doubt whether they are attending." (Swift and Spivack, 1969, p.103)

The problem of building attention to task has been pursued in a variety of ways. Various drug therapies have been used with varying success (Douglas, 1972; Sroufe, Sonies, West, Wright, 1973; Sykes, Douglas, Weiss, 1971). With a number of situations behavior modification programs were the vehicle used in an attempt to bring greater attention to task (Drabman, Spitalnik, O'Leary, 1973; Patterson, Jones, Whittier, Wright, 1965). Researchers have also explored the use of cognitive methods to build attention with children. Here, methods of modelling and

verbal training were used (Egeland, 1974; Palkes, Stewart, Freedman, 1971; Ridberg, Parke, Hetherington, 1971; Thomas, 1974). On a limited basis psychophysiological methods have been employed to build attention to task. Here methods of relaxation and body function control were used (Martin and Hershey, 1976; Culbertson and Willie, 1978; Simpson and Nelson, 1974).

A method which has not been directly researched, to explore its contributions to the building of attention to task, is that of a guidance program as part of the school curriculum. This is the area to be explored by this study, with the Human Development Program (Bessell and Palomares, 1973) (Ball, 1974) as the chosen guidance program. The study will investigate the effect that experiencing the Human Development Program at least three times a week will have on children identified as having problems attending to task.

Background of the Problem

Background of Attending Behavior

As the word "attention" is used so extensively in everyday language, it needs to be defined specifically as to its psychological application.

Berlyne (1970) discussed two aspects of attention. The first aspect was that of how much attention the person is giving to the stimulus field, this being called the intensive aspect of attention. Under this aspect he identified arousal, attentiveness and degree of concentration.

Arousal referred to the degree of wakefulness, with this being

on a continuum from sleep to fully awake. Attentiveness was the readiness from moment to moment, of the individual to receive and process stimuli. The range of stimuli, from wide to narrow, to which the person gives attention, was the degree of concentration.

The second aspect of attention Berlyne (1970) discussed was the selective aspect. This referred to how the individual distributes his attention over the stimulus field. Berlyne (1970) discussed three processes of this aspect which were exploratory behavior, abstraction, and selective attention.

Exploratory behavior was referred to as the act of bringing sense organs into contact with the stimulus object, as when a person moves his head to see a bright light or object. Abstraction was the focusing on one dimension of a stimulus object to the exclusion of other equally accessible dimensions. The individual may focus on the loudness of a sound to the exclusion of its location, or pitch. Finally, selective attention was the ability to select from the many stimuli, which are bombarding all senses, the one or limited number of impulses to which to respond. The person, at any given time, has information being sent from the different senses and must be able to select and respond to those appropriate to the situation, screening out the rest.

Berlyne's discussion of the various aspects of attention brings to awareness the complexity of attending.

Background of the Human Development Program

The Human Development Program was first developed for preschool and kindergarten level children by two men, Uvaldo Palomares,

an educator, and Harold Bessell, a psychologist (Bessell, 1968). The program at this experimental stage was introduced to the Twin Trees Nursery School in La Jolla, California, in 1964.

Another name important to the Human Development Program is that of Geraldine Ball, a teacher. It has been her influence which forced Palomares and Bessell to face the practical issue of how to apply the theories of human development to a classroom setting on a consistent basis.

From these peoples' planning, field testing and writing, has come the Human Development Program curriculum, with Activity guides, levels pre-school through six, and also a kit of materials to meet the needs of students in grades seven through twelve. The guides consist of topics dealing with the three theory areas, that of awareness, mastery and social interaction. Awareness deals with developing the child's knowledge of his or her thoughts, feelings, and behaviors. Feelings of competence and "I can-ness" are fostered in the mastery section of the curriculum. The third area dealt with is social interaction, where the aim is to develop in the child an awareness of the effect people have on one another. The guides give equal time to each of these theory areas with the topics arranged in a systematic, sequential fashion.

The Human Development Program is organized in six week units, with one of the three areas being focused in each unit.

The curriculum is brought to the classroom in the form of a circle meeting of eight to thirteen children. The leader gives the topic to be discussed in the circle from the appropriate level guide. Each

child and the leader are then given an opportunity to share an experience which relates to the topic. The circle operates under a few specific rules which guard the safety of sharing, knowing what is shared will be accepted by the group, and listened to by the group. The rules of the circle are:

1. Everyone gets a turn.
2. No one has to take a turn.
3. No put downs.
4. Share time equally.
5. Everyone gets listened to.

It is the responsibility of the group leader to see the rules are enforced.

Group members develop appropriate behavior for the circle sessions through the understanding and enforcement of the rules under which the circle operates and also through modelling the leader's behavior. Leaders are encouraged to use social reinforcement when group members are observed behaving appropriately in the circle sessions, thus serving to strengthen appropriate behavior.

Each circle follows a specific format. First the children are drawn together and the circle topic is introduced. The children are then given an opportunity to discuss their experiences in relation to the topic. An optional addition to the circle is the remembering phase. Here group members are given an opportunity to remember what others have said. Each circle is culminated in a cognition phase. At this time group members are encouraged to share what they have learned from the session.

Ideally each child should be given an opportunity to participate

in a circle session each day. Often this is not possible, so as near to the ideal as possible is aimed for.

As a training experience, preliminary to the introduction of the Human Development Program into the classroom, a teacher may attend an introductory workshop. At this workshop the three theory areas are discussed with teachers being given an opportunity to experience circle sessions with fellow teachers. Here, the teachers are given an overview of the program, with some opportunity to develop their skills in leading circle sessions before they begin with their own class.

This, then, outlines briefly, the program to be used as the basis of the study.

Causes of Attentional Deficits and the Relevance of the Human Development Program

In a study investigating attention to task and work completion, as they are found to relate to a child's personal adjustment and educational setting, Werner and Simpson (1974) found the poorly adjusted child to perform unsatisfactorily in both a traditional and open plan classroom. The results found the child's level of adjustment to be the most salient variable affecting classroom attention and academic productivity.

The authors concluded with the following statement:

> Since more and more evidence is appearing to support the contention that the type of school environment is not the most significant variable that a child has to contend with in a school, and certainly not the variable that is going to determine success or failure, it is necessary to adopt more positive and efficient techniques for educating poorly adjusted children. (Werner and Simpson, Vol.68, p.57)

Also McWhirter (1977) states "a child who feels particularly bad about himself probably cannot reach his learning potential. He engages in behavior that is negative, inappropriate (to the task at hand), and self defeating." (McWhirter, 1977, p.98). A major thrust of the Human Development Program is building the child's feeling of self worth, which would be addressing the concerns of these authors.

Stott (1971) discusses a depressed motivational system as one of the sources of attentional failure. This depression could have come about because of health, nutritional, or family problems. In addition to family problems, social interaction problems could also be responsible for this depression. For the child suffering from interpersonal problems, the Human Development Program has one third of the program concerned with social interactions. Depending on the severity of the problem, the child may be able to work the problem through, freeing himself to attend to other matters.

Another type of attentional failure (Stott, 1971) on which the Human Development Program should have a positive effect, is the child who does not lack the ability to concentrate, but rather has not been trained to focus on relevant details. For this child, who is unable to attend because of insufficient training in listening and responding, the Human Development Program should provide this experience in a consistent fashion.

Upon close inspection of the objectives of the Human Development Program, further support is found for the assumption that the program might have the ability to build positive attending behavior.

Ball states:

> Specifically the program attempts to increase the children's abilities to:
> 1. Articulate their thoughts and feels verbally and to feel comfortable and natural while doing it,
> 2. Listen attentively to other people as a positive habit,
> 3. Reflect to people what they heard the other say, as a part of natural conversation, and to,
> 4. Increase their understanding of how thoughts, feelings and behaviors operate in people. (Ball, 1974, p.3).

Both goal two and three relate to the child's ability to attend. A child who "listens attentively" is displaying positive attending behavior. The child who is able to reflect what he has heard, displays the results of positive attending behavior. A child must have given close attention to a person, as he was speaking, to enable him to reflect what the speaker has said.

This suggests some of the specific ways the Human Development Program can have an effect on a child's attention.

Should the results of this study support the premise that regularly experiencing the Human Development Program aids the growth of attention to task, it would allow teachers another vehicle to choose from, in building this critical skill. Also, use of this program does not require additional personnel, as some programs do, other than some inservice training to build skills in using the program effectively. This makes the program more easily accessible to the teacher, for if outside personnel are not the major factor, the teacher controls commencement and termination of the program. It is also seen, in

reviewing the literature, that the Human Development Program has been found to have positive effects in both the affective and cognitive areas. Therefore, having a program which could build skills in attention and also lend support to the cognitive and affective growth of the child, would lead to an efficient use of time.

CHAPTER II

REVIEW OF THE LITERATURE

The literature reviewed for this study has been organized around two major themes; first, the various experimental methods used at this point to build attention to task and secondly, research related to the Human Development program.

Building Attention with the Use of Medication

Douglas (1972), in reviewing a number of studies concerning the effect of Methylphenidate (Ritalin) on the selective attention and impulse control of hyperactive children, found the drug had a positive effect on increasing attention and decreasing impulsivity. She states:

> It is argued that a core group of symptoms involving inability to sustain attention and to control impulsivity can account for most of the deficits found in the hyperactive group. It also appears that the stimulants exert their main effect on these deficits.
> (Douglas, 1972, p.259)

When two groups of hyperactive children were compared on a task requiring the detection of significant stimuli, Sykes et al, (1971) found the hyperactive group treated with Methylphenidate detected more significant stimuli, making less errors, than the group on a placebo.

Sroufe et al, (1973) also found encouraging results on the use of Methylphenidate with hyperactive children. The experimenters found a significantly greater heart rate deceleration in anticipation of stimulus with the treated group than that of the group on placebo. These results are interpreted as supporting an indication of an attentional set or readiness to attend.

Both Sykes et al, (1971) and Sroufe et al, (1973) carried out laboratory investigations, which did not address the medication effect on task attention in a school setting. It is therefore impossible to know from this research whether the positive effects would be evident in the classroom situation.

Gabrys (1977), when studying the effects of Methylphenidate on 6 through 12 year old learning disabled boys, found the boys receiving the drug therapy made significant gains on selected performance subtests of the Wechsler Intelligence Scale for Children, including those measures which are claimed to focus primarily on attentional behavior. The drug treatment was not found to have a significant effect on the verbal subtests of the same measure.

Barkley and Cunningham (1979) investigated the effects of Methylphenidate on hyperactive boys in a different type of setting than the other studies cited. Here the boys were monitored in a gym to find if the drug effected attention span and activity level in what they describe as a "highly stimulating, informal setting." Using six different measures of attention span and activity level, the children receiving Methylphenidate demonstrated significant gains in both areas.

Although the results find positive effects on attention with the use of Methylphenidate, the nature of the experimental situations must be kept in mind. Here, we see children performing to very specific tasks, most quite unlike tasks required in school. A further concern is the long term side effects of a drug such as this on the child.

Also, this therapy is aimed at the child exhibiting severe off

task behavior. It is not focusing on the child who is inattentive but not at a level to be classed as hyperactive. The present study is investigating a method to address the needs of this child who is inattentive but not hyperactive.

Building Attention Through Behavioral Methods

A considerable number of studies have been carried out in an attempt to increase attention to task employing behavioral means. The first two studies report programs for a single subject.

Patterson et al, (1965) describe a study with a retarded boy who was described as having a short attention span, and being hyperactive and aggressive toward younger children. A behavior program was used, with the child earning a reward for each ten second period when he had not displayed any inattentive behaviors. As the program progressed, the experimenters moved to a variable interval schedule. The results of the study found the child to increase in attending as compared to the control subject, who was in the child's class.

Another study involving an N=1 situation was Riegelman's (1974) experiment with a student repeating grade one. An oven timer was used to help build attention. The teacher set the oven timer for various intervals. When the time interval expired the child earned a reward if he was attending to the assigned task. As the experiment progressed, the time intervals between rewarding became progressively longer. This was designed as a fading procedure to maintain the child's increased performance while removing the timer. Results found the child's attention to task to increase from an average of forty eight percent of the time to

an average of eighty two percent of the time, at the close of the study.

Positive gains in attending behavior were found for the two subjects, but consideration needs to be given to the limited number of children each was assisting. Here, the programs were designed for a single student.

The next group of studies reviewed were designed to build attention in groups of students. In these situations the program was based outside the child's home classroom. Encouraging gains in attention were reported but these gains were not found to transfer to the home classroom when transfer results were reported.

Drabman et al, (1973) reported a university based study in which eight grade three boys learned to rate their own behavior. The program was introduced with the teacher reinforcing the students for "good behavior" and completion of work. The experimenters designed the program to progress from a standard teacher administered program, to the boys evaluating their behavior in comparison to the teacher's rating. Then, the boys evaluating entirely on their own. The control was a random fifteen minute segment of the hour period which was not reinforced. The results showed an eighty eight percent decrease in non attending behavior in comparison to the baseline. This increase was not found to transfer to the boys regular classroom.

In a resource room based token reinforcement program, O'Leary et al, (1973) used free time as a reward for sustaining attention to task. The results found the students to make significant gains within the resource room setting but found the gains not to transfer to the homeroom class.

