A STUDY TO DETERMINE THE EFFECTS OF A CENTERING EXERCISE ON THE SELECTIVE ATTENTION OF FIFTH GRADE CHILDREN

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1972

Submitted to the Faculty of the Graduate College
of the Oklahoma State University
in partial fulfillment of the requirements
for the Degree of
Master of Science
May, 1978

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PREFACE

This study was concerned with the effects of a centering exercise on the selective attention of a group of fifth grade children. The idea for the study grew out of my concern and interest in working with children. In the course of my work with children, I had encountered many books and articles with ideas for intervention strategies that would be useful in the regular classroom. However, I found little research that had explored the effects of the use of many of these intervention strategies and decided to do some exploring myself.

There are many people who have crossed my path and who deserve thanks for their sharing and support in helping me get this far. First, I would like to extend my thanks to my committee members, Dr. Paul Warden, Dr. Joe Pearl, and Dr. Dave Perrin. I appreciate your humor, support, and teaching that were valuable in helping me survive this project. A special note of thanks goes to Dave Perrin for the extra time and support given without prior knowledge of this student's capabilities.

To the many friends in Tulsa and Tahlequah, who listened and shared, I would like to extend my thanks and warm appreciation. You listened to many of the trials and tribulations of a procrastinator and shared in the joy of a completed project.

And to my friends, Jim and Linda Reese, I would like to extend my warmest thanks. Your sharing of books, ideas, and technical advice on how to use a library was much appreciated.

Much appreciation is also extended to the students and teachers at Town and Country School in Tulsa, Oklahoma. Without your assistance and care this study would not have been done.

And to my typist, Joyce Gazaway, a warm note of thanks for a fine job. Also, much thanks and appreciation for the extra work you put into helping me finish.

And to my parents, Marie and Pete, this thesis is dedicated. I love you for your support and care and nagging and kindness and financial aid. Thanks so much for all of it and your hugs when I needed them.

And for really pushing me to the point where I could finally complete this thesis, I wish to extend my thanks and love to Al. There were many times when your trust in me was more than my own. Thank you, thank you, thank you for helping me to know I could do it!

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CHAPTER I

THE RESEARCH PROBLEM

Introduction

Historically speaking, educational practices have progressed from teaching with emphasis on the cognitive domain to an inclusion of affective domain variables in teaching objectives. Controversy has been evident in the past 10 years as to whether or not affective domain objectives are appropriate goals for the educational system. Despite the controversy over the use of affective domain objectives, school teachers are expressing a desire to assist students in developing self-help, emotional control, and rational problem-solving skills (Knipping, Maultsby, and Thompson, 1976). These types of skills can be considered affective domain variables and can be applied in the curriculum as part of the educational objectives for a particular class.

Currently, there is a growing philosophy that considers the development of the intuitive, non-verbal, creative part of the child as a function and role of educational practitioners (Hendricks and Roberts, 1977). This development is creating a need for methods and techniques that help achieve affective domain objectives. At this point in time, several methods have been devised. These cover a wide range of strategies from using yoga in the classroom to the use of guided fantasy, meditation or relaxation. The line of thought expounded is that the use of these

strategies will have an enhancing effect on the learning of cognitive skills. Ideally, a child who is relaxed and free to express herself/himself will perform better in academic areas which involve cognitive domain objectives. However, few studies have employed the use of affective domain intervention strategies in a systematic way. Regardless of this, there are currently many articles and books full of them. This leaves the teacher in a position to use techniques that are not specified in terms of the behavior outcome. Therefore, it becomes important to systematically study the behaviors which are effected by affective domain objectives.

The Problem

In the regular classroom, much time and energy is often spent getting the children to settle down. Experience and research demonstrates that the ability to learn is influenced by the amount of attention one gives to the task. Obviously, when a child is engaged in other activity, be it daydreaming or annoying other children, she/he will be unable to focus her/his attention on a particular unit of instruction.

