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COGNITIVE AND AFFECTIVE SELF-INSTRUCTIONAL STATEMENTS
AND TASK PERSISTENCE

by

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ABSTRACT

Third and fourth grade pupils were tested to investigate the effects of differing self-instructional statements on task persistence in young children. The relationship of these statements to expectancy for success, appraisal of task, affect, and internal orientation was also examined.

The statements in the study included: (a) Competency statements, (b) Affect statements, and (c) Task Information statements. Subjects were assigned to one of five conditions. Those in conditions one to three were asked to repeat a Competency, Affect, or Task Information statement, respectively, while working on a task. Those in condition four were asked to select a Competency, Affect, or Task statement to repeat. Those in condition five (control condition) repeated a neutral phrase.

Contrary to prediction the Competency group was not significantly superior to the Affect or Control groups in task persistence, but was superior to the Task and Self-Select groups. Also, contrary to prediction, there was no significant relationship between the effects of differing self-statements and expectancy for success, appraisal of task and affect. As predicted, there was some support for the idea that training emphasizing personal competency would be the best "fit" for internally oriented children even though choice of statement in the Self-Select group

was not a function of internality. The results were related to various psychological theories with emphasis on their implications for Clinical and Educational Psychology.

TABLE OF CONTENTS

	Page
CERTIFICATE OF EXAMINATION	i
ACKNOWLEDGEMENTS	ii
ABSTRACT	iv
TABLE OF CONTENTS	vi
LIST OF TABLES	ix
TEXT	
1 INTRODUCTION	1
2 LITERATURE REVIEW	3
Cognitive-Behaviour Modification	3
Verbally Mediated Control of Behaviour	7
Self-Instructional Statements	10
Self-Instructional Training	11
Specific Self-Instructional Statements	22
The Role of Affect and Self-Instructional Training	28
Purpose of the Study	33
Research Hypotheses	36
3 METHOD	38
Subjects	38
Procedure	39
Instruments	42
Selection of Statements	42
Measures	45
Internal orientation	45
Expectancy for success	46
Appraisal of the task	47
Affect	47
Persistence variables	47
Achievement level	48
Experimenters	48
Experimental and Generalization Tasks	49
4 RESULTS	51
Rater Reliability	51
Variable Selection	51
Self-Instructional Training and Task Persistence	53

TABLE OF CONTENTS cont.

	Page
Experimental Task	53
Generalization Task	58
Internal Orientation (IAR), Ability and Task Persistence	62
Experimental Task	62
Generalization Task	63
Self-Instructional Training, Expectancy for Success, Affect, and Appraisal of Task	63
Pre-performance	63
Post-performance	63
Internal Orientation (IAR), and Ability With Respect to Expectancy for Success, Affect, and Appraisal of Task	66
Pre-performance	66
Post-performance	69
Expectancy for Success, Affect, and Appraisal of Task as Predictors of Task Persistence	69
Time Worked	70
Problems Attempted	70
Internal Orientation (IAR), Persistence, and Treatment Group	73
Choice of Statement as a Function of Internal Orientation	78
Supplementary Analyses	80
Self-Instructional Training, Task Persistence, and Sex of Subject	80
Experimental Task	80
Generalization Task	80
Self-Instructional Training, Task Persistence, and Grade of Subject	80
Experimental Task	80
Generalization Task	82
Experimenter and Time of Day Effects	82
Persistence Variables	83
Expectancy, Affect, and Appraisal of Task	83
 5 DISCUSSION	 85
Self-Instructional Training and Task Persistence	85
Expectancy, Affect, and Appraisal of Task	90
Internal Orientation, Persistence, and Self-Instructional Training	92
Relationship of Present Results to Psychological Theory	93

TABLE OF CONTENTS cont.

