

RELAXATION TRAINING AS A READING REMEDIATION TOOL FOR SCHOOL-AGED CHILDREN

FRANCES M. CULBERTSON and CRAIG WILLE
University of Wisconsin-Whitewater

Abstract

This study sought to evaluate the effectiveness of a relatively short-term program of relaxation training in producing changes in elementary students in terms of attention-related skills associated with reading tasks in the classroom. Evaluation of change was measured by change in experimental variables under examination as well as subjective evaluations of change coming from students, parents, as well as examinations of on-going work production and style.

Résumé

Cette étude visa l'évaluation de l'efficacité d'un programme à court terme d'entraînement à la relaxation. Ce programme mené auprès d'élèves au niveau élémentaire avait pour but de produire des changements dans les habiletés d'attention associées à la lecture dans la salle de classe. Le changement observé dans les variables expérimentales, les évaluations subjectives des élèves et des parents au sujet du changement produit de même que l'examen du genre de travail accompli contribuèrent à déterminer le montant de progrès accompli.

This study sought to evaluate the effectiveness of a relatively short-term program of relaxation training in producing changes in elementary students in terms of attention-related skills associated with reading tasks in the classroom. The emphasis was on a program which could realistically be carried out in a school setting given the limitations of time and staff. Evaluation of change was measured by change in experimental variables under examination as well as subjective evaluations of change coming from students, parents, as well as examinations of on-going work production and style.

Studies of poor readers (Gale & Lynn, 1972; Keogh, 1971; Noland & Schuldt, 1971) indicate that poor readers generally exhibit excessive physical movement, poor performance when stimuli are embedded in extraneous backgrounds and poor performance when they are presented with multiple stimulus modalities. These studies suggest that distractibility in sensory and motor areas plays a role in reading difficulties.

Relaxation training, and other similar procedures such as hypnosis, progressive relaxation, yoga, Zen and transcendental meditation (Benson, Beary & Carol, 1974) have an important component to their procedures which may be useful in diminishing individuals' distractibility and increasing their attention to tasks. That is, all these methods engage in procedures and instructions which lead persons to "centering" attentional states. The basic elements of these techniques that

are essential to the development of centering attentional states are: 1. that there be a constant stimulus; 2. that there be a passive attitude; 3. that there be decreased muscle tonus; and 4. that there be a quiet environment. Relaxation training, as a means of centering attention on internal stimuli, may therefore be a useful method of training to be learned and then transferred to other situations such as poor reading response situations where the negative effects of distractibility could be diminished through centering of one's attention.

The concept of Field Dependence/Independence describes characteristic ways in which people organize their perceptual worlds. The Field Dependent person is strongly influenced by global aspects of his perceptual world. The Field Independent person is better able to perceive and use discrete elements of the field and is better at tasks requiring identification of stimuli surrounded by — or embedded in — complex backgrounds. Therefore, Field-Independent persons are most likely to be better at centering attention on important or significant details in situations than Field Dependent individuals. Investigators (Fiebert, 1967; Wineman, 1971; Keogh & Donlon, 1972), have suggested that the concept of Field Dependence/Independence can be related to reading achievement levels, in that children with good reading skills are more field independent. The effect of relaxation response procedures on Field Independent/Dependent behavior, however, has not been explored.

This study investigates the hypotheses that Relaxation training will increase directed attention and decrease the distracting effects of an embedding context, thus effecting increased reading performance and resulting in greater measured levels of Field Independence. The specific hypotheses are as follows:

1. Relaxation training will decrease percentages of Off-Task behavior in subjects undergoing training, with behavior observations taken by means of time sampling, in an elementary reading class functioning below grade level.
2. Relaxation training will increase percentages of correct responding in a standardized reading comprehension test — the SRA Reading Lab Series.
3. Relaxation training will produce changes in a positive direction in teacher ratings of subjects' classroom behaviors during reading instruction on selected areas of the Devereux Elementary School Behavior Rating Scale.
4. Relaxation training will decrease Embedded Figures Test scores indicating movement toward a more Field Independent perceptual style.

Because the treatment effects hypothesized to occur during the study were expected to be nonreversible, a multiple baseline design across subjects was used. In this research, four elementary school children from the fifth grade were used as subjects. Subjects were drawn from a reading class at a level below the expected fifth grade achievement level. The four subjects were chosen randomly from this class and were randomly assigned to the order of treatment initiation.