A regular school day is usually divided into segments, each one focusing on a particular topic. During the structured activities, the teacher usually has the child's attention. However, there are at least two periods of the day when a child is left to her/his own recourses for the most part--lunch and recess. Following these times, the teacher often has to calm the children before beginning the next lesson. The problem becomes one of effectively getting the children to focus their attention.

As indicated previously, there are several intervention strategies that can be used in the regular classroom. This study is designed to question the effectiveness of a type of intervention strategy on the attending behavior of a group of fifth grade children. The strategy employed is a centering exercise. As the word "centering" implies, an exercise such as this should help a child to focus or center her/his attention.

Purpose of the Study

The purpose of the present study was to explore the use of an intervention strategy which can be easily employed by the classroom teacher and which has some measurable effect on a desirable behavior such as attention. It has previously been pointed out that teachers usually have difficulty getting children to settle down following a period of unstructured activity, i.e., lunch or recess. These periods of the day allow a child to release energy in her/his own manner. Often, it is distasteful to children to have to come back in the classroom, sit down, and focus attention on a cognitive task.

In this study, children were given a centering exercise following their lunch period. The exercise lasted for 15 minutes a day for four consecutive days. Since the purpose of the study was to give the teacher a useful tool in the classroom, the exercise was conducted in the classroom. Following the centering exercise, a test of selective attention was given to the group of children. It was hypothesized that a centering exercise would help children to focus their attention, as measured by the test of selective attention.

Research Data

Since the goal of this study was to determine the effectiveness of a centering exercise on the selective attention of a participant in the exercise, it was necessary to use a test of selective attention as a dependent variable.

The Goldman-Fristoe-Woodcock Selective Attention Test (Goldman-Fristoe-Woodcock, 1974) was administered. This is one of several tests comprising the Goldman-Fristoe-Woodcock Battery. It was designed to assess the ability to attend under increasingly difficult listening conditions. The test administration was revised to meet the conditions of the present study.

In order to simulate a classroom learning activity, the test was revised to be administered to a group. Each day a total of 30 items were pre-recorded on a tape recorder to be used as a stimulus item. The first four items were presented with no distracting sound (Quiet condition). Thirteen items were presented with a steady fan noise (Fan condition) and 13 items with a noisy cafeteria background (Cafeteria condition). The latter two conditions were designed to make the listening task more difficult. On days 1 - 3 - 5 - 7, the Fan condition was presented first following the Quiet condition and on days 2 - 4 - 6 - 8, the Cafeteria condition was presented first following the Quiet condition.

Each child was given an answer sheet and instructed to circle the number which was a picture of the item that they heard on the tape. Cards with four pictures on them were held up to the group. Each picture was numbered and corresponded to the taped stimulus word. In this

way, a total score for each day would give a measure of selective attention.

Research Questions

This study was designed to answer the following questions:

1. Does a group of children perform better on a test of selective attention following a centering exercise?
2. Does background noise have an effect on a child's ability to selectively attend to a stimulus?

Definitions

Centering exercise: An exercise designed to help the body achieve total relaxation, employing the mind to bring a serenity to the total organism.

Selective attention: The ability to focus attention on a task so as to produce a correct response.

Unstructured activity: A period of time during which a child is free to express herself/himself in any manner she/he wishes, i.e., recess or lunch.

Structured activity: A period of time in which the teacher directs the activity of a group of children.

Limitations

This study was conducted with two groups of fifth grade children from Town and Country School in Tulsa, Oklahoma. This is a privately funded school for children with special learning problems. The children are grouped in classes composed of five to eight children. The results

of the present study may only be generalized to fifth graders from Town and Country School.

