

A BEHAVIORAL APPROACH TO MODIFYING  
SELF-CONCEPT IN THE CLASSROOM

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The problem with which this investigation was concerned was that of assessing the effects of token reinforcement on children's self-concept. Twenty-two black, female students and thirty-five black, male students, ages ranging from fourteen years to seventeen years, were randomly assigned to one of four remedial reading classes for one class period per day. The classes were randomly assigned to an experimental and a control group. There was a token economy system operative in all classes. Piers' and Harris' self-concept scale was administered to each student to obtain a baseline self-concept score. Every day (Monday through Friday) for four weeks and every other day for three weeks, students in the experimental group were instructed to "Tell me something good about yourself." A positive response received a token reward. In the control group, positive statements were not elicited or reinforced.

At the end of the research period, a posttest was administered to both groups to evaluate the changes from baseline. The results indicated that there was no significant difference between groups. There was a significant change within the experimental group, but not within the control group.

It was concluded that if a larger sample had been used, and the research had been conducted over a longer period of

time, this would have accentuated the difference enough to yield a significant difference between groups and a significant within group change for both groups.

The report also concluded that there is a need for additional research in regard to a behavioral approach to modifying self-concept. The areas indicated were type of positive reinforcement, the age group which is amenable to this technique, and measures of self-concept.

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## Statement of the Problem

The psychological construct, the self-concept, has received increasing attention within the last several decades. The focus has been the influence of antecedent factors upon the consequent self-concept, the influence of the antecedent self-concept upon consequent behaviors, and the correlations between theoretically relevant variables and the self-concept (Wylie, 1961). The goal has been to determine the nature of the self-concept as well as its relation to behavior and adjustment.

It is generally believed that self-concept develops in response to various social and personal experiences an individual has had. The phenomenological self-concept derived from these experiences is considered to be one factor which determines the behavior of an individual. As McCandless (1967) describes self-concept, it is "a set of expectancies, plus evaluations of the areas or behaviors with reference to which these expectancies are held (p. 255)." However, since the self-concept is acquired, it should be subject to change according to the principles of learning (McCandless, 1967). The concern would then be those antecedent variables which influence the self-concept.

Wylie (1961) discussed a variety of studies which deal with influential antecedent variables. Some of these were parent-child interaction, body characteristics, lobotomy, learning, and counseling and psychotherapy. Of these studies

one attempted to effect a direct connection between learning theory and the learning of the self-concept (Nuthmann, 1957).

Nuthmann's (1957) experiment was designed to determine whether "acceptance of self" responses to personality test items could be increased through reinforcement. One group was reinforced by the E's saying "good." The other group was reinforced by a light blink. The results indicated that the verbal reinforcement "good" increased "acceptance of self" responses while the light reinforcement did not. This was true regardless of whether or not the Ss were aware of the purpose of the reinforcement. Wylie (1961) indicated that it was "questionable whether the experiment has demonstrated a relevant principle of development of the self-concept (p. 200)." Nuthmann (1957) made no attempt to demonstrate that increasing positive self-referents would enhance phenomenal self-concept. If it could be shown to do so, then it would be considered a relevant principle.

On what basis could one predict that increasing positive self-referents would enhance phenomenal self-concept? Festinger (1957) has proposed a theory of "cognitive dissonance." He postulates that when an individual has inconsistent perceptions about himself or his environment, he is placed in a state of "dissonance" or psychological tension. The individual will deal with this tension by moving his cognitions closer together. Festinger (1957) has applied the reasoning to a theory about attitudes and their change. He has stated

that if a person can be induced to engage in overt action or a spoken opinion which is contradictory to his private opinion or belief, then his private opinion will be altered in the direction of his spoken opinion or overt action. Although Festinger himself has not dealt directly with self-attitudes, McCandless (1967) discusses Festinger's theory and supportive research, and outlines the implications for changing self-concept. Of particular relevance is his conclusion that "self concept will change in the direction of the overt behavior relating to it. Change will be greater if the behavior is induced by low pressure or accompanies a high degree of freedom of choice . . . (p. 288)." More specifically, one would predict that positive reinforcement of positive self-referent statements will change the self-concept in the direction of the overt verbal behavior.