Emmer and Woolfolk, (1972) and Woolfolk and Woolfolk, (1974) used a vigilance task embedded in the lesson to build task attention. In the vigilance task, consisting of such commands as "touch your nose," the child was reinforced if he/she responded appropriately. These treatment lessons were experienced outside the classroom. The programs created significant increases in task attention as measured by performance on the vigilance tasks and also through a time sampling measure. These increases in task attention were, again, not found to transfer to the regular classroom.

Woolfolk and Emmer (1972) added to their design teacher inservice training on behavior management, to find if this would facilitate the transfer of student gains to the classroom setting. This addition was not found to produce significant results. The length of this teacher inservice is questioned. The investigators gave a three hour inservice on behavior management. For teachers who lack background in this approach, three hours does not seem sufficient to expect teachers to internalize and begin to practice a new approach. Without substantial understanding and committment to this approach, significant transfer effects could not be expected.

Heiman, Fischer, Ross (1973), in their study, were working to build reading and attention skills. The reading task was structured in such a way that the child received token reinforcement for the correct answer. The child was required to attend to the task in order to respond correctly. In this way, the child was trained and reinforced simultaneously for attention and responding. The study found the attentional skills to increase, with reading gains being significant over a control

which used similar materials, but without the token reinforcement. This study, carried out separately from the school, did not investigate if the gains were evident in that setting.

As the major portion of a child's education is gained in a regular classroom situation, it is crucial that the gains made in attention, through programs outside the classroom, are evident when the child returns to his class.

Several studies report findings based on programs in the child's home classroom.

In one situation, Wagner and Guyer (1971) describe a program designed to increase attention to task with an entire school of ninety nine learning disabled children. Here, positive periods of attention to task were recorded by the teacher's or aides' initials on a record sheet kept by the child. When the child had sufficient initials he/she was able to choose a reward. Through this program the school found a significant increase in task attention with its students.

A further study based in a school for learning disabled children was carried out by West and Axelrod (1975). Here behavior management and developmental principles were used. The study consisted of three distinct phases. Each phase focused on building a specific skill, with phase one focusing on lessening disruptive behavior, phase two building attention and participation in the lesson and phase three improving the quality of the written assignments. Each phase had a specific reward system. The data was graphically represented but was not subjected to any form of statistical analysis. The graphs did show considerable gains in task attention. If the results had been statistically

analyzed, the authors and reader of the study would have been better able to judge how truly successful the approach had been. Using graphic representation only, this judgement is difficult, if not impossible, to make.

Haubrich and Shores (1976) used a combination of cubicles and reinforcement conditions to build both attending behavior and academic performance of five upper elementary-aged children, in a residential treatment centre for emotionally disturbed children. The use of cubicles were added to the study as a means of lowering distractions initially. It was found that the combined effect of the two conditions displayed significant results upon analysis. Results from the use of the cubicle, without the reinforcement condition, showed gains made only in attending behavior and not in academic performance.

In another study, the home and school worked co-operatively to build attention (McKenzie et al, 1968). The students enrolled in a learning disabilities class were placed on a program which used allowances as back up reinforcers. Along with the allowance program the teacher also used free time activities, withholding of recess and special privileges as further reinforcement. Through meetings, parents were instructed how they might pay specific amounts for the weekly grades given by the teacher. The program found significant gains in attention to arithmetic and reading over that of the baseline. Observations of attending behavior in class were discontinued after the designated study period, but the allowance for grades continued.

It was reported that for all but one subject, the gains in work completion evident at the close of the study continued for the remainder of the school year.

The attention of the school principal was the reinforcement successfully used in an experiment conducted by Darch and Thorpe (1977). Here the grade four students earned the attention of the principal by "team on-task performance". This group contingency was found to be a powerful tool. Individually earned attention was not found to produce as high a percentage of on-task behavior.

As these studies were based in the child's home classroom, the results are more likely to have an effect on his entire day in that classroom rather than only the treatment lesson. The study carried out by McKenzie et al, (1968) had the added strength of parent reinforcement for the school program. The parent participation helped to extend the effectiveness of this study.

The method employed in the Darch and Thorpe (1977) study using school principal's attention as a reward can be most readily applied to a regular classroom setting. The other studies were carried out with children based in special classes where smaller numbers and additional personnel were a factor.

In looking at the use of behavioral methods in building attention skills, several areas of concern may be noted.

A number of programs were based outside the regular classroom. The positive change in attention did not transfer to the class situation, but rather were only effective in the situation where the reinforcement

had taken place. The Human Development Program, in contrast, is employing a treatment based in the child's classroom with its administration by his/her teacher. This format increases the possibility of any positive effects generalizing to the classroom situation.

Information is also lacking on the long term effect of the changes which were noticed in classroom based studies. A question to be asked is: "Were the gains in task attention evident the following year?" This question of the continuity of treatment effects is a weakness of the present study also, for this area will not be addressed.

A number of the programs also used concrete rewards which add a burden of expense to the program.

Personnel for administering these programs presents another area of concern, for the majority of these studies had additional staff to aid in the administration of the program. In contrast, the Human Development Program is conducted by the child's classroom teacher with support, on occasion, from personnel trained in the area.

Building Attention using Cognitive Methods

Another area which has been researched in an attempt to discover methods of increasing children's attention to task, is that of cognitive approaches.

A number of the studies in this section refer to children as reflective or impulsive. The term reflective child refers to the child who delays before responding to a task, taking sufficient time to more carefully analyse the task. In contrast, the impulsive child responds immediately, not allowing himself time to fully analyse

the situation. As a result the impulsive child's error rate is much higher than that of the reflective child.

Egeland (1974) worked to teach impulsive children to delay before responding, and to impart strategies for effectively scanning a visual discrimination task. The study was organized on a three group approach; one received training to scan, another was required to delay ten to fifteen seconds before responding, and the third group received no training. The results of these approaches found positive changes in delaying response time, and also decreasing errors. On a two month follow up, the group taught the scanning techniques were found to hold the gains, compared to the delaying response time group, which did not. Egeland concluded:

> The results prove most encouraging and indicate that impulsive children can be trained to alter the way in which they process information and solve problems. (Egeland, 1974, p. 170)

In two other studies children were taught to talk to themselves as a means of maintaining attention.

Meichenbaum and Goodman (1971) trained children to talk to themselves about tasks.

> The impulsive children were taught to use their private speech for orienting, organizing, regulating, and self-rewarding functions. (Meichenbaum and Goodman, 1971, p. 124)

A group which experienced modelling and training in self instruction made the greatest gains in altering decision time and decreasing errors on a variety of psychometric tests. Self instruction or modelling were found not to be as effective as the combination.

Palkes et al, (1971) also used a self instruction method to build attention to a maze task. Hyperactive boys were divided into three groups. One group was taught to verbalize the self directed commands, while the second group was taught to silently read the commands. The groups were trained to use these commands before each task. The third group was given the same amount of time and materials with the experimenter, but the self directed commands were not taught.

> The results support the hypothesis that verbalization of self directed commands is a more effective technique for modifying the maze performance of hyperactive boys than silent reading the same commands.
> (Palkes et al, 1971, p. 341)

Kagan, Pearson and Welch (1966) experimented with the effect that perceived similarity between the child and his tutor would have on the child's performance on a visual discrimination and Picture Completion reasoning task. Specified training sessions were designed to build the idea of similarity between child and tutor. Questions were asked of the child with the tutor saying how he was the same. After the similarity had been built, the tutor suggested the child could work carefully and not make mistakes, as they are so similar this would be another way they could be the same. During the training sessions the child was also required to delay ten to fifteen seconds before responding to the task, working to discourage impulsive responding. This experiment found a marked effect on response delay, but minimal effect on the number of errors. The perceived high similarity to tutor had a facilitating effect on some of the female subjects, but not the males.

In two experiments, the viewing of filmed models were used to modify attention.

Ridberg, Parke, and Hetherington (1971) attempted to modify response latency and error number on a visual discrimination task with reflective and impulsive children. Subjects viewed films of models with opposite cognitive styles to themselves. The films included models demonstrating scanning, verbalization, or a combination of both techniques. The experimenters found the viewing of these films to have an effect on cognitive style for both the reflective and impulsive child. Significant gains were found for the impulsive subjects in response latency and lessening of errors. Reflective subjects were only partially affected by viewing the impulsive models. For both reflective and impulsive subjects, the experimenters found I.Q. to be a factor in modifiability. "The use of scanning or verbal cues alone were most salient for high I.Q. subjects, whereas a combined use of scanning and verbal cues by the model was most effective for low I.Q. subjects." (Ridberg, Parke, Hetherington, 1971, p. 369)

Thomas (1974) investigated the effect of videotape viewing to increase the attending behavior of disadvantaged grade one students. The experimental groups were shown videotapes of their peers attending to a variety of school tasks. A control group spent an equal time in a school learning centre involved in various activities. Observation of the children's classroom attention to task, on a pre and post treatment basis, revealed significant gains in the experimental groups. One experimental group was told by the experimenter that the film

they were about to see showed a student acting like their teacher would like them to act. This group made greater gains than the group that was not told this.

In reviewing these studies which used cognitive means to alter attention to task, a limitation became evident. In most of the studies, the area of task attention in class was not addressed. Changes were reported on a single test or measure, such as a visual discrimination task in an experimental setting, without exploring effects on the child's attention in any other setting.

Some of the factors which had positive influence on attention to task in these studies using cognitive means, are present in the Human Development Program.

The Human Development Program has modelling of positive attending behavior by the leader and to varying degrees by the members of the group. These group members will be maintaining visual contact with the speaker, giving eye contact to group members as they speak, restating accurately what group members have said, and sitting without disturbing others.

Shared characteristics with peers and leader is another area on which the Human Development Program may also have an effect. As the child's peers and leader share experiences related to various topics, the child may see how he/she is similar.

Building Attention Through Psychophysiological Methods

Further investigation has been carried out in an attempt to build the attending skills of children using psychophysiological methods.

Here various methods of body control and relaxation were taught, with their effects on attention being explored.

Martin and Hershey (1976) carried out an exploratory investigation with nine elementary aged children using biofeedback techniques. The study group was composed of five hyperactive, learning disabled children and four non-hyperactive learning disabled. A control group was not employed in this study. Pre and post observational measures were taken on the children. After ten-fifteen minute sessions over an eight week period, the subjects were found to have increased their attending behavior by 17.4%. Only slight increases were noted in classroom performance and self concept.

Culbertson and Willie (1978) worked with four reading disabled students to see the influence varying periods of relaxation training would have on attending behavior, reading achievement and teacher ratings of student behavior. Each of the four subjects experienced a different condition. Subject one received relaxation training for three weeks, subject two for two weeks, subject three for one week and subject four received no relaxation training. All subjects receiving relaxation training were found to decrease in off-task behavior from eleven to seventeen percent in a pre- and post-training comparison. Reading achievement showed a change for only one subject, with teacher ratings of student behavior showing some positive changes.

Concerns with this study are rooted in the small sample and the lack of statistical analysis performed on the data. As mentioned with an earlier study, the results, here again, are only graphically

represented, with the implications for the study drawn from this visual representation of the data. Also each of the four subjects experienced a varying period of the treatment, which means an N=1 situation.

A training of regulating breathing and attention was undertaken by Simpson and Nelson (1974). The authors relate breathing to attention in the following manner:

> The regulation of breathing during attention appears to be a part of an "attending" behavior pattern, involving few gross body movements, focused perceptual and cognitive processing systems, and altered physiological states. Maintenance of a regulated breathing pattern, therefore, should promote a behavior profile maximally effective in interpreting and processing information.
> (Simpson and Nelson, 1974, p. 17)

In this study a shaping procedure with token reinforcement was used to train breath control. A control group was given the same environmental conditions for training but a vigilance task was reinforced rather than breath control. The results found the experimental groups overall gains on breath control measures to be slightly higher than that of the control. The test employed to measure attention and vigilance on a pre and post basis was found to be inadequate, as the subjects gained near perfect scores on the pre measure not leaving latitude for gain.

Various psychophysiological methods have proved to show some gains in the area of attention. One concern with this method is its need for at least specialist guidance to initiate the program as few teachers have expertise in this area. The approach does seem to warrant further research to more clearly determine its effect.

The Human Development Program and other Guidance Programs

A number of programs designed to assist children in the area of affective development have been published in the past decade. Each program uses slightly different methods and materials, and comes from a slightly different philosophical base, but each is designed to assist in meeting the affective needs of the child.

There are three major programs being used in elementary schools - Toward Affective Development (Dupont, Gardner, and Brody, 1974), Human Development Program (Bessell, 1972), and Developing Understanding of Self and Others (Dinkmeyer, 1970). These programs offer a complete curriculum with considerable support suggestions for teacher implementation. Other materials are available, but either tend to consist of a series of activities with no sequence or the materials are designed for counsellor use, requiring considerable background in the area of affective education.