CHAPTER II

A REVIEW OF RELATED LITERATURE

Introduction

The purpose of this chapter is to review research that is related to the goals of this study. Initially, current educational practices and implications for the child in the classroom will be discussed. Following this will be a brief review of studies dealing with relaxation and meditation, as these techniques are very similar to the centering exercise used in this study. Finally, research which investigates the use of movement in education and body awareness exercises in the classroom will be discussed.

Current Educational Practices

The educational system in this country is one of the most influential elements in the growth and development of children. It has been constructed in such a way as to attempt to meet the cognitive and affective needs of children. Recent reviews of educational practices seem to indicate that too much emphasis has been placed on the cognitive variables. The child's ability to think and do is being enhanced and yet, some critics feel that education has ignored the intuitive, nonverbal, creative part of the child. One of the most important developments of the last few years is the accelerating expansion of transpersonal

psychology and education (Hendricks and Roberts, 1977). This means that the study of consciousness is being incorporated into education. With this, new ways of teaching are being explored.

These new methods do not focus on the academic needs of the child. They focus instead on expanding the child's awareness of herself/himself and her/his relationship to the environment. They focus on more personal goals that the child will be able to transfer into problem-solving situations outside of the classroom. Exponents of these practices report that these methods often enhance learning (Hendricks and Roberts, 1977). Teachers can read and use them with expectations that their students will improve. However, not many studies have been conducted to explore the behavioral outcome of such educational practices. Therefore, the teacher is left to her/his own resources, applying techniques that are based on theoretical assumptions and not necessarily real life situations.

In the classroom, a good deal of time is often devoted to correcting inappropriate behavior (Downing, 1976). It is assumed that the elimination of behavior that is not desirable would improve instructional efficiency. This study was designed to investigate one variable and that is the child's ability to attend following unstructured physical activity. There are some children who seem to "wind up" as a result of physical activity (Hopkins and Hopkins, 1977). This, of course, results in inappropriate behavior since a child is not then attending to instruction.

In order to develop cognitive functions, a child must be able to limit motor activity and focus attention. As a first step in remediation of learning difficulties, a child needs to be taught some way to

attend (Hill and Gattis, 1976). The majority of studies dealing with teaching children how to control impulses and attend have been in the area of behavior modification.

Behavior modifiers have developed many teacher-administered, externally controlled techniques for helping children control impulses (Robin, 1976). The major fault with these approaches has been a return of in- behavior after treatment. Essentially, these approaches have not given the child an effective tool to apply by herself/himself. They are intervention strategies used for one specific situation, but are not often applicable as part of the standard curriculum (Klein, 1976). Therefore, they are not being used by the teacher who wishes to improve attending behavior within her/his day-to-day situation.

Relaxation and Meditation

In dealing with the problem of getting children to settle down following periods of unstructured activity, it seems that the intervention would be of such a nature as to be applicable in the standard curriculum. The problem could be solved by an activity that would take place daily in the classroom and that would be conducted by the teacher. There are currently books of exercises which proport to develop attending behavior (Chenfeld, 1976; Norton, 1977; Wirth, 1976). However, not enough research has been conducted to show how these can be appropriately applied.

The majority of the research conducted that deals with selective attention has been in the areas of relaxation and meditation. In a study by Linden (1973), meditation is considered to be a method of training attention. The ideas presented in this study indicate that training

individuals to meditate intensifies their awareness to environmental sensory data. Individuals who are trained in meditation are also taught to relax.

The processes which go on during meditation are very similar to the process of centering. Essentially, a person is taught to focus her/his awareness. In a centering exercise, the individual is also taught to focus her/his awareness.

Many studies have used relaxation as a self-control procedure for reducing anxiety (Wolpe, 1973; Deffenbacker and Payne, 1977). The procedure has been shown to be effective in various settings. It has been hypothesized that relaxation can be applied as a generalized coping skill. If this is so, then the use of relaxation in the classroom may possibly have an effect on attending behavior.