In-class observation of attending behaviors consisted of a time sampling procedure where occurrences of On-Task and Off-Task behaviors were recorded. Off-Task behaviors included out of seat behaviors, talking out loud and other behaviors incompatible with teacher directions.

Each subject was observed for a ten second period followed by a five second recording period. Each subject was observed for a total of twenty observations per subject per day, with the data treated as percentage of total observations per day scored as Off-Task. Observation took place in the daily reading class and occurred on each of twenty school days of the research.

The Reading Achievement Test consisted of comprehension exercises from the SRA Reading Lab Series (Parker, 1960). The exercises consisted of a short story followed by ten questions related to the story. All of the exercises were standardized on the fifth grade level. The variable was measured in terms of the percentage correct responses on each test. Tests were given to all subjects, once each week of the study, for a total of four administrations.

Teacher ratings of student behaviors were taken from the Devereux Elementary School Behavior Rating Scale (Spivack & Swift, 1967). Areas rated were designated as Classroom Disturbance,

Achievement Anxiety, Comprehension, and Inattentive-Withdrawn. Ratings were compared in terms of raw score differences within each rating area. Ratings were made once each week of the study for a total of four ratings.

The Embedded Figures Test was used to measure levels of Field Dependence/Independence (Witkin, Oltman, Raskin & Karp, 1971). The test consists of two forms, each containing twelve complex designs containing simple figures, with the scores assigned in terms of the average period of time required to find the embedded, simple figure. Norms are provided by age levels with lower scores indicating greater Field Independence. Pre- and post-test administrations were given at the beginning and end of the research.

The relaxation training technique used consisted of muscle tension/release exercises similar to Jacobson's Progressive Relaxation Technique (Jacobson, 1938), followed by a variation of Benson's "relaxation-response" technique (Benson, et al., 1974, p. 38), which consisted of four components: 1) sitting quietly, 2) with eyes closed, 3) with mental focus on the word "calm" during exhalation, and 4) with a passive, unforced attitude toward the success of relaxation. Each twenty minute session was led by the experimenter with the suggestion to the subjects to practice independently, especially in anxiety-producing situations and at the beginning of reading classes. During days when formal relaxation training sessions did not occur for those experimental subjects who had entered the training period, the experimenter guided — in the classroom — an unobtrusive relaxation period of approximately three minutes in length. The experimenter was already present in the role of classroom observer.

Formal relaxation practice occurred immediately before the reading class, occurring twice a week for each subject in the treatment period. Subject 1 received three weeks of training — beginning on the second week of in-class observations in order to establish a baseline period. Subject 2 received two weeks of training, Subject 3 received one week of training, and Subject 4 received no relaxation training.

A summary of results indicates that in the area of the percentages of Off-Task behavior, all three subjects receiving training demonstrated decreases in Off-Task behavior when pre- and post-relaxation training periods were compared, with decreases ranging from 11% to 13%. Therefore, there was some support for the hypothesis that relaxation training can be effective in reducing rates of observable Off-Task behavior. When the observation periods were partitioned into halves, it was found that a somewhat lower percentage of Off-Task behavior occurred during the first half of those sessions. This suggests the possibility that in

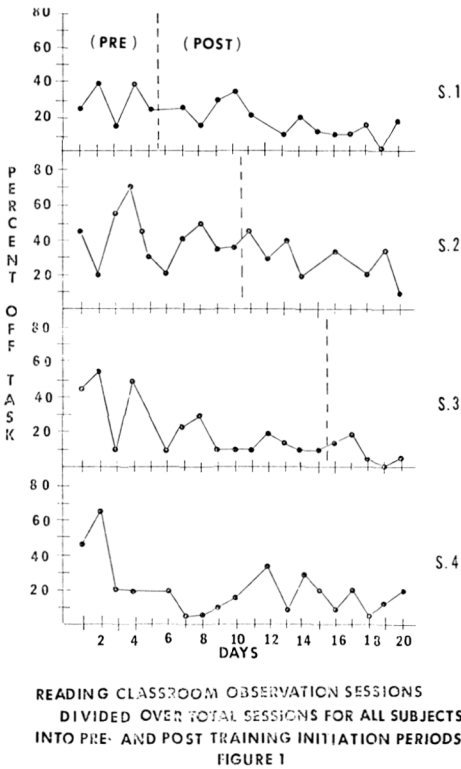
terms of observable attending behaviors, the effects of relaxation may be relatively short lived.