Various studies have been carried out to investigate the effectiveness of these programs in assisting children. Medway and Smith (1978) reviewed research on the four most widely used affective education programs. The four programs were Developing Understanding of Self and Others (DUSO), Human Development Program (HDP), Toward Affective Development (TAD), and Dimensions of Personality (Limbacher, 1973). Each program was evaluated in the following areas:

(a) structural characteristics (ie., the format, rationale, instructional sequence of the materials and the specified roles for the teacher and students);
(b) specific learning outcomes (ie., the stated program objectives and procedure for their evaluation); and

> (c) effectiveness in enhancing affective development as indicated by systematic research studies. (Medway and Smith, 1978, p.260)

The conclusions the authors came to as a result of their investigation were, in part, as follows:

> Although one cannot unequivocally state at this point in time that any one program is more effective in terms of facilitating affective development than others, three of the four programs do appear to have some value if used on a consistent and relatively long-term basis. These are HDP, DUSO and TAD. (Medway and Smith, 1978, p.268)

The Human Development Program has also been the subject of comparative studies in which the effectiveness of the Human Development Program and other affective education programs are compared.

Strickler (1973) carried out a five group study, which was an attempt to find evidence in support of a specific approach. The five groups were composed of: group 1 which used no guidance materials, group 2 which used the Human Development Program almost every day, group 3 which used the Human Development Program but discontinued its use part way through the year, group 4 which used selected Human Development Program lessons and learning centers with an affective education emphasis and group 5 which used a wide variety of guidance materials and conducted guidance lessons almost every day. Significant differences were not found in this study, but positive trends in the area of self concept were found for groups 2, 4 and 5 with groups 4 and 5 showing the greatest change. The author concludes with the following statement:

> The Human Development Program and other prepared guidance materials can effectively change pupil attitudes if used frequently with the pupils. To be most effective the

> lessons and activities must be used on a daily basis throughout the year. (Strickler, 1973, p.2)

Harris (1976) attempted to compare the Rational - Emotive Education approach to the Human Development Program in an 8 week study with Grade 5 and 6 students. The study did not find significant results for either group on variables of self acceptance, internal locus of control, growth of self awareness, self confidence, effectiveness, and tolerance. In concluding, the author suggested the study may not have been long enough to see changes in this area. A further weakness of the study is the number of treatment sessions experienced. Not only was the study period short but the treatment was only experienced twice a week. This gave a total of fifteen treatment sessions over the eight week study.

Gerler (1980) investigated the possible relationship which might exist between the school attendance of a group of children experiencing Human Development Program, a group experiencing Developing Understanding of Self and Others, a group experiencing a play period, and a group which were given no special treatment. The treatment was carried out during the childrens' kindergarten year. Attendance records were compared for their first, second, and fourth years of school. The author's rationale for choosing school attendance as the dependent variable was due to research with the Human Development Program and Developing Understanding of Self and Others which found positive changes in school attitude. The authors suggest that with a more positive attitude to school, the children experiencing the treatment are likely

to attend more regularly. The author reported significantly better school attendance for the Developing Understanding of Self and Others and Human Development Program groups than the control group. A significant difference continued for the Developing Understanding of Self and Others group upon investigation of attendance in grade one. There was no significant difference found between any of the groups at the end of grade 3.

Edmondson (1978), in a three group design, studied the effect the Human Development Program and Transactional Analysis for Kids had on grade 4 students' self concept. In this eleven week study, significant differences were not found, but a positive trend in self concept was obtained with both treatment groups. When investigating the effect of the Human Development Program and other guidance programs on affective variables, two major factors were found to be salient: the frequency of experiencing the program and also the duration of the study. Significant differences were not found to exist when programs were experienced infrequently and over fairly short study periods.

The Human Development Program and Affective Variables

Some of the specific studies investigating the effectiveness of the Human Development Program will be reviewed. Studies focusing on the effect of the Human Development Program on affective variables will be the first to be reviewed.

Isaacson (1976) found inconclusive results, measuring self concept change on the Primary Self Concept Inventory.

> It was concluded that self concept is not responsive to change by a treatment that is limited to a period of months as reflected by scores on the Primary Self-Concept Inventory. (Isaacson, 1976, p.808)

In studying one hundred and five grade 3 students who experienced the Human Development Program on a daily basis for seven months, Lancaster (1977) did not find this treatment to show significant effect on the children's self concepts.

Jackson (1973), when investigating a number of factors in regard to the effects of a 10 week treatment of the Human Development Program on grade 4 students, found a significant treatment effect for reading achievement but not for self concept and feelings of responsibility for consequences of their academic behavior. Specific concerns in regard to the study itself are similar to some of the other investigations reviewed. Jackson's treatment group experienced the Human Development Program on only nineteen occasions during the ten week study. Also the use of unpaired t-tests are questioned as the most appropriate post hoc tests to an analysis of covariance. A test with measures to control for mistakenly rejecting a null hypothesis would seem to have been more appropriate.

Kinghorn (1977) found no significant difference, when investigating the effect of experiencing the Human Development Program on the self concept of primary school aged Mexican-American children. When comparing the effects of the treatment at various grade levels, there was found to be a significantly greater change in the kindergarten and grade one children as compared to the grade two and three children.

In a study involving grade two, four and six students, Day (1978) found mixed results after treatment groups experienced the Human Development Program for one year. The study considered various affective, cognitive and confluent variables. Results showed no clear differences between the controls and the treatment groups.

Mestler (1975), in investigating the various changes of eight and nine year old children who are experiencing the Human Development Program on a regular basis, found no significant difference among the groups in terms of unexcused absence and academic performance. Significance was found in the area of adjustment using the Cassell Child Behavior Rating Scale.

> From the results one main conclusion was drawn. That conclusion was that a human relations program of the type used has a marked and significant influence on the behavior and attitudes of the participants.
> (Mestler, 1975, p.4631)

In reviewing studies investigating the effect of the Human Development Program on the affective development of children, significant gains were rarely found. The literature is lacking long term studies, where the effects of experiencing the Human Development Program over a several year period are addressed. A person's self perception develops slowly and therefore would be expected to change slowly as a result of a specific intervention. A concern when reviewing these studies is the lack of information in regard to the skill with which the teachers lead their circle sessions. The success of the program is definitely dependent on the teacher's ability to implement this program. It is therefore important that each teacher in a study group leading the

Human Development Program be observed by a person able to evaluate their effectiveness. The results of the studies could then be more appropriately interpreted as evaluations of the program rather than the effectiveness of the teacher in implementing the program.

The Human Development Program and Cognitive Variables

A second group of studies focus mainly on the effect the Human Development Program has on cognitive variables.

McGee (1972), using both experimental data and case studies, found five and six year olds to make significant gains on the Peabody Picture Vocabulary test after experiencing the Human Development Program for twenty-eight weeks.

> An examination of the subjective data indicated that the Human Development Program did facilitate positive growth in self-acceptance, self-confidence, verbal expression, spontaneity, risk-taking, acceptance of others and caring. (McGee, 1972, p.4329)

A concern with this study's design is the lack of a control group. Comparisions were made on pre and post test scores.

A second study focusing on kindergarten age children was carried out by Brett (1978). Here the relationship between a child's regularly experiencing the Human Development Program for a semester and their scores on group intelligence and reading readiness measures were examined. A Solomon Four-Group Design was employed for this study. This entails two control and two treatment groups. The experimental groups experienced the Human Development Program four times a week while the control groups had a story read to them for a similar period. The results found the experimental groups gained

significantly higher scores on both the reading readiness and group intelligence tests.

Delaporte (1977) investigated the long term effect of experiencing the Human Development Program in preschool. The subjects, at the time of Delaporte's study, were in grades 5 and 6. The investigation found the experimental group to have "achieved greater long term gains in intellectual performance, but did not achieve greater long-term effects in their school achievement or total auditory-verbal learning aptitude." (Delaporte, 1977, p.5032) For studies focusing on cognitive changes in relationship to regularly experiencing the Human Development Program, it was again found that the effectiveness of teacher leadership was not addressed.

A number of research studies have been carried out with regular use of the Human Development Program as the independent variable under study. The research has been inconclusive in its findings. A few have found significant results in effecting change in the area of self concept, but the majority have not. Those studies found to show significant results in this area were carried out with younger children in the early primary and pre school years. Also the duration of the study seems to be a factor, with a school year being the minimum period found for seeing any significant change in this area. For older children, who have more fixed self perceptions, a longitudinal study conducted over more than one year seems a possible direction for future research.

When investigating the programs effect on the cognitive area,

research found significant changes in as short as a 10 week period (Jackson, 1973). All studies did not find significant results in their exploration of the Human Development Program's effect on the cognitive area, but the ratio is proportionately higher than for self concept change. It is concluded that factors effecting school achievement and intellectual performance are, in certain conditions, amenable to change through a regular intervention with the Human Development Program. As attention to task is one of the primary prerequisites to efficient learning, it was proposed, for this study, to explore the possible relationship of attention to task and regular experience of the Human Development Program. By studying this relationship, insight may be gained as to the reason why an affective education program might have a significant effect on cognitive functioning after a relatively short treatment period. Possibly increased attention to task is a variable involved.

Other reasons for selecting the Human Development Program are, as Medway and Smith (1978) suggest, the research, at this time, does not find one affective education program reviewed as superior. Therefore the Human Development Program is seen as equal to the other programs. Also, no other affective education program has been used to examine its effect on attention to task. Finally, a strength the Human Development Program has for this study is the group format with its specific rules aimed toward building skills in attending to other group members. The Human Development Program is seen then, as having a format which very specifically teaches and reinforces attending behavior, besides

having the strength of dealing with the affective side of the child, which also has a relationship to attending.

Like the other methods employed to increase attention to task which have been reviewed for this paper, there are concerns in regard to the use of the Human Development Program. First, there is a need for the program to be monitored by a person qualified in its use, as the program's effectiveness is very dependent on the teacher's implementation. The expense and time required for the initial training is another factor needing consideration. Also it is a long term intervention with results requiring more time than other methods.

Summary

Four different methods of building attention to task have been reviewed. Studies in the use of specific drugs; behavioral, cognitive and psychophysiological means of increasing attention to task were reported. In many of the cases, positive effects on task attention were found. A major concern with these methods was the transfer of attentional changes to a classroom setting. Often this area was either not addressed or negative results were found. In the present study, a further method to effect change in the area of task attention is proposed. Here, a guidance curriculum, the Human Development Program will be experienced by children having problems attending to task, in an attempt to determine the effect this program might have on this area.

CHAPTER III

DESCRIPTION OF THE STUDY

Statement of the Problem

The purpose of this Study was to investigate whether a student's experience of the Human Development Program on a regular basis, as part of his school curriculum, will lead to an increase in his task attention during the circle session of the Human Development Program and during regular classroom activities.

Definitions

Task Attention is specifically defined in the Task Attention Criteria which is included as Appendix I.

Treatment Attention Score is the number of points for task attention gained by subjects during observation of them, either during the circle session of the Human Development Program for the experimental group "one" or in sharing time for the experimental group "two."

In-Class Attention Score is the number of points for task attention gained by subjects during observations in their regular classroom activities.

Traditional Sharing Time is a period of the day set aside for children of a classroom to share experiences or show possessions which are important to them. The sharing is oral, with the entire class involved. A typical sharing time would last approximately fifteen to twenty minutes. At this time, each child would be given an opportunity to tell the

rest of the class something important to him/her. This can involve showing something new, telling about something he/she has done, or something that has happened to him/her. The child usually stands in front of the class to share. If there are too many children wanting to share, without sufficient time, teachers usually give those children who did not share, first opportunity at the following share time. Magic Circle/Human Development Program is a group sharing experience in which each child is given the opportunity to relate a personal experience in response to a specific topic. The specific topics and their developmental sequence are outlined fully in the Magic Circle Level Guides (Bessell, 1972).

A typical circle session of the Human Development Program as used in this study, lasts approximately twenty minutes. A group of eight to thirteen children meet in a circle with their teacher to share personal experiences in relation to a specific topic. The topics for discussion are carefully sequenced to promote self concept growth. Topics such as: My favorite place, Something your teacher did which displeased you, A time I had unexpected happy feelings, are a small cross section giving some idea of the variety in focus. The circle operates under very definite rules which are to be enforced by the teacher or group leader to ensure the circle is a safe place to share. The rules are:

1. Everyone gets a turn but no one has to share.
2. No put down comments are allowed.
3. Everyone gets listened to.
4. Share time equally.

Hypotheses

The following statements were specifically investigated in this research:

1. A sample of grade one, two, and three students, who experience the Human Development Program at least three times a week for five weeks, will not demonstrate significantly greater increased task attention* during regular classroom sessions as compared to an experimental group, who experiences a traditional Sharing session with the same frequency as the Human Development Program.

1a. The same as 1. but ten weeks instead of five weeks.

2. A sample of grade one, two, and three students who experience the Human Development Program at least three times a week for five weeks, will not demonstrate significantly greater increased task attention* during regular classroom sessions as compared to a control group who received no special treatment.

2a. The same as 2. except ten weeks instead of five weeks.

3. A sample of grade one, two, and three students who experience the Human Development Program at least three times a week for five weeks, will not demonstrate significantly greater increased task attention* during the Circle sessions of the Human Development Program as compared to an experimental group's task attention during their sharing session.

3a. The same as 3. except ten weeks instead of five weeks.

*The Attention Rating Instrument is the measure of task attention used for a beginning, middle, and final treatment evaluation.