Proponents of the use of new techniques being used in the classroom argue that an emphasis needs to be placed on process variables (Hendricks and Roberts, 1977). This would mean that children would change their process behavior, how they go about achieving goals, and learn to deal more effectively with their environment. Daily use of a centering exercise in the classroom may, in fact, provide a useful tool for achieving objectives that deal with the process of learning.

Movement and Body Awareness

There are research findings which support the use of motor activity to lengthen attention span (Cratty, 1969). This leads one to question whether or not these findings can be applied to the classroom. Hopkins and Hopkins (1976) suggested a psychomotor program as an aid in teaching children how to relax and settle down following physical activity.

This is fine, but the problem is that most teachers are not trained to organize a psychomotor program. A common complaint heard is that techniques are needed which can be integrated into the standard curriculum and used in the classroom.

Proponents of movement education feel that movement and awareness of one's body are necessary elements of learning (Hansen and Hansen, 1973). Children often learn to suppress their feelings by intellectualizing about them. As an addition to the curriculum, movement education can provide a way for children to experience their feelings and personalize the activity in the classroom (Dimondstein, 1971). Common sense tells us that when feelings of anxiety are present, learning efficiency will be reduced.

In movement and body awareness exercises, a child learns to focus her/his attention on specific body parts. This ability to focus attention may transfer to other aspects of a child's situation, increasing cognitive as well as affective functioning (Wirth, 1976). A centering exercise is simply the first step in using movement as a viable intervention in the classroom. For teachers to be able to apply these techniques, it is first necessary to conduct research defining the behavioral outcomes of the use of such techniques.

CHAPTER III

RESEARCH METHOD AND DESIGN

Selection of Subjects

Subjects (N = 10) for this study were selected from Town and Country School in Tulsa, Oklahoma. Their ages range from 10 years, 5 months to 11 years, 5 months. This group was chosen because the teachers had expressed a desire for an intervention strategy that would be useful in helping children settle down after lunch.

Since it was necessary to simulate a regular classroom, the subjects were not randomly assigned to treatment. Instead, classes were kept intact and all subjects received both treatment and non-treatment conditions. This allowed for a situation which was realistic in terms of the teachers' needs.

Prior to conducting the study, parental releases were obtained for all subjects that participated in the study.

Research Design

This study was designed to assess the effects of a centering exercise on the selective attention of children in the classroom. The purpose was to determine whether or not a centering exercise would be a useful tool for the teacher in helping children settle down following a period of unstructured activity, such as lunch.

In order to provide for a normal classroom situation, the classes were kept intact. Group A was assigned to the treatment condition for four days followed by four days of no treatment. Group B received four days of no treatment followed by four days of treatment. This allowed for a measure of selective attention for all subjects under treatment and non-treatment conditions. Reversing the order of treatment/no-treatment with the two groups provided a control for the practice effect of taking the test of selective attention.

A third factor, noise, was also analyzed in terms of its effect on selective attention. On days 1 - 3 - 5 - 7, the stimulus words under the Fan condition followed the Quiet condition. On days 2 - 4 - 6 - 8, the Cafeteria condition followed the Quiet condition.

Teachers remained in the classroom during the intervention by the examiner.

For eight consecutive days, the examiner entered the classroom for the last 15 minutes of the lunch period. On the first four days, the treatment group (Group A) was given the centering exercise followed immediately by the test for selective attention. During the first four days, Group B was simply given the test for selective attention. On the last four days, the procedure was reversed so that Group A received the test only and Group B received the treatment and the test.

Raw scores on the test of selective attention were obtained for each subject daily. These scores were then added together and a total mean score for each class, each day was obtained. Mean scores were also obtained for each subject over all treatment and non-treatment days.

The data was analyzed by a three factor mixed design analysis of variance with repeated measures on two factors (Bruning and Kintz, 1968).

The .05 level of confidence was chosen as the level where the differences between conditions would be significant.