#### Related Research

Two studies have demonstrated the efficacy of this approach. Krop, Calhoun, and Verrier (1971) used thirty-four items from the Tennessee Department of Mental Health self-concept scale (TDMH) as the self-concept measure. Their subjects were thirty-one children diagnosed as having various behavior disorders. They administered the TDMH on the first trial to obtain a base line measure of self-concept. Each subject was then randomly assigned to one of three groups for the second trial occurring one day after the first trial. The two experimental groups were subjected to a procedure by



which they were reinforced for answering TDMH items in a pre-determined, "good self-concept" direction. One experimental group received overt reinforcers in the form of tokens and gum drops. The other experimental group received covert reinforcement, which consisted of reinforcing each subject in imagination by presenting a pleasant scene (i.e., a covert reinforcement procedure described by Cautela, 1970). The control group received no reinforcement following responses associated with a positive self-concept. The third administration of the TDMH immediately followed the second trial. Reinforcement was withheld for all groups. Although both overt and covert reinforcement facilitated changes in the desired direction, statistical analysis indicated a significant group difference only between the covert reinforcement group and the control group. A two-week follow-up showed that the covert reinforcement group maintained these significant gains. This study extended the design employed by Nuthmann (1957), and demonstrated the relevance to development of self-concept. The fact that significant gains were still present after two weeks implies, as the authors indicate, "that this change is relatively long lasting (p. 208)."

Uhler (1970) employed a different method. He used fourteen male residents at Denton State School as Ss. The Ss were participants in a token economy system which had been operating for four months prior to the initiation of his research. The Ss were matched according to token achievement

at the time of selection. The research was conducted over a four week period. Uhler used Piers' and Harris' (1954) self-concept scale, The Way I Feel About Myself, as a pretest and posttest measure. Each weekday during the research period, the Ss were instructed to "Tell me something good about yourself." A positive response was followed by verbal reinforcement plus a token reward for the experimental group. The control group received only verbal reinforcement. There was a significant difference between the experimental and control group following the posttest. The experimental group showed a significantly higher level of self-concept.

An important distinction between the two aforementioned studies is that Krop et al. (1971) reinforced responses in a structured situation (i.e., responses to the TDMH) while Uhler (1970) reinforced responses in an unstructured situation (i.e., responses to "Tell me something good about yourself"). The distinction is important because Uhler's research more cogently demonstrated the generalizability of the technique. This can be attributed to the fact that his self-concept measure was independent of the method employed to enhance self-concept. For this reason, Uhler's method would appear to be the most efficacious to pursue.

The objective of the present research was to extend the application of a behavioral approach to modifying self-concept. To pursue this objective, a high school population in a public school setting was chosen. All were enrolled in remedial

reading classes in which a token economy system was operative. The teacher was interested in improving the self-concept of this group because she repeatedly heard comments such as "I'm too dumb to read," "I'll never be able to learn this," and "Everyone knows I'm dumb."

The experimental group consisted of those classes in which each student received instruction to make a positive statements about themselves and received a token reinforcement for it. The control group was not instructed to give positive statements. It was hypothesized that, on the posttest evaluation, the experimental group would show a significantly higher level of self-concept than the control group.

In addition, it was hypothesized that there would be a significant within group change from pretest to posttest evaluation for both the experimental and control groups. This prediction was based upon their enrollment in remedial reading classes which, by utilizing a token economy system, was designed to teach necessary skills as well as to give rewarding performance feedback. As Bandura (1969) points out, "Evidence that attitudes are significantly influenced by rewarding performance feedback indicates that enduring positive self evaluations can be most effectively achieved by arranging optimal conditions for the individual to acquire the requisite competencies (p. 615)."

### Method

Subjects. Twenty-two black, female students and thirty-five black, male students were used as Ss. The Ss' ages ranged from fourteen years to seventeen years. All were reading at or below fourth grade level as measured by the Stanford Achievement Test at the onset of the research period. Each S had been randomly assigned to one of four remedial classes for one class period (fifty minutes) per day. The classes were randomly assigned to an experimental and a control group. Each class was in a token economy system initiated on the same day as this research.

Procedure. Piers' and Harris' (1964) scale, The Way I Feel About Myself, was used as the measure of self-concept. The scale was administered to both groups at the beginning of the research period in order to determine each S's level of self-concept as measured by the scale.