Sample

The subjects for this study were fifty-four children attending school in a central interior town in British Columbia. Three classes for each grade, one through three, with six children from each class, were involved. Of these fifty-four children, eighteen children formed each of experimental group "one", experimental group "two" and the control group.

Treatment and control classrooms were selected as follows:

1. All elementary schools in the Central British Columbia town and immediate area were contacted by telephone. The primary teachers were asked if they would be willing and interested in participating in a study. There were ten elementary schools contacted.
2. From this telephone canvas, twelve primary teachers were interested in taking part in the study. Of this group, three teachers, one at each grade level, were willing to conduct the Human Development Program in their classrooms on a regular basis. Of the nine remaining teachers, five were willing to lead a Traditional Sharing Time on a regular basis. Of the five teachers there were two at grade two, two at grade three, and one at grade one. From these candidates, the grade two and three teachers were randomly chosen. At this point four teachers remained with one at grade one, two at grade two, and one at grade three. The grade two teacher was randomly selected. This then formed the control group.
   Once the selection of the classrooms had been completed, subjects were then identified.

The criteria used in selecting the subjects were as follows:

1. In-Class attention score. Each child's attention was assessed using an observational measure of attention. The Attention Rating Instrument is discussed more fully later in this chapter. Ten children from each class with the lowest scores on the Attention Rating Instrument were identified as possible subjects.
2. Learning and Emotional Problems. From the ten identified children in each class, any child identified by the District Special Services personnel as having severe emotional and/or learning problems were not included in this study.
3. Sex. The sample was equally represented by boys and girls.
4. Human Development Program. The children forming experimental group "one" were enrolled in a class in which the Human Development Program was experienced a minimum of three times each week for the ten week treatment period.
5. Traditional Sharing Time. The children forming experimental group "two" were enrolled in a class in which a traditional sharing time was experienced a minimum of three times each week for the ten week period.

Task Attention data was gathered from the nine classrooms to select subjects for the experimental and control groups. Observers made five twenty-second observations on each child in the class on two different days. From these data ten children with the lowest Attention scores were chosen as possible candidates for the experimental or control groups. From the ten children eligible in each class, four

were eliminated in compliance with the sample criteria. If more than six children remained after the necessary exclusions had been made, six students were randomly selected from the eligible students.

The population sampled for this study were thus grade one, two and three students of central British Columbia with identified problems in attending to task in the classroom situation, but were not identified as having severe emotional and/or learning problems.

Measurement Instrument

The Attention Rating Instrument is an observational, time sampling measure used to record a child's attention to task (Woolfolk and Woolfolk, 1974). Similar observational measures of task attention have been used in a number of studies (Bryan, 1974; Hewett, 1968; Hops and Cobb, 1972; McKenzie et al, 1968; Thomas, 1974; Woolfolk and Woolfolk, 1974). In this study, the child was observed for a twenty second interval during which he was awarded one point for each second he was attending to task. For subject selection, the child was observed during five, twenty-second intervals per session. The child was observed for twenty, twenty-second observations in each session during baseline and post-baseline data collection. Task attention is specifically defined in behavioral terms for the instrument in Appendix I (Hewett, 1968). Points accrued by the child are recorded on the Attention Rating Instrument Record Form. A copy of this record form and a description of its use are included as Appendix II.

The observers were given specific training in identifying

task attention and use of the Attention Rating Instrument before the data collection commenced. An outline of the observer training is included as Appendix III.

Observer-Experimenter agreement was calculated. The experimenter co-observed with each observer for thirty, twenty-second observations. For each co-observation the child received two scores, that of the experimenter and the regular observer. These scores were later compared to give a measure of inter-rater reliability.

General Methodology

Teachers of students in the experimental group experienced an introduction to the Human Development Program via a discussion, question and answer session prior to commencement of the study. During the study, circle debriefing and consultation continued with the experimenter, who has completed the training from the Human Development Training Institute to lead the introductory workshops.

The experimental group experienced the Human Development Program at least 3 times a week during the experimental period. Experimental group "two" experienced the traditional classroom sharing time, at least three times a week for the experimental period. The Control group received no special treatment. Traditional sharing time may have been experienced from time to time, but with no consistency, comparable to experimental group "two."

The In-Class and Treatment data was gathered by five observers. Each observer made observations in several classrooms. There were

three observers collecting data for each of the Human Development Program groups, Traditional Sharing Time groups, and Control groups.

Observations were made between 9 a.m. and 3 p.m. All groups were observed equally in the morning and afternoon. Children were not observed during physical education or during recess and noon hour. Children were also only observed in their own classroom.

The first data collected was for the purpose of subject identification. This has been discussed in the Sample section of this paper.

Once the experimental and control groups had been established, baseline data were collected. Observers collected baseline In-Class Attention scores on each subject from three visits to their classrooms. On each occasion twenty, twenty-second observations were made on each subject. Similar observations were made at five and ten weeks into the experiment.

Treatment Attention scores were gained for the experimental and control groups. Baseline, five and ten week scores were gained via observations with the Attention Rating Instrument. The Treatment Attention score was established from four visits with seven, twenty-second observations per subject, taken at each visit.

Specific details of the experiment and its purpose was not divulged to the teachers involved in the experiment. Also, the hypotheses were not discussed with the observers until after the close of the study to avoid the possible effects of bias.

Analysis of the Data

1. All hypotheses were tested using the .05 level of significance.
2. The mean scores of the In-Class and Treatment data were analysed using an Analysis of Variance to check for initial differences between the various grade levels and groups.
3. The mean scores of the In-Class and Treatment data were, then, analysed using a Two Factor Analysis of Covariance. This design was chosen to control statistically for any initial differences in the students which might be present and which might confound differences between the groups of students. The In-Class data was analysed using a 3 x 3 (grade x group) design with the Baseline In-Class data as the covariate. With the Treatment data a 3 x 2 (grade x group) design was used with the April Treatment data as the covariate. The post hoc Scheffé Multiple Comparison of Group Means test was employed to determine any significant differences when comparing mean gains on a paired basis.
4. A Pearson Product - Moment Correlation coefficient was calculated comparing the observing of the data collectors with that of the experimenter. The percent of perfect agreement between observer and experimenter was also calculated.

Assumptions and Limitations of this Study

It was assumed, for this study, that task attention can be observed, that the outward signs listed as target behaviors on the Task Attention Criteria Appendix I, are, in fact, signs of attending on

the part of the subject.

The findings of this study are limited to grade one, two, and three students of central British Columbia, who have difficulty attending to task but are not identified as having severe social, emotional, or learning problems.

A further limitation of the study is the lack of follow up data on the subjects, to determine whether the changes will continue if the Human Development Program is discontinued.

Also the Human Development Program was lead by teachers who had not had the introductory workshop offered by the Human Development Training Institute. The teachers were given support before and during the study, but the introductory workshop would have given a more extensive background on which to build.

The study spans a relatively short period which may not be sufficient to effect changes in task attention. Should a lack of significant differences be found, this could be related to the short study duration rather than the potential of the program to effect change in the area of attention.

It would have been desirable also, to have more than one observer gathering the data for each group. In this way stronger inter-rater reliability could have been established.

The children from the sharing time group had gained some experience with the Sharing Time treatment prior to the experimental period. Sharing Time had not been experienced by the groups on as regular a basis as during the study, but had been experienced prior to the study's commencement. The novelty effect, possibly experienced

by the Human Development Program groups in their early circle sessions, may have inflated their baseline Treatment scores. This would function to the detriment of these groups as future scores are compared to these initial scores.

The novelty effect is unlikely to influence the In-Class data, as observations were prior to regular commencement of the treatments and then again five and ten weeks later. After a five or ten week period of time the novelty effect would not likely persist.

CHAPTER IV

RESULTS

As the intent of this study was to investigate the effects of regularly experiencing the Human Development Program for varying periods, as compared to another treatment group and also a group receiving no treatment, the data was statistically analysed as outlined in Chapter III to test the specific hypotheses proposed.

A correlation was calculated to compare the similarity in observing of the data collectors, with the experimenter. The experimenter observed simultaneously with each data collector. Both individuals observed the same child for the same time period. A Pearson Product-Moment Correlation Coefficient was calculated on the total score the data collectors attained, in comparison to that of the experimenter. A r=.996 was found as a result of this comparison.

The data collector-experimenter agreement was also investigated by determining the percentage of perfect agreement on co-observations. A range from 63% to 90% agreement was found with a mean of 78%. The data collectors which observed the Human Development Program groups gained 63%, 77% and 86% agreement. The agreement found with the Traditional Sharing Time observers was 63%, 76%, and 90%. The Control group observers showed 76%, 86%, and 90% agreement.

From this indication of inter-rater reliability, the experimenter seems justified in comparing scores statistically, and interpreting the data as changes within the sample rather than interrater variability.

An analysis of variance was performed on the baseline In-Class and Treatment mean scores, to determine if there were significant differences between the grade levels or groups before the treatments had been experienced. For both the In-Class and Treatment mean scores, there were found to be significant differences between both grade levels and groups ($p<.05$). This suggests there were significant differences between both grade levels and groups prior to treatment.

Evans and Anastasio (1968), in an article, discuss the appropriate application of the analysis of covariance. Three uses of the test are outlined with strengths and weaknesses for each application discussed. For the present research, the usage 2 would apply. This usage was stated as the "'adjustment' of treatment means for differences between intact groups, when the covariate is unrelated to the treatments." This application of the analysis of covariance was chosen to statistically adjust for the initial differences found to exist between both groups and grade levels on the analysis of variance. Specific conditions were stated by Evans and Anastasio for this use of the analysis of covariance. There was a stated need for random assignment of the treatment variables to the groups and also that the covariate must be unrelated to the treatments. When evaluating the present research in regard to satisfying these conditions, it was found that random assignment of treatment variables was not fully met due to the lack of teachers willing to be involved in the study. Also the limited number of teachers willing to conduct the Human Development Program lowered the random assignment of treatments. The condition of

the covariate being unrelated to the treatment was met for the In-Class data as the covariate was taken prior to the commencement of the treatment. For the Treatment data, this condition is not fully met for the covariate measure was taken at the first four treatment sessions. As the conditions for this usage of the analysis of covariance have not been fully met, it is suggested that the following results gained from its use be cautiously interpreted.

A further caution stated by Evans and Anastasio for this use of the analysis of covariance, even if all conditions are met, is that because the initial differences between groups are statistically adjusted and not truly similar "the adequacy of the adjustment is always open to question" (Evans and Anastasio, 1968, p.228).

A graphic representation of the group means as measured by the Attention Rating Instrument and adjusted means gained from the analysis of covariance are found in figures 1, 2, and 3 for the In-Class data and figures 4, 5, and 6 for the Treatment data. Also tables I and II are to provide direct reference to this data.

Testing of Hypotheses

Hypothesis 1

It was hypothesized that a sample of grade one, two, and three students, who experience the Human Development Program at least three times a week for five weeks, will not demonstrate significantly greater increased task attention during regular classroom sessions as compared to an experimental group who experiences a Traditional Sharing session

with the same frequency as the Human Development Program.

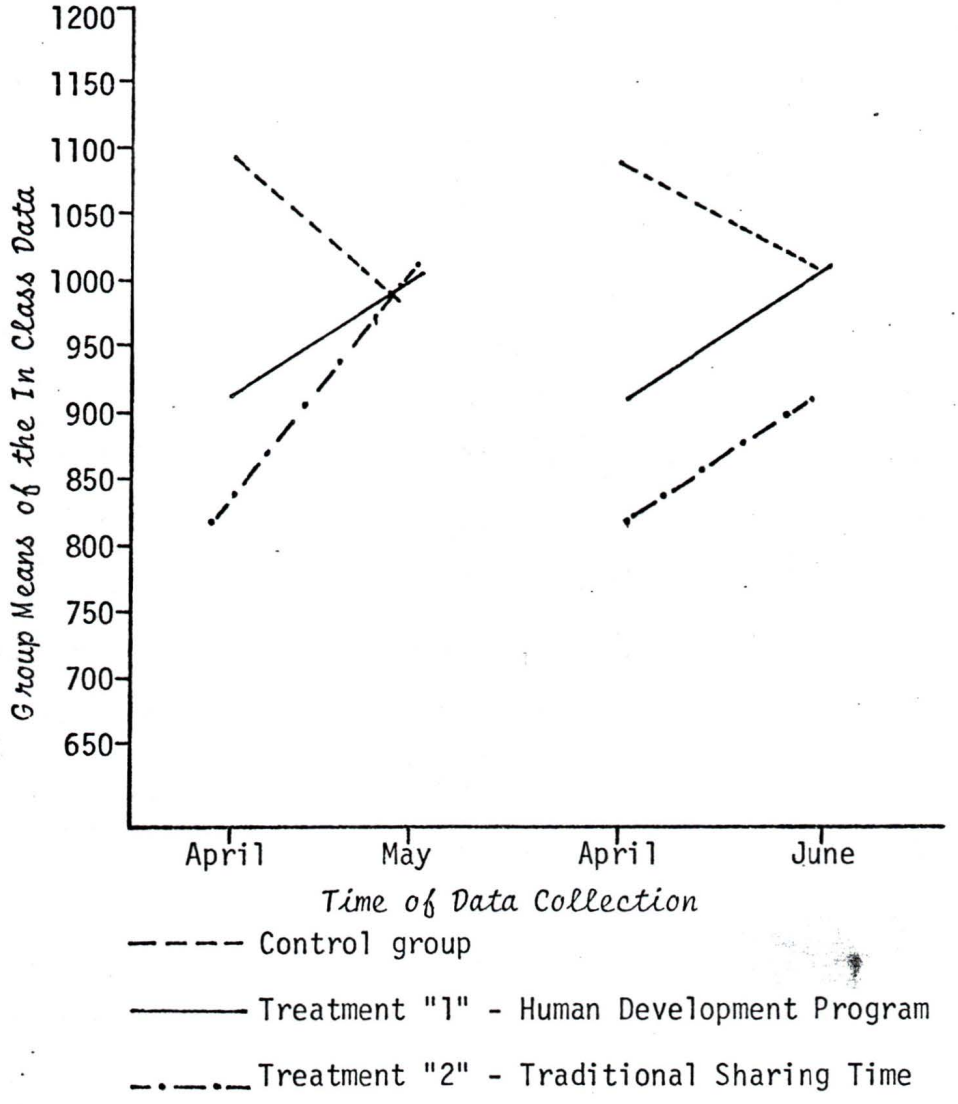
Upon inspection of the results of an analysis of covariance on the In-Class data for April and May, it was found there were significant Group effects ($P<.05$) and also Grade/Group interaction ($P<.05$) (refer to table I). The Scheffé Multiple Comparison of Group Means was then applied on the adjusted means to determine if there were any significant differences between the individual groups. (refer to table IV). No significant differences were found when comparing the two treatment effects across grade levels. Hypothesis 1 is sustained as stated.