In the analysis of the data, the number of days in the experiment was changed from eight days to four days. It was assumed that treatment-control and control-treatment order was irrelevant. In essence, Group A and Group B received four days of treatment and four days of control. Since the order was assumed to be irrelevant and was not accounted for in the design it becomes confounded with the differences between the groups. Therefore, group differences may be partially due to the treatment-control versus control-treatment order. However, if there are treatment differences found, then the subjects would receive treatment and the order of treatment-control becomes a trivial factor.

Research Questions

This study was designed to answer the following questions:

1. Does a group of children perform better on a test of selective attention following a centering exercise?
2. Does background noise have an effect on a child's ability to selectively attend to a stimulus?

The Test Instrument

The instrument used to provide a measure of selective attention was the Goldman-Fristoe-Woodcock Selective Attention Test (Goldman-Fristoe-Woodcock, 1974). This instrument was designed to assess the ability to attend under increasingly difficult listening conditions. The test is an individually administered measurement. The materials consist of 110 items divided into four parts, prerecorded tapes, and response forms.

The first part of the test consists of items presented with no distracting sound, the second consists of items presented with a fan noise background. The third and fourth parts consist of items presented with a cafeteria noise background and a verbal distraction background, respectively.

Revision of the test administration was necessary in order to meet the goals of the present study. In this study, classes were kept intact for presentation of treatment and test of selective attention. Therefore, the test of selective attention had to be given to the group as a whole. Administration time had to be kept to a minimum in order to provide a more concise measure of selective attention following treatment. Therefore, only 30 stimulus items were used and the fourth part of the original test was not used.

In the revised version, only three noise conditions were presented. The total number of items was broken down into 30 items by random selection of items from the original test. The first four items were presented with no distracting sound (Quiet condition). Thirteen items were presented with a fan noise (Fan condition) and 13 items with a cafeteria noise background (Cafeteria condition). Each day, the background noise was varied by changing the order of presentation. The four items in the Quiet condition were always presented first. On days 1 - 3 - 5 - 7, the 13 items in the Fan condition followed the Quiet condition and the 13 items in the Cafeteria condition were presented last. On days 2 - 4 - 6 - 8, this presentation was reversed, the 13 items in the Cafeteria condition were presented before the 13 items in the Fan condition. The items or stimulus words varied from day to day.

Response forms consisted of 30 items with four choices for each one. The children were instructed to circle the number corresponding to the picture of the word they heard. The examiner would hold up four pictures, numbered 1 - 2 - 3 - 4, while a tape recorded voice provided the word-item.

The number of correct responses was computed for each day. This provided a total raw score which represented the number of correct responses. These scores were then tabled for each subject in both treatment and no-treatment conditions.

Procedure

Before beginning, the examiner went into each class to introduce the study and to provide an example of how to respond to the test. Prior to conducting the actual experiment, the examiner made arrangements with the classroom teachers to enter the classroom during the last 15 minutes of the lunch hour. Collection of the data was accomplished by administering the treatment and the test instrument to the two groups of children for eight consecutive school days.

On the first four days of the experiment, the examiner went into Group A's class during the latter part of the lunch period. The five children participating were seated around the examiner for the centering exercise (see Appendix, p. 29). They were told that this would help them to relax and were instructed to get comfortable and to close their eyes. The exercise took 15 minutes. Following this, response forms were given out and the test of selective attention was administered. The examiner then went into Group B's class and for the first four days administered only the test of selective attention during the latter part

of their lunch period. This group was given no further instructions the first four days. On the last four days, following lunch, Group B received the centering exercise prior to test administration. Group A was given the test only, following their lunch period, and no further instructions were presented.

Summary

In this chapter, the design of the study was described. This included a description of the subjects and the test used. A revised administration of the Goldman-Fristoe-Woodcock Test of Selective Attention (Goldman-Fristoe-Woodcock, 1974) was used as the response measure for two groups of fifth grade children from Town and Country School in Tulsa, Oklahoma. Each group participated in the treatment and no-treatment conditions at different times. An analysis of variance in a three factor mixed design with repeated measures on two factors was employed to analyze the data. The .05 level of confidence was chosen as the level of significance.