	Page
6 REFERENCE NOTES	104
7 REFERENCES	105
APPENDICES	
A Letter of permission	112
B Subject Selection and Control Conditions	115
C Instructions for Children	125
D Signalling Apparatus	128
E Pilot List of Statements	130
F Instructions for Raters and Rating Sheet	135
G Statements in the Competency, Affect, and Task Conditions	138
H Intellectual Achievement Responsibility Questionnaire	140
I Likert Scales (Expectancy, Appraisal of Task)	146
J Affect Measures	148
K Sample Problems	150

LIST OF TABLES

<u>Table</u>	<u>Page</u>
1 Correlations of Persistence Variables and Covariates	52
2 Summary of the Multivariate Analysis of Covariance for Persistence on the Experimental Task	54
3 Means (Standard Deviations) for Time Worked and Problems Attempted for each Treatment Group on the Experimental Task	55
4 Post-hoc Comparisons of Treatment Group Differences on the Experimental Task using Hotelling's T^2 Tests	57
5 Summary of the Multivariate Analysis of Covariance for Persistence on the Generalization Task	59
6 Means (Standard Deviations) for Time Worked and Problems Attempted for each Treatment Group on the Generalization Task	60
7 Post-hoc Comparisons of Treatment Group Differences on the Generalization Task using Hotelling's T^2 Tests	61
8 Stepwise Multiple Regression Analyses for association of Internal Orientation (IAR) and Ability with Task Persistence: Experimental Task	64
9 Stepwise Multiple Regression Analysis for association of Internal Orientation (IAR) and Ability with Task Persistence: Generalization Task	65
10 Summary of the Multivariate Analysis of Covariance for Cognitive and Affective Variables measures pre-performance	67
11 Summary of the Multivariate Analysis of Covariance for Cognitive and Affective Variables measures post-performance	68
12 Multiple Regression Analysis for Time Worked	71
13 Multiple Regression Analysis for Time Worked Adding IAR and Ability	72

LIST OF TABLES cont.

<u>Table</u>		<u>Page</u>
14	Multiple Regression Analysis for Problems Attempted	74
15	Multiple Regression Analysis for Problems Attempted Adding IAR and Ability	75
16	Correlations of IAR and Persistence Measures Within Treatment Groups	76
17	Breakdown by Sex of Child and Statement	79
18	Summary of Analysis of Variance Comparing IAR Mean Scores	81

INTRODUCTION

Recent research on behaviour change has examined the relationship between language and behaviour. The basic assumption of this research is that behaviour-environmental relationships are influenced by inferred mediational events such as language, cognitions, or thoughts. Based on the above assumption, an interactive or reciprocal determinism model of man interacting with his environment has been proposed by several authors including Bandura (1969, 1977), Mahoney (1974), and Mischel (1973b). These models have focused attention on cognitive variables in behaviour change techniques.

Several writers including Ellis (1962), Beck (1967), Rotter (1966), and Kelly (1955) have theorized regarding the importance of cognitive factors in human behaviour, but little systematic research had been done to investigate them. In the context of different experimental and therapeutic situations some cognitive mechanisms have been examined.

For example, "self-instructional statements" have been investigated as one of several key factors in affecting behaviour change (Meichenbaum, 1977). Self-instructional statements generally refer to thoughts or verbalizations that individuals make about themselves while engaging in a certain behaviour.

The effectiveness of teaching people to "self-instruct" has been examined in studies of clinical and non-clinical

populations (Meichenbaum, 1977, 1975). For example, Patterson and Mischel (1976) examined the content of various "plans" in a resistance-to-temptation situation with young children. Masters and Santrock (1976) examined statements of differing content and affective tone in an experiment on task persistence in children. Their results suggested that cognitive stimuli generate affective responses which in turn affect behaviour. However, it is not certain whether subtle differences in content or differences in affective tone of statements produce differential effects on behaviour. It is also not certain what mechanisms are operative in the self-instructional process. The present study examined different types of self-instructional statements and their relationship to task persistence; expectancy for success; attribution for success; subject's appraisal of the task; and subject's affect.

LITERATURE REVIEW

Cognitive-Behaviour Modification

The growing acceptance of cognitive-behaviour modification as an area of research has stimulated much work on the role of cognitions in behaviour change. Theorists