Hypothesis 1a

This hypothesis is the same as hypothesis 1 except that the effects of a ten week treatment period were investigated rather than five weeks.

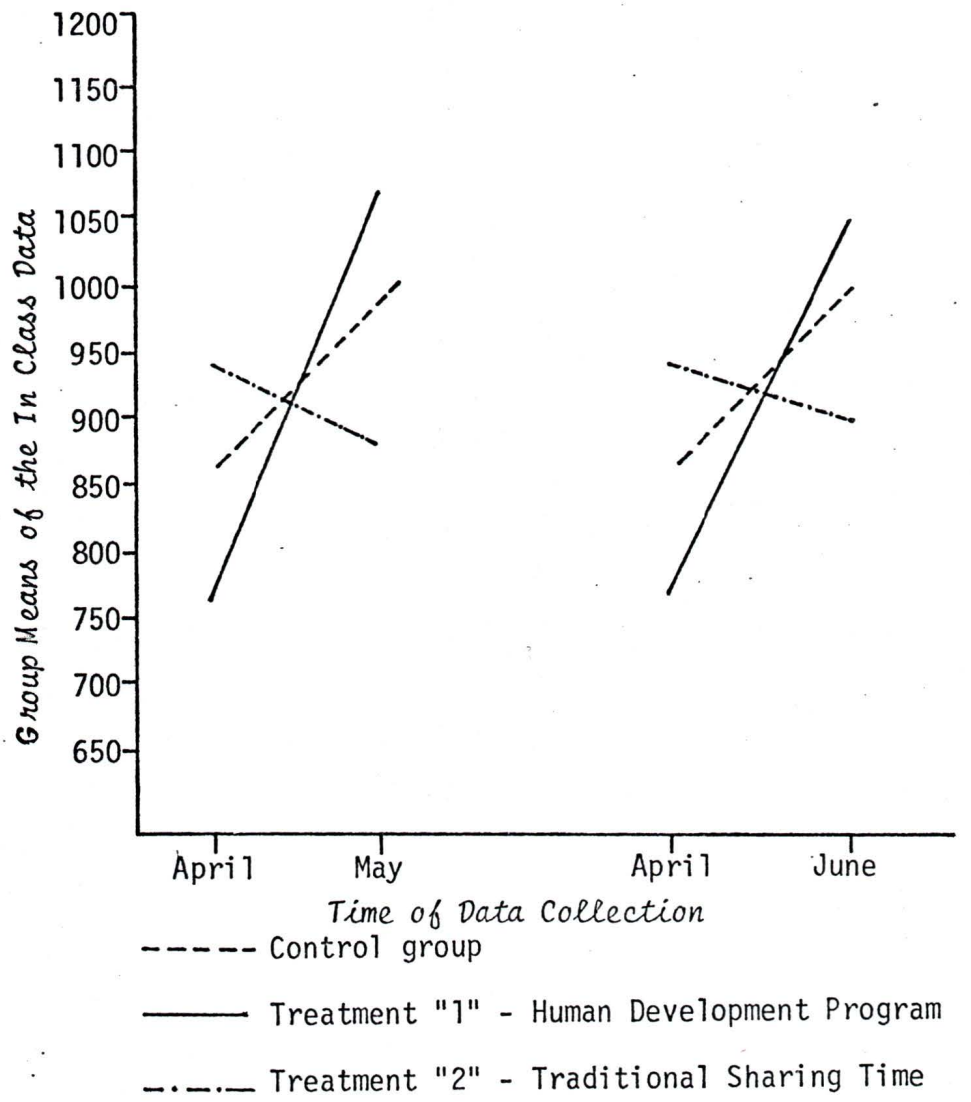
Through an analysis of covariance, on the April and June In-Class data, there was found to be a significant group effect with ($P<.05$) (refer to table I). Using the Scheffé Multiple Comparison of Group means on the adjusted means, there were found to be no significant differences among any of the groups (refer to table III). Hypothesis 1a is then sustained..

Figure 1



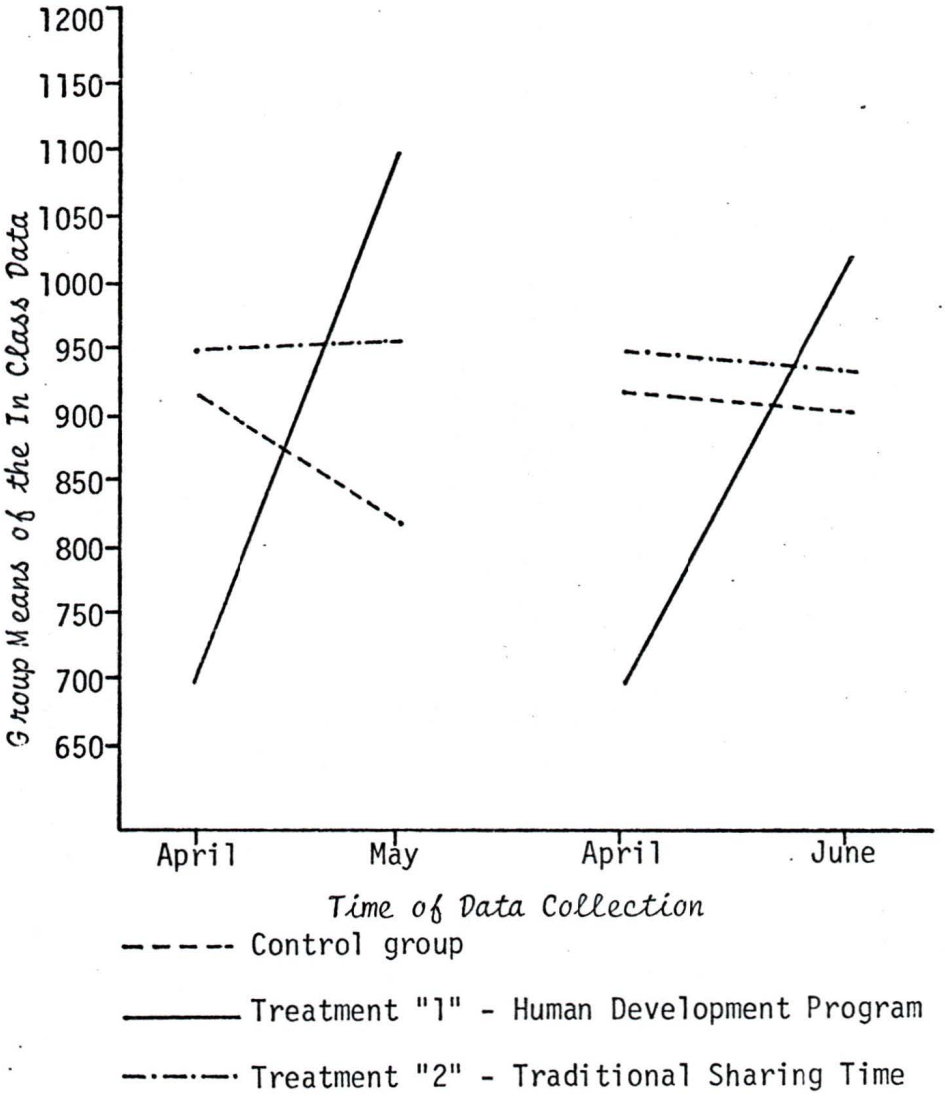
April Group Means and May/June
Adjusted Group Means of the In Class Data for the Grade One Sample.

Figure 2



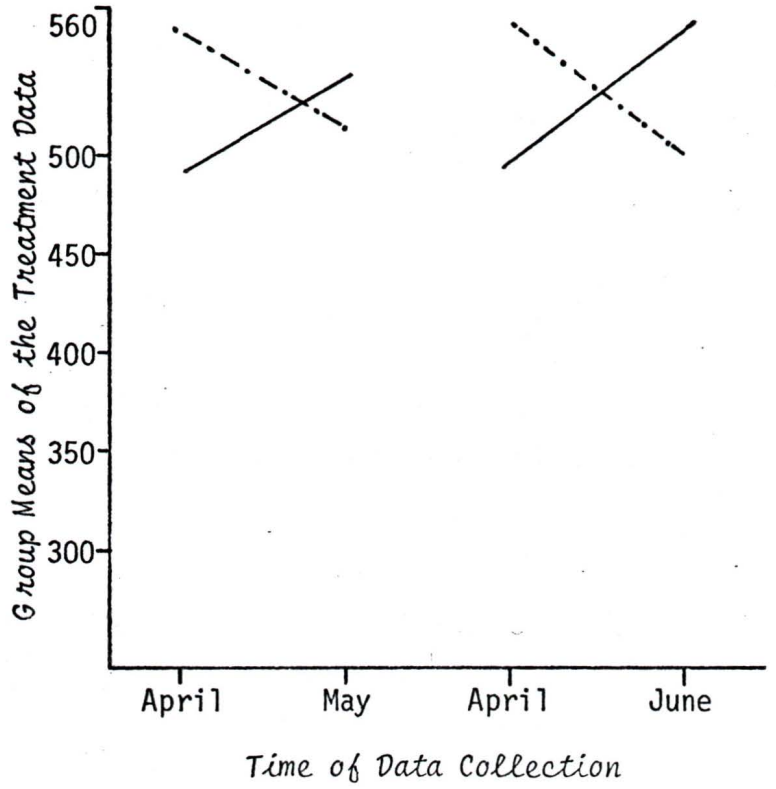
April Group Means and May/June
Adjusted Group Means of the In Class Data for the Grade Two Sample.

Figure 3



April Group Means and May/June
Adjusted Group Means of the In Class Data for the Grade Three Sample.

Figure 4

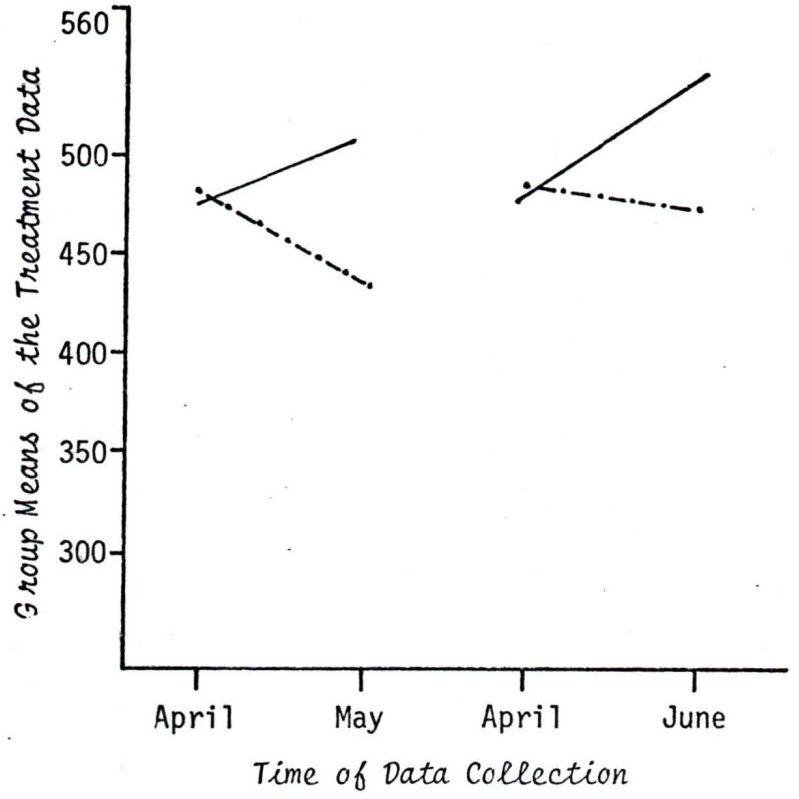


——— Treatment "1" - Human Development Program

—.—.—.— Treatment "2" - Traditional Sharing Time

April Group Means and May/June
Adjusted Group Means of the Treatment Data for the Grade One Sample.