CHAPTER IV

RESULTS

The purpose of this chapter is to present the results of the study in terms of an analysis of the data. This study sought to answer two research questions. These questions were addressed to discovering the effects of treatment (centering exercise) on the selective attention of a group of fifth grade children and the effects of background noise on the selective attention of a group of children.

Scores were obtained from each subject's response to the revised administration of the Goldman-Fristoe-Woodcock Test of Selective Attention (Goldman-Fristoe-Woodcock, 1974). Regardless of whether or not a class received treatment, they were administered the test of selective attention. This provided a raw score for each subject for eight consecutive days yielding a total of 80 raw scores.

With regard to the scores on the test of selective attention, the analysis of variance (Table I) revealed a significant difference between the two groups ($F = 12.77$, $df = 1,8$, $p < .05$). The sample means of the two groups were Group A = 22.63 and Group B = 23.50. This is understandable since the subjects were not randomly assigned to treatment conditions. Classes were kept intact and, as the analysis of variance revealed, the performance of the two groups was different.

In answer to the first research question regarding the effects of treatment, the analysis of variance revealed no significant effect of

TABLE I

ANALYSIS OF VARIANCE SUMMARY TABLE FOR
SELECTIVE ATTENTION SCORES

Source	SS	df	ms	F	p
Total	23,809.19	79	-		
Between Subjects	370.56	9	-		
Groups (G)	227.81	1	227.81	12.77	<.05
$Error_b$	142.75	8	17.84	-	
Within Subjects	23,438.63	70	-	-	n.s.
Treatment (T)	78.01	1	78.01	.04	n.s.
Days (D)	468.14	3	156.05	6.12	<.05
G x T	501.14	1	501.14	0.26	n.s.
G x D	6.74	3	2.25	0.09	n.s.
T x D	12.54	3	4.18	0.02	n.s.
G x T x D	382.02	3	127.34	0.52	n.s.
$Error_1$	15,431.98	8	1,929.00		
$Error_2$	612.21	24	25.51		
$Error_3$	5,946.66	24	247.78		

the treatment variable on selective attention ($F = .04$, $df = 1,8$, $p > .05$) and no group by treatment interaction ($F = .26$, $df = 1,8$, $p > .05$). There was also no treatment by days interaction ($F = .02$, $df = 3,24$, $p > .05$) and no significant groups by days interaction ($F = .09$, $df = 3,24$, $p > .05$) Furthermore, there was no significant groups by treatment by days interaction ($F = .52$, $df = 3,24$, $p > .05$). The significant difference between the two groups contributed to much of the variance in the scores of selective attention. These results failed to support the hypothesis that the treatment would significantly affect scores on a measure of selective attention.

With regard to the second research question concerning the effects of background noise, the analysis of variance revealed a significant effect of days ($F = 6.12$, $df = 3,24$, $p < .05$). These results suggested that differences in background noise does affect a child's ability to selectively attend.

In order to determine whether or not there is a difference in the order of presentation of the noise conditions, a student's t-ratio was employed. This provided an analysis of the difference between mean scores on days when the Fan condition came first and days when the Cafeteria condition was presented first. The t-ratio obtained was 2.14 with 24 degrees of freedom. This is significant at the .05 level of confidence (two-tailed). These results indicate that there was a significant difference in performance when order of presentation of noise conditions was alternated. When the Cafeteria condition was presented first, better scores were obtained on the test (Table III).