On the Embedded Figures Test, all subjects including the control subject, produced substantial score decreases on the post-test suggesting that relaxation alone could not be identified as the primary factor in score differences.

In the reading achievement test, one of the three relaxation training subjects demonstrated increases in correct responding following training while the other two demonstrated decreases and the control subject remained constant.

In the teacher rating areas, ratings indicating positive change occurred in the rating areas designated as Achievement Anxiety and Inattentive-Withdrawn with mixed results in the areas of Classroom Disturbance and Comprehension.

Overall, then, support for the hypotheses was indicated by trends in the areas of a reduction in Off-Task behavior, and positive change in two of the four teacher rating areas following relaxation training.



READING CLASSROOM OBSERVATION SESSIONS DIVIDED OVER TOTAL SESSIONS FOR ALL SUBJECTS INTO PRE- AND POST TRAINING INITIATION PERIODS
FIGURE 1

The single subject nature of the design lent itself to more subjective examinations of work quality and style on the part of the subjects, the subjective reactions of subjects and their parents to the research and the relaxation training in particular.

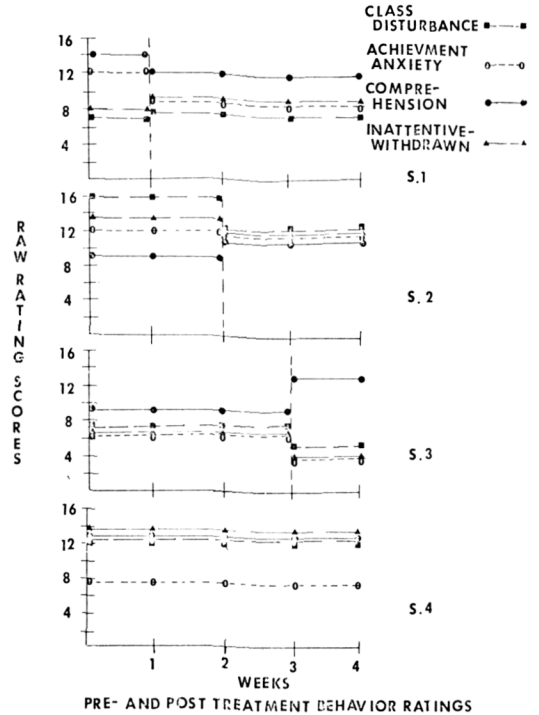


FIGURE 2

Reading related work completed by the subjects during the time of the research was examined in terms of quality and style, with pre- and post-relaxation samples compared for change.

In terms of those quality ratings, Subject 1 generally demonstrated lighter writing pressure following relaxation; Subject 2 produced more orderly work with less erasure and correction. The work quality of Subject 3 who received one week of relaxation, and of Subject 4 who received no training, demonstrated generally constant quality levels.

All of the subjects receiving relaxation training reported that they enjoyed the practice and would continue it. Subjects 1 and 2 who received training for the longest periods, reported they felt more relaxed, and less "jumpy" following practice. Both Subjects 1 and 2 also reported that they noticed an improvement in reading ability following the research. Subject 3 reported no noticeable changes.

In a follow-up directed toward parents, it was reported by parents of Subject 1 and 2 that the relaxation training was seen as enjoyable by those subjects. Subject 1's parents reported a more positive attitude toward reading on the part of that subject following relaxation training.

The implications of this study seem to indicate that a program of relaxation training can be effective in producing greater levels of overt attending behavior seen in the classroom with

increases in attending behavior seen as a facilitative factor in increasing reading skills. It was seen that, to some extent, teacher ratings of student behavior can be changed in a positive direction following training.

Also, relaxation training is seen as producing short-term effects in terms of work style which may be beneficial in producing more long-term increases in reading skills.

Positive attitudes toward relaxation on the part of the subjects and their parents suggest using relaxation techniques are feasible with children at this age level.

Further related research needs to especially examine relaxation programs of longer duration which may be demonstrative of greater effects on the more complex, gross areas of reading achievement as a whole, and on changes in the Field Dependence/Field Independence continuum.

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