Figure 5

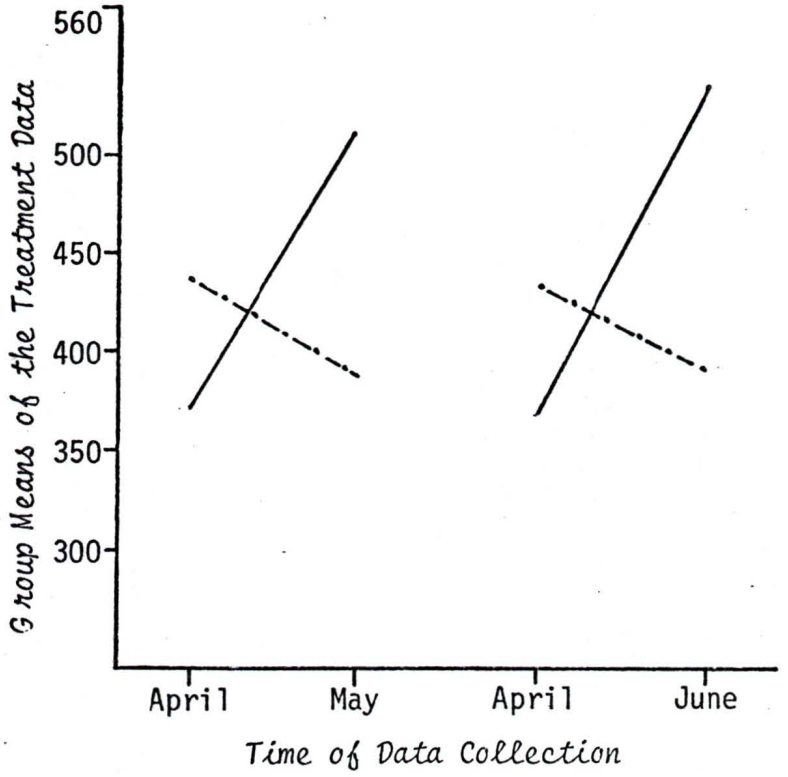


——— Treatment "1" - Human Development Program

•—•—•—• Treatment "2" - Traditional Sharing Time

April Group Means and May/June
Adjusted Group Means of the Treatment Data for the Grade Two Sample.

Figure 6



——— Treatment "1" - Human Development Program

•—•—•—• Treatment "2" - Traditional Sharing Time

April Group Means and May/June
Adjusted Group Means of the In Class Data for the Grade Three Sample.

Table I

Comparison of Human Development Program Group, Traditional Sharing Groups and Control Groups on In Class Data by Analysis of Covariance*.

Source of Variation	April/May Comparison				April/June Comparison			
	df	Mean Square	F	P	df	Mean Square	F	P
Grade effect	2	7,895.09	1.072	.351	2	4,970.75	.433	.651
Group effect	2	58,191.06	7.899	.001	2	51,469.97	.488	.016
Grade x Group	4	41,534.81	5.638	.001	4	10,621.56	.926	.457
Within	44	7,367.03			44	11,467.90		
Total	52				52			

*The April In Class data is the covariate factor.

Table II

Group Means and Adjusted* Group Means on In Class Data

Group	Means			Means		
	April	May	Adjusted	April	June	Adjusted
Human Development Program Groups						
Grade 1	910.3	1022.8	1005.6	910.3	1026.0	1019.5
Grade 2	759.3	992.6	1065.9	759.3	1006.2	1033.6
Grade 3	697.2	984.2	1094.6	697.2	969.3	1010.78
Traditional Sharing Time Groups						
Grade 1	812.2	967.8	1009.4	812.2	889.5	905.1
Grade 2	937.7	909.6	876.1	937.7	898.2	885.6
Grade 3	948.8	992.0	951.7	948.8	946.0	930.9
Control Groups						
Grade 1	1094.3	1108.2	980.7	1094.3	1062.6	1014.9
Grade 2	860.0	985.3	998.3	860.0	983.8	988.7
Grade 3	914.2	837.8	818.3	914.2	904.0	896.7

*Adjusted Group Means as calculated on the analysis of covariance.

Table III

Probability Matrix - Scheffé Multiple Comparison of the Adjusted Means from the Analysis of Covariance

April/June In Class Data

	1	2	3	4	5	6	7	8	9
1. HDP* Grade 1		.898	1.000	1.000	.783	1.000	1.000	.976	.854
2. SH* Grade 1			.918	.820	1.000	.984	.933	1.000	1.000
3. Control Grade 1				1.000	.815	1.000	1.000	.9832	.880
4. HDP Grade 2					.675	.999	1.000	.943	.762
5. SH Grade 2						.942	.840	.999	1.000
6. Control Grade 2							1.000	.999	.970
7. HDP Grade 3								.988	.899
8. SH Grade 3									1.000
9. Control Grade 3									

*HDP is the abbreviation for the Human Development Program Group and SH is the abbreviation for the Traditional Sharing Time Group.

Hypothesis 2

It was hypothesized that a sample of grade one, two, and three students who experience the Human Development Program at least three times a week for five weeks, will not demonstrate significantly greater increased task attention during regular classroom sessions as compared to a control group who received no special treatment.

The relevant analysis of covariance (refer to table I) and Scheffé Multiple Comparison of Group Means (refer to table IV) have been reported, with this information discussed for the testing of hypothesis 1. For this hypothesis, the Scheffé Multiple Comparison of Group Means found the grade three group experiencing the Human Development Program to display significantly greater treatment effect as compared to the grade three control group ($P<.05$). Hypothesis 2 is then sustained for the grade one and two samples but rejected for the grade three sample.

Hypothesis 2a

This hypothesis is the same as hypothesis 2 with the variation in treatment period from five weeks to ten weeks.

Results of the analysis of covariance (see table I) and post hoc Scheffé Multiple Comparison of Group Means (see table III), as reported for the testing of hypothesis 1a, also contain the information necessary to make a decision in regard to the present hypothesis. There were found to be no significant differences between the groups. Hypothesis 2a is then sustained.

Table IV

Probability Matrix - Scheffé Multiple Comparison of the Adjusted Means from the Analysis of Covariance

April/May In Class Data									
	1	2	3	4	5	6	7	8	9
1. HDP* Grade 1		1.000	1.000	.986	.614	1.000	.884	.998	.127
2. SH* Grade 1			1.000	.995	.520	1.000	.931	.994	.091
3. Control Grade 1				.931	.807	1.000	.723	1.000	.248
4. HDP Grade 2					.095	.983	1.000	.7202	.007
5. SH Grade 2						.6390	.028	.965	.994
6. Control Grade 2							.868	.999	.138
7. HDP Grade 3								.421	.002
8. SH Grade 3									.520
9. Control Grade 3									

*HDP is the abbreviation for the Human Development Training Groups and SH is the abbreviation for the Traditional Sharing Time Groups.

Hypothesis 3

It was hypothesized that a sample of grade one, two, and three students who experience the Human Development Program at least three times a week for five weeks, will not demonstrate significantly greater increased task attention during the circle sessions of the Human Development Program as compared to an experimental group's task attention during their sharing session.

The analysis of covariance was employed to compare the April and May Treatment data (refer to table IV). The grade, group, and grade/group interaction effects were all found to be significant ($P<.05$). Upon application of the Scheffé Multiple Comparison of Group Means, using the adjusted means, significant treatment effects were found in comparing the grade three Human Development Program group with the grade three Traditional Sharing Time group. Hypothesis 3a is then sustained for the grade one and two groups but rejected for the grade three sample.

Hypothesis 3a

This hypothesis is the same as hypothesis 3 except that the effects of the treatment are experienced for ten weeks instead of five weeks.

Again the analysis of Covariance was employed to determine significant differences on the Treatment Data for April and June (refer to table V). Grade, group and grade/group interaction effect were all found to be significant with ($p<.05$). Following the analysis of covariance with the Scheffé Multiple Comparison of Group Means (refer to Table VII)

using the adjusted means, it was found that the grade three Human Development Program group demonstrated significantly greater treatment effects than the grade three Traditional sharing group with attention to task during their respective treatments. Hypothesis 3 is then sustained for the grade one and two groups but rejected at the grade three level.

Table V

Comparison of Human Development Program Groups and Traditional Sharing Groups on Treatment Data by Analysis of Covariance.*

Source of Variation	April/May Comparison df	Mean Square	F	P	April/June Comparison df	Mean Square	F	P
Grade effect	2	10,642.64	12.383	.000	2	6,926.41	5.16	.012
Group effect	1	43,436.80	50.54	.000	1	57,561.13	42.90	.000
Grade x Group	2	7,086.38	8.25	.001	2	6,704.75	4.99	.013
Within	29	859.48			29	1,341.88		
Total	34				34			

*The April Treatment Data is the covariate factor.

Table VI

Group Means and Adjusted* Group Means on Treatment Data

Group	Means			Means		
	April	May	Adjusted	April	June	Adjusted
Human Development Program Groups						
Grade 1	488.0	536.3	532.8	488.0	554.3	553.5
Grade 2	474.5	507.8	506.7	474.5	529.7	529.4
Grade 3	370.0	491.0	508.3	370.0	527.6	531.9
Traditional Sharing Time						
Grade 1	555.6	522.5	507.1	555.6	499.8	495.9
Grade 2	480.8	429.6	427.4	480.8	467.5	466.9
Grade 3	439.8	380.5	385.5	439.8	388.3	389.6

*Adjusted Group Means as calculated on the analysis of covariance.

Table VII

Probability Matrix - Scheffé Multiple Comparison of Adjusted Group Means from the Analysis of Covariance

April/May Treatment Data						
	1	2	3	4	5	6
1. HDP* Grade 1		.227	.932	.017	.957	.000
2. SH* Grade 1			.774	.860	.715	.002
3. HDP Grade 2				.155	1.000	.000
4. SH Grade 2					.126	.041
5. HDP Grade 3						.000
6. SH Grade 3						

April/June Treatment Data						
	1	2	3	4	5	6
1. HDP Grade 1		.227	.932	.016	.957	.000
2. SH Grade 1			.774	.860	.715	.002
3. HDP Grade 2				.155	1.000	.000
4. SH Grade 2					.126	.041
5. HDP Grade 3						.000
6. SH Grade 3						

*HDP is the abbreviation for the Human Development Program Groups and SH is the abbreviation for the Traditional Sharing Time Groups.

CHAPTER V

SUMMARY AND CONCLUSIONS

Summary

Through statistical means, the data was analysed in order to test the proposed hypotheses. When interpreting the conclusions being drawn, the reader is reminded of the caution discussed earlier with regard to the application of the analysis of covariance used in this study.

Upon inspection of the results it was not found that a five or ten week treatment period was sufficient to produce significant treatment effects for most of the treatment or control groups. The null hypothesis was accepted in all instances but that of the grade three Human Development Program Group. The treatment effect for this group was found to be significant when compared with the grade three Control group.

In ordering the adjusted means obtained from the Analysis of Covariance on the In-Class data with the April data as criterion, the Human Development Program groups are found to hold first, second, and fourth place. Third place was held by a group from the Traditional Sharing Time groups in the April/May analysis and a control group in the April/June analysis. This suggests that although the Human Development Program was not found to have significant effect on the childrens' in class task attention for most groups in this study period, the groups did all show movement in a positive direction as compared to the Traditional Sharing Time groups and Controls who showed both positive and negative movement.

In reviewing the results of the statistical analysis on the Treatment data, it was found that significant treatment effects existed for only the grade three Human Development Program group in comparison to the grade 3 Traditional Sharing Time group. Therefore the null hypothesis was rejected for only the Grade 3 group and sustained at the grade one and two level for both a five and ten week treatment period.

Through a visual inspection of the group means and adjusted means for both the April/May and April/June study periods (refer to table 6), the Traditional Sharing Time Group was found to decrease in attention to task during the sharing period. The Human Development Program groups means and adjusted means were each found to steadily increase during circle sessions.

Conclusions

The findings of this study lack support for the effectiveness of the Human Development Program in facilitating positive changes in attention to task for grade one and two students. The results suggest a positive trend for these groups, but the treatment effects failed to reach significance in comparison to the Control on the Traditional Sharing Time groups.

The study was found to support the proposal of using the Human Development Program at a grade 3 level with children having problems attending to the task as a means of facilitating growth in this area, as compared to a no special treatment situation. The results suggest positive effects of the Human Development Program at a grade 3 level for both attention to task during regular classroom sessions and also during the circle session. The results would then support the decision

to use the Human Development Program as a facilitator in building task attention with children having problems in this area at a grade 3 level. The results do not support this decision at the grade one and two level. At this level only positive trends were found. It would therefore not be recommended, from these results, to choose the use of the Human Development Program if the major objective for its use is facilitating the growth of attention to task.