TABLE II

TABLE OF MEANS

Group	Treatment			Control		
	Fan	Cafeteria	Q + F + C	Fan	Cafeteria	Q + F + C
Group A	10.45	8.60	22.05	9.95	9.80	23.20
Group B	12.55	12.00	23.55	10.25	9.75	23.45
Total	23.00	20.60	45.60	20.20	19.55	46.65

TABLE III

MEAN SCORES FOR FAN AND CAFETERIA CONDITIONS OVER ALL DAYS

Condition	Mean Fan Condition	Mean Cafeteria Condition
Fan First	20.35	19.40
Cafeteria First	22.85	20.25
Combined	21.60	14.83

CHAPTER V

SUMMARY, CONCLUSIONS AND DISCUSSION

Summary

The primary purpose of this study was to determine the effects of a centering exercise on the selective attention of fifth grade children. A second hypothesis was generated in order to determine the effects of background noise on the selective attention of fifth grade children. The test used to measure selective attention was the Goldman-Fristoe-Woodcock Test of Selective Attention (Goldman-Fristoe-Woodcock, 1974). Administration procedure of this test was revised in order to meet the conditions of the present study.

Ten children in the fifth grade at Town and Country School in Tulsa, Oklahoma, were administered the test of selective attention daily for eight consecutive school days. The children were divided into two groups according to class so that classes remained intact. Each class received treatment and no-treatment conditions. The data obtained were analyzed by using an analytis of variance in a three factor mixed design with repeated measures on two factors.

Conclusions and Discussion

The first research question was concerned with the effects of the treatment (centering exercise) on the selective attention of fifth grade

children. The results of the statistical analysis failed to support the major research question. That is, the centering exercise had no significant effect on the attending behavior of fifth grade children. As indicated previously, teachers have expressed a desire for an intervention strategy which would help children settle down following periods of unstructured activity, such as lunch. Since the treatment had no significant effect on the attending behavior of the children, one may be lead to conclude that this is not a useful intervention strategy in the classroom. However, before this conclusion can be accepted, other explanations must be considered. There are at least two factors which may have produced the non-significant results.

The first factor to be considered is the amount of time that subjects were in the treatment condition. For each class, there were only four days of treatment and these periods were 15 minutes long. Studies on meditation and relaxation have exposed subjects to much longer treatment conditions (Linden, 1973). It is highly possible that the four days were not enough time to produce an effect.

A second factor to be considered in view of the non-significant results of treatment is the fact that the examiner conducted the centering exercise. The children were not accustomed to this new person in the classroom or to the method of presentation of the exercise. It appears that if the teacher had been giving the exercise, the children would have been more familiar with her voice and style of presentation. The children reported that they had, in fact, benefited from the exercise. This was especially true as they became more accustomed to the examiner throughout the course of the experiment.

The second research question was concerned with the effects of background noise on the attending behavior of fifth grade children. The results of the statistical analysis indicated a significant effect for background noise. This supports the hypothesis that background noise will affect attending behavior.

Initially, the idea was that increased background noise would reduce scores on the measure of selective attention. In fact, it was thought that presenting the Cafeteria condition first would influence attending behavior in a negative manner. The results of the student's t-ratio reported in Chapter III indicated that there was a significant difference between scores on "Fan first" and "Cafeteria first" days. Perusal of the mean scores for each condition gives an idea of the direction of this difference. From Table III, it may be seen that mean scores were higher on days when Cafeteria noise was presented first.

A tentative conclusion was that children attended more and scored better when the Cafeteria condition was presented first. This was a more difficult listening condition and it is possible that this made the children attend better. Throughout the course of the experiment, getting a good score on the test became important to the children although no feedback was given. The better mean scores when the Cafeteria condition was presented first suggested that under this condition the children were trying harder.

The analysis of the results of this experiment indicated that the difference between the two groups of children was significant. This was expected since the groups were composed of intact classes. In order to apply an intervention strategy in a realistic situation, it was necessary to keep the classes intact. Personal observation by the researcher

concurred with the results of the analysis. In Class A, the teacher appeared to have more control of the children and this class had a more structured lunch period. In Class B, the teacher gave the children more freedom during lunch and did not appear to be as authoritative as the teacher in Class A.