The research period covered a span of seven weeks. Every day (Monday through Friday) for four weeks and every other day for three weeks each S, in the experimental group, was instructed to "Tell me something good about yourself." A positive response received a token reward. The teacher was instructed not to give any tokens to a S unless he made a positive response. (It may be noted that it was never necessary to apply this contingency.) The tokens acquired at this time as well as tokens obtained for other appropriate responses could be exchanged during the class period for

various activities. The remaining tokens were recorded at the end of each class period in order to determine each student's grade for that class. In the control group, tokens were acquired and used in the same manner as in the experimental group except that no positive statements were elicited or reinforced. At the end of the research period, a posttest was administered to both groups.

### Results

A two-by-two (sex by treatment) analysis of covariance was employed to analyze the results. It was calculated to determine any significant difference between the experimental and control group following the posttest, using the pretest as the covariant. Results are shown in Table 1. The results

TABLE 1  
Analysis Of Covariance

Source	<u>df</u>	<u>MS</u>	<u>F</u>
Sex (A)	1	14.97	.41
Treatment (B)	1	15.22	.42
Interaction (A x B)	1	22.38	.61
Within	52	36.45	

reflect no main effect for sex, and no significant difference between groups following the posttest.

A t test (one-tailed) was conducted to determine whether there was a significant change within each group when the Ss were used as their own controls, with results as shown in Table 2.

TABLE 2  
Comparison Of Change Of Self-Concept

	Pretest		Posttest		Change	<u>t</u>
	Mean	SD	Mean	SD		
Experimental	51.9	8.06	54.3	8.59	2.4	2.39*
Control	52.3	7.59	53.7	8.41	1.4	.99

\* $p < .05$

There was a significant change on the self-concept measure within the experimental group. There was no significant change within the control group, however, there was enough change to make the difference between groups nonsignificant.

The students in the experimental group seemed to be evaluating themselves more realistically at the end of the research period. Comments such as "I can learn to read better if I work hard," and "I'm not dumb. I've just never been that interested in learning before" were often made.

#### Discussion

The hypothesis that, following posttest evaluation, the group receiving token reinforcement for positive statements about themselves, would show a significantly higher level of

self-concept than the group receiving token reinforcement but making no positive statements about themselves, was not confirmed. The hypothesis that there would be a significant within-group change for both the experimental and control groups, following posttest evaluation, was confirmed in part. There was a significant within group change for the experimental group in the expected direction. Although there was within-group change for the control group as well, it was not significant.

One may surmise that if a larger sample had been used, and the research had been conducted over a longer period of time, this would have accentuated the difference enough to yield a significant difference between groups and a significant within group change for both groups.

Also it may be hypothesized that had a third group receiving no treatment been employed in this research, there would have been a significant difference between the no treatment group and the experimental group. As was indicated earlier, the token economy system itself constituted a treatment program. The student was learning requisite competencies, and received immediate rewarding performance feedback. This provided a mechanism through which self-concept could be changed.

The paucity of research in this area precludes any specific conclusions regarding a behavioral approach to modifying self-concept. There is no doubt, however, that it deserves

further study. One area would be the type of positive reinforcement which is most effective. Krop et al. (1971) employed covert reinforcement and token reinforcement plus a gum drop. Uhler (1970) used verbal reinforcement and verbal-plus-token reinforcement. The present study used only token reinforcement. However, due to the varying situations in which they were employed, no conclusions can be drawn as to which, if any, is more effective.

Another area to be given consideration should be the age group. Research conducted thus far has dealt with an age range of nine through eighteen. Further research should determine if older and younger populations are amenable to this approach of enhancing self-concept.

Concurrent consideration should be given to the measures of self-concept employed. With a behavioral approach, an objective method is used to determine the success or failure of the technique. This assumes that the index of change chosen will be sensitive to that change. Thus, research is needed to provide evidence as to whether or not this assumption is warranted.

In regard to research design, a no treatment control group is recommended for each study employing a treatment to modify self-concept. Also, a follow-up study should be routinely included to determine if the effects hold over time.

Techniques to modify behaviors which can be employed in the classroom are gaining increasing popularity. One of the



reasons is that it reduces the need for individual therapy which is both time consuming and often impractical, and increases the number of children who can be treated. Modifying self-concept has been treated in individual therapy in the past. However, by refining a behavioral approach to modifying self-concept, this technique may be applied in the classroom setting as well as in individual therapy.

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