Suggestions for Further Study

1. Through visual inspection of the means for the April data collection, the grade one control group mean score is found to be considerably higher than that of the other groups. As these were a random sample of the ten children having the lowest task attention scores, it suggests a need to possibly place a ceiling level on task attention scores, for a child to still be considered as having a problem with task attention. For the present study, this was not considered.
2. As significance was not found at the grade one and two level, but positive trends were found, it is recommended that a future study investigate the effects of the Human Development Program on children's task attention when the treatment is experienced for a longer period. This was found to be a recommendation of some of the Human Development Program studies in regard to self concept (Harris, 1976; Isaacson, 1976). This also applies to the present study.
3. In a future study, the use of a larger sample of children at a specific grade level with more than one teacher administering the treatment would be suggested. The experimenter found this study to

cover a broader sample than would be recommended.

4. A future direction for study could be in a comparative study at the grade three level. Here the treatment effects of the Human Development Program could be compared with some of the other methods reviewed in Chapter III. Also significant results may be found in comparing the effects on task attention of using the Human Development Program in conjunction with one of the other methods discussed in Chapter III, as compared to the use of this other method on its own.

BIBLIOGRAPHY

American Psychological Association. Publication Manual of the American Psychological Association (2nd. ed.). Washington, D.C.: American Psychological Association, 1974.

Ball, G. Magic Circle An Overview of the Human Development Program. La Mesa, Human Development Training Institute, Inc., 1974.

Barkley, R.A., and Cunningham, C.E. Stimulant Drugs and Activity Level in Hyperactive Children. July 1979, American Journal of Orthopsychiatry, vol. 49, no. 3, p.491-499.

Berlyne, D.E. Attention as a Problem in Behavior Therapy. In Mostofsky, D.I. (Ed.), Attention: Contemporary Theory and Analysis, New York, Appleton-Century-Crofts, p.25-49, 1970.

Berlyne, D.E. Conflict, Arousal, and Curiosity. New York, McGraw-Hill, 1960.

Bessell, H. The Content is the Medium: The Confidence is the Message. Psychology Today, Jan, 1968, vol. 1, no. 8, p.32-35;61.

Bessell, H. Human Development in the Elementary School Classroom. In Solomon, L.N., and Berzon, B., (Ed.), New Perspectives on Group Encounters, San Francisco, Jossey-Bass Publishers, p.349-367, 1972.

Bessell, H. "The Magic Circle" Human Development Program Level I. La Mesa, Calif.: Human Development Training Institute, 1972.

Bessell, H. "The Magic Circle" Human Development Program Level II. La Mesa, Calif.: Human Development Training Institute, 1972.

Bessell, H. "The Magic Circle" Human Development Program Level III. La Mesa, Calif.: Human Development Training Institute, 1973.

Brett, A. The Influence of Affective Education on the Cognitive Performance of Kindergarten Children. Child Study Journal, 1978, vol. 8, no. 3, p.165-174.

Bryan, T.S. An Observational Analysis of Classroom Behaviors of Children with Learning Disabilities. Journal of Learning Disabilities, Jan. 1974, vol. 7, no. 1, p.26-34.

Culbertson, F.M. and Wille, C. Relaxation Training as a Reading Remediation Tool for School-Aged Children. Canadian Counsellor, Jan. 1978, vol. 12, n. 2, p.128-131.

Darch, C.B. and Thorpe, H.W. The Principal Game: A Group Consequence Procedure to Increase Classroom On-task Behavior. Psychology in the Schools, July 1977, vol. 14, no. 3, p.341-347.

Day, R.W. An Investigation of the Effects of the Human Development Program "Magic Circle" on Selected Affective, Cognitive, and Confluent Variables of Second, Fourth and Sixth (Doctoral Dissertation, University of Alabama, 1977). Dissertation Abstracts International, July 1978, vol. 39, Part A 1, p.126-126. (University Microfilms no. 7809850)

Delaporte, K.L. The Long-term Effects of a Human Development Program on the Intellectual performance, School Achievement, and Auditory-Verbal Learning Aptitude of Economically Disadvantaged Children (Doctoral Dissertation, University of Oklahoma, 1976). Dissertation Abstracts International, Feb. 1977, vol. 37, Part A 8, p.5031-5032, (University Microfilms no. 77-1818)

Dinkmeyer, D. Developing Understanding of Self and Others. Circle Pines, MN: American Guidance Service, 1970.

Douglas, V.I. Stop, Look, Listen: The Problem of Sustained Attention and Impulse Control in Hyperactive and Normal Children. Canadian Journal of Behavior Science, 1972, vol. 4, p.259-281.

Drabman, R.S., Spitalnik, R., and O'Leary, K.D. Teaching Self-Control to Disruptive Children. Journal of Abnormal Psychology, 1973, vol. 82, p.10-16.

Dupont, H., Gardner, O., and Brody, D. Toward Affective Deveopment, Circle Pines, MN.: American Guidance Service, 1974.

Edmondson, R.J. A Comparison of Two Different Instructional Approaches in Achieving Self Concepts of Fourth Grade Students in a Public School (Doctoral dissertation, Nova University, 1976). Dissertation Abstracts International, Feb. 1978, vol 38, Part A 8, p.4580.

Egeland, B. Training Impulsive Children in the use of more Efficient Scanning Techniques. Child Development, 1974, vol. 45, p.165-171.

Emmer, E.T. and Woolfolk, A.E. Increasing Student Attention: A Learning Theory with an Emphasis on Transfer to the Regular Classroom, Final Report. Austin, U.S.: Department of Health, Education and Welfare, National Centre for Educational Research and Development, University of Texas, August 1972. (ERIC Document Reproduction Service no. ED 067 604)

Evans, S.H. and Anastasio, E.J. Misuse of Analysis of Covariance when Treatment Effect and Covariate are Confounded. Psychological Bulletin, April, 1968, Vol. 69, No. 4, p.225-234.

Fearn, L. and McCabe, R.E., Magic Circle Human Development Program Supplementary Idea Guide, La Mesa, Calif.: Human Development Training Institute, 1975.

Gabrys, J.B. Methylphenidate Effect on Attentional and Cognitive Behavior in Six Through Twelve-year old males. Perceptual and Motor Skills, 1977, vol. 45, p.1143-1149.

Gagné, R.M. The Conditions of Learning (Second Ed.). Dallas: Holt, Rinehart, and Winston, 1970.

Gerler, E.R. A Longitudinal Study of Multimodal Approaches to Small Group Psychological Education. The School Counsellor, Jan. 1980, vol. 27, p.184-190.

Harris, S.R. Rational - Emotive Education and the Human Development Program: A Guidance Study. Elementary School Guidance and Counselling, Dec. 1976, vol. 11, p.113-122.

Haubrich, P.A., and Shores, R. Attending Behavior and Academic Performance of Emotionally Disturbed Children. Exceptional Children, 1976, vol. 42, p.337-338.

Heiman, J.R., Fischer, M.J., and Ross, A.O. A Supplementary Behavioral Program to Improve Deficient Reading Performance. Journal of Abnormal Child Psychology, 1973, vol. 1, no. 4, p.390-399.

Hewett, F.M. The Emotionally Disturbed Child in the Classroom. Boston: Allyn and Bacon, Inc., 1968

Hops, H. and Cobb, J.A. Survival Behaviors in the Educational Setting: the Implications for Research and Intervention, Report 13. Eugene, Oregon: Oregon University, Department of Special Education, 1972. (ERIC Document Reproduction Service no. 069 091).

Huck, S.W., Cormier, W.H., and Bounds, W.G. Reading Statistics and Research. New York, N.Y.: Harper and Row, Publishers, 1974.

Isaacson, S.C. The Effect of the Human Development Program on the Self Concepts of Selected Los Angeles Elementary Children (Doctoral Dissertation, Brigham Young University). Dissertation Abstracts International, Aug. 1976, vol 37, Part A 2, p.808. (University Microfilms no. 76,18,332)

Jackson, W.J. The Study of the Relationship Between a Small Group Discussion Activity, the Self Concept and Reading Achievement of Selected Fourth Grade Boys and Girls. (Doctoral Dissertation, Oregon State University). Dissertation Abstracts International, Nov. 1973, vol. 34, Part A 5, p.2301. (University Microfilms no. 73 25 939)

Kagan, J., Pearson, L., and Welch, L. Modifiability of an Impulsive Tempo. Journal of Educational Psychology, 1966, vol. 57, no. 6, p.359-365.

Lancaster, B.J. Magic Circle: An approach for Self Concept Enhancement in Children (Doctoral Dissertation, The University of Oklahoma Health Services Centre, 1977). Dissertation Abstracts International, Sept. 1977, vol. 38, Part B 3, p.1138. (University Microfilms no. 17 18 270)

Limbacher, W. Dimensions of Personality. Dayton: Pflaum, 1973.

Martin, L.L. and Hershey, H. An Exploratory Investigation of the Effects on a Biofeedback Technique with Hyperactive, Learning Disabled Children. Chicago: Paper presented at the Annual International Convention, The Council for Exceptional Children, April, 1976. (ERIC Document Reproduction Service no. ED 126 640).

Medway, F.J. and Smith, R.C. An Examination of Contemporary Elementary School Affective Education Programs. Psychology in the Schools, 1978, vol. 15, p.260-269.

Meichenbaum, D.H., and Goodman, J. Training Impulsive Children to Talk to Themselves: A Means of Developing Self Control. Journal of Abnormal Psychology, 1971, vol. 77, no. 2, p.115-126.

Mestler, J.E. Behavioral Changes of Elementary Students Involved in the Human Development Program (Bessell - Palomares) (Doctoral Dissertation, United States International University, 1975). Dissertation Abstracts International, Mar. 1975, vol. 35, Part B 9, p.4630-4631. (University Microfilm no. 75-4293).

McGee, G.A. An Evaluation of the Effects of the Bessell-Palomares Human Development Program on Five Year Olds in an Appalachian Head Start Class (Doctoral Dissertation, University of Tennessee, 1971). Dissertation Abstracts International, Feb. 1972, vol. 32, Part A 8, p.4329. (University Microfilm no. 75-5462)

McKenzie, H.S., Clark, M., Wolf, M.M., Kothera, R., and Benson, C. Behavior Modification of Children with Learning Disabilities using Grades and Allowances as back up Reinforcers. Exceptional Children, 1968, vol 34, p.745-752.

McWhirter, J.J. The Learning Disabled Child A School and Family Concern, Champaign, ILL.: Research Press, 1977.

O'Leary, K.D., Drabman, R., and Kass, R.E. Maintenance of Appropriate Behavior in a Token Program. Journal of Abnormal Child Psychology, 1973, vol. 1, p.127-138.

Palkes, H., Stewart, M., Freedman, J., "Improvement in Maze Performance of Hyperactive Boys as a Function of Verbal-Training Procedures", Journal of Special Education, 1971, vol. 5, p.337-342.

Palomares, U.H., Collins, H., and Barone, J.V. Teachers Like Children Will Grow: Associate Trainer Manual. La Mesa, Calif., Human Development Training Institute, 1975.

Palomares, U.H., and Ball, G. Magic Circle Human Development Program Supplementary Idea Guide, La Mesa, Calif.: Human Development Training Institute, 1975.

Patterson, G.R., Jones, R., Whittier, J., and Wright, M.A. A Behavior Modification Technique for the Hyperactive Child. Behavior Research and Therapy, 1965, vol. 2, p.217-226.

Popham, W.J. and Sirotnik, K.A. Educational Statistics Use and Interpretation (2nd ed.). New York, Y.Y.: Harper and Row, Publisher, 1973.

Ridberg, E.H., Parke, R.D., and Hetherington, E.M. Modification of Impulsive and Reflective Cognitive Styles through Observation of Film Mediated Models. Developmental Psychology, 1971, vol. 5, no. 3, p.369-377.

Riegelman, E.D., Brown, A., Knight, M.F., and Egner, A. An Evaluation of the Effect of an Oven Timer on Study Behavior and Concurrent Completion and Accuracy of Assignments for a First Grade Repeater: A Case Study. Burlington, Vermont; University of Vermont, Special Education Program, 1974. (ERIC Document Reproduction Service no. 104 044).

Ross, A.O. Psychological Aspects of Learning Disabilities and Reading Disorders. New York, N.Y.: McGraw - Hill, Inc., 1976.

Ross, A.O. Learning Disability The Unrealized Potential. New York, N.Y.: McGraw - Hill, Inc., 1977

Simpson, D.D., and Nelson, A.E. Attention Training Through Breathing Control to Modify Hyperactivity. Journal of Learning Disabilities, May 1974, vol. 7, no. 5, p.274-283.

Sroufe, A.L., Sonies, B.C., West, W.D., and Wright, F.S. Anticipatory Heart Rate Deceleration and Reaction Time in Children with and without Referral for Learning Disabilities. Child Development, 1973, vol. 44, p.267-273.

Stott, D.H. Behavioral Aspects of Learning Disabilities: Assessment and Remediation. Guelph, Ontario: University of Guelph, Center for Educational Disabilities, 1971.

Strickler, R.W. Evaluation of H.D.P. and other Guidance Materials. Aston, Pennsylvania: Penn-Delco School District, 1973.

Swift, S., and Spivack, G. Clarifying the Relationship between Academic Success and Overt Classroom Behavior. Exceptional Children, Oct. 1969, vol. 36, no. 2, p.99-104.