In discussing the results of this study, there is one point which is necessary to present. This has to do with the response measure which proportedly measured selective attention. The test itself was a very difficult and tedious task. When in the control condition, the children only received the test. This made it important for them to do well since good scores on tests are important in school. It may be that attention was given to the task regardless of whether or not treatment preceded it.

Suggestions for Further Studies

This study might be replicated with a group of children in various grade levels to see if the effect of a centering exercise is related to age. Further, the length of time during which the centering exercise is used should be extended. For instance, a teacher could provide the exercise to her/his class for a whole semester or year. This would possibly allow for greater effects since a class would become accustomed to learning how to relax and may learn to transfer this ability to more situations.

Another suggestion for further study is to use a different measure of selective attention. In this study, the response measure was a difficult and tedious task. Perhaps there are other measures of selective attention which are not so tedious. For instance, a teacher could use learning rate on a unit of instruction following the centering exercise

as a measure of selective attention. One could then compare the performance of part of a class who receives the exercise preceding instruction with the performance of the children in the class who do not receive the exercise.

In conclusion, it is necessary to point out that intervention strategies such as the centering exercise used in this study may offer much to educational practice. Further study and research in the use of intervention strategies in the classroom is needed. It is important that these studies simulate realistic classroom situations as much as possible.

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APPENDIX

CENTERING EXERCISE

This is the centering exercise which was used as a treatment for this study. The children followed the instructions as the examiner presented them. The exercise took 15 minutes.

> Please, find a position where your body feels most comfortable. If you remain at your desk, let your feet be flat on the floor and rest your head on your arms on the top of the desk. Now close your eyes and begin to pay attention to your breathing.

Pause five seconds.

> We are going to begin to relax our bodies. You will allow yourself to relax and will listen only to my voice.

Pause five seconds.

> Focus your attention on your feet and ankles. Notice any tension or tightness there . . . breathe deeply and allow your feet and ankles to totally relax. Notice the floor beneath your feet.

Pause five seconds.

> Continue to be aware of your breathing. Focus your attention on your calves. Notice any tension or tightness there . . . breathe into that tension and allow this part of your body to totally relax.

Pause five seconds.

> Now focus your attention on your knees and thighs. Breathe deeply and notice any tension in your knees and thighs. Breathe again and allow yourself to release any tension in this part of your body.

Pause five seconds.

> Relax down in your pelvic area . . . notice any tension in your buttocks and release it by breathing deeply.

Pause five seconds.

And now relax your stomach. First be aware of any tension in your stomach . . . allow yourself to breathe deeply and release any tension you notice in your stomach.

Pause five seconds.

Now focus your attention on your upper back and chest. Be aware of any tension there. Breathe deeply and allow yourself to release any tension you notice.

Pause five seconds.

Focus your attention on your hands and arms. Be aware of any tension there. Breathe and relax these areas.

Pause five seconds.

Now relax the muscles in your neck. Breathe deeply and allow yourself to relax your neck muscles, let all the tightness go.

Pause five seconds.

Notice the muscles in your face. Be aware of any tension in your face muscles. Breathe and let go of that tension.

Pause five seconds.

By now your body feels pretty relaxed. Notice how nice it feels to let your body relax.

Now we are going to find a spot in our bodies that is the center, this is the balance point for our whole being. Find that spot in your stomach and breathe into it.

Pause five seconds.

Now take everything in your mind and send it all down to your center . . . just be your center . . . breathing in and out, feeling the center of your body.

Pause ten seconds.

And now I'll begin counting from 10 to 1, and when I hit 1 you'll feel rested and very alert. 10, 9, 8, 7, let your toes and fingers wiggle . . . 6, 5, 4, feel awareness returning to your body . . . 3, 2, open your eyes, and 1, sit up, rested and alert.

VITA

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