Sykes, D.H., Douglas, V.I., Weiss, G., and Minde, K.K. Attention in Hyperactive Children and the Effect of Methylphenidate (Ritalin). Journal of Child Psychology and Psychiatry, 1971, vol. 12, p.129-139.

Thomas, G.M. Using Videotaped Modelling to Increase Attending Behavior. Elementary School Guidance and Counselling, Oct. 1974, vol. 9, no. 1, p.35-40.

Trabasso, T., and Bower, G.H. Attention In Learning: Theory and Research. New York, N.Y.: Wiley, 1968.

Wagner, R.F., and Guyer, B.P. Maintainance of Discipline through Increasing Children's Span of Attention by Means of a Token Economy. Psychology in the Schools, 1971, vol. 8, p.285-289.

Werner, C.S., and Simpson, R.L. Attention to Task and Completion of Work as a Function of Level of Adjustment and Educational Environment. Journal of Educational Research, Oct. 1974, vol. 68, no. 2, p.56-58.

West, M.G., and Axelrod, S. A 3-D Program for L.D. Children. Academic Therapy, Spring 1975, vol. 10, no. 3, p.309-319.

Winer, B.J. Statistical Principles in Experimental Design (2nd. ed.). New York: McGraw - Hill, 1971.

Woolfolk, A.E., and Woolfolk, R.L. A Contingency Management Technique for Increasing Student Attention in a Small Group Setting. Journal of School Psychology, 1974, vol. 12, no. 3, p.204-212.

APPENDIX I

Task Attention Criteria

Eye attention is the primary criterion, but head and body attention are acceptable subject to specifications listed below.

I. Eye Attention

a. Child's eyes must be on task or teacher when

1. Teacher is talking to class.
2. Teacher is talking to him individually or helping him.
3. Child is doing an assignment at his desk.

Note: Eyes not to shift to folders, box, etc. during a task unless these are being employed during the task.

During task at desk, no loud noises or talking to others, but whispering to self permitted.

b. Child's eyes must be on speaker when involved in group discussion.

II. Head Attention

a. Child's head must be facing task when back turned to observer.

III. Body Attention

a. Child must be sitting in chair quietly when:

1. Hand is up waiting for the teacher.
2. All other waiting periods (e.g. when finished task, before recess and dismissal).

IV. General

a. Child is not credited when he calls out to teacher, talks to classmate during work periods, or sits and plays with objects at his desk.

*b. If he leaves his seat or the room without permission during twenty second observation, complete that interval then do not time until he returns.

*c. If sent on errand in the room (e.g. go to a centre, sharpen pencil etc.) credit body attention (e.g. does not disturb others, touch irrelevant objects, and goes directly to assigned area). Do not time child when sent out of room by teacher on errand or when he goes to the bathroom or for drink outside.

*d. If taken from the room for misbehavior (e.g. sent to spend time in hallway) do not time beyond interval already commenced.

e. Child who holds pencil during waiting period is not docked unless he plays with it.

f. When teacher says "stop" child has thirty seconds to put pencil down and work away before being docked.

g. Any time an observer sees or hears an assignment being disobeyed by child (during a child's twenty second observation), the child must be docked (e.g. if it can be seen that the child has not finished all math problems and he has put himself into a waiting period instead of completing the task). If, however, an observer cannot see whether the task is completed or not, or if he has not heard the teacher assign the child to a specific task, the

child is not docked for a self-imposed waiting period; the criterion being that he engaged in task for at least thirty seconds before stopping.

h. Child is not docked for looking at date on blackboard or any other words, etc. which teacher wrote there, that are part of the assigned task.

Task Attention Criteria taken from Hewett, 1968, p.348-350.

*Material marked by an asterisk in the Task Attention Criteria indicates information added and deemed necessary for the present experiment.

APPENDIX II

The Attention Rating Instrument Record form and description of its use

Use of the Attention Rating Instrument Record form:

1. Fill in all required pre-information on the form (e.g. teacher's name, observer's name, date of observation, etc.).
2. Names of subjects are to be randomly selected for placement on the form. This order will remain unchanged except for a rotation of subjects to be observed first. At the end of each complete observation session, the first name will be placed at the bottom of the list will all other names moving up.
3. Recording of points for task attention:
   a. Each point in a twenty second observation interval will be recorded with a hand counter. At the end of the twenty second observation, the score on the counter will be transferred to the record form.

      See figure 1. marked a.
   b. Upon completion of a twenty second observation of the first child recorded on the form, proceed to the second child for observation with him. Follow through the names from top to bottom until twenty observations of each child are complete.
   c. When all children have been observed for twenty, twenty second observations, a daily total for each child should be calculated

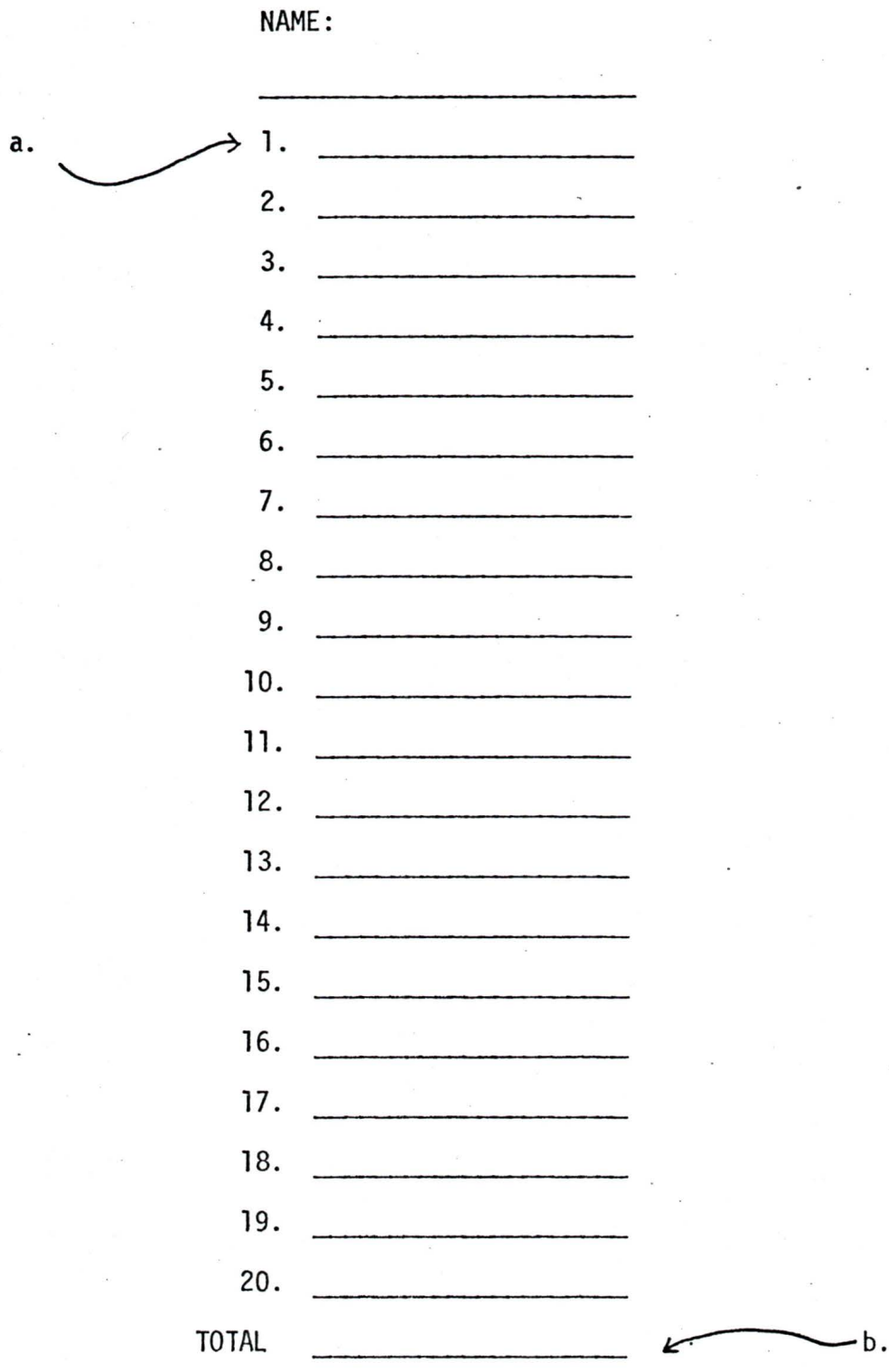


Figure 1. A selection of the Attention Rating Instrument.

by adding the scores on the twenty second observations. See figure 1. marked b.

4. All further information is filled in on the form (e.g. subjects being taught during observations, brief description of activities students were involved in, etc.).
5. Names of the children are then to be placed on a new record form ready for the next observation session.
6. Completed record form is taken to the experimenter.

ATTENTION RATING INSTRUMENT

RECORD FORM

Date of Observation _____ Classroom Teacher _____

Time of Observation _____ Observer _____

Name	Name	Name	Name	Name	Name	Name
_____	_____	_____	_____	_____	_____	_____
1._____	1._____	1._____	1._____	1._____	1._____	1._____
2._____	2._____	2._____	2._____	2._____	2._____	2._____
3._____	3._____	3._____	3._____	3._____	3._____	3._____
4._____	4._____	4._____	4._____	4._____	4._____	4._____
5._____	5._____	5._____	5._____	5._____	5._____	5._____
6._____	6._____	6._____	6._____	6._____	6._____	6._____
7._____	7._____	7._____	7._____	7._____	7._____	7._____
8._____	8._____	8._____	8._____	8._____	8._____	8._____
9._____	9._____	9._____	9._____	9._____	9._____	9._____
10._____	10._____	10._____	10._____	10._____	10._____	10._____
11._____	11._____	11._____	11._____	11._____	11._____	11._____
12._____	12._____	12._____	12._____	12._____	12._____	12._____
13._____	13._____	13._____	13._____	13._____	13._____	13._____
14._____	14._____	14._____	14._____	14._____	14._____	14._____
15._____	15._____	15._____	15._____	15._____	15._____	15._____
16._____	16._____	16._____	16._____	16._____	16._____	16._____
17._____	17._____	17._____	17._____	17._____	17._____	17._____
18._____	18._____	18._____	18._____	18._____	18._____	18._____
19._____	19._____	19._____	19._____	19._____	19._____	19._____
20._____	20._____	20._____	20._____	20._____	20._____	20._____
TOTAL___	TOTAL___	TOTAL___	TOTAL___	TOTAL___	TOTAL___	TOTAL___

GROUP TOTAL _____

Subject/s being taught during observations _____

_____

Brief description of activities students were involved in (e.g. center activities, boardwork, group work, learning games, etc.)

APPENDIX III

Observer Training in use of the Attention Rating Instrument

Sessions

Section I

A. Description of Attention Rating Instrument:
   1. Discussion of material included in the Measurement Instrument Section of this thesis.

B. Discussion of Task Attention Criteria:
   1. The Task Attention Criteria will be read through, with the observers discussing each section. Questions of the observers will be answered as they come.

C. Practice in measurement of from one to twenty second periods without use of a stopwatch:
   1. Observers practice counting off seconds and comparing with a stopwatch, checking accuracy.
   2. Observers continue to practice until they are able to count off seconds in twenty second intervals with 90% accuracy as compared to a stopwatch.

D. Recording points for task attention:
   1. Material in Appendix II will be discussed with questions which may occur being answered by experimenter.
   2. Record forms will be given to each observer to practice observing and recording at home.

Section II

A. Discuss any questions of material covered in Section I.

B. Practice making observations of a child from a video, with results being discussed as the video is viewed a second time.

C. Use of video for observation until a 90% inter-rater agreement is reached. (As many sessions as necessary are used to reach this criterion).

VITA

Surname: HAUGLAND Given Names: Harry Christian

Place of Birth: Prince Rupert, B.C. Date of Birth: October 13, 1947

Educational Institutions Attended, with Dates of Entering and Leaving:

Selkirk College, Castlegar, B.C.	1966 to 1967
University of Victoria, B.C.	1967 to 1980
	____ to ____
	____ to ____

Degrees, Diplomas, Etc., Awarded, with Dates and Names of Institutions:

B.Ed.	1974	University of Victoria, Victoria.

Honors and Awards:

Arrow Lakes Teachers' Association Bursary 1966

Government of the Province of British Columbia Scholastic Award 1973/74

University of Victoria Graduate Scholarship 1975/76

Publications:

PARTIAL COPYRIGHT LICENSE

I hereby grant the right to lend my thesis or dissertation (the title of which is shown below) to users of the University of Victoria Library, and to make *single copies only* for such users or in response to a request from the library of any other university, or similar institution, on its behalf or for one of its users. I further agree that permission for extensive copying of this thesis for scholarly purposes may be granted by me or a member of the University designated by me. It is understood that copying or publication of this thesis for financial gain shall not be allowed without my written permission.

Title of Thesis/Dissertation

The Effect of the Human Development Program on the Attending Behavior of Grade One, Two, and Three students.

Author [redacted]

Signature

Harry Christian Haugland

Name (typewritten)

September 5, 1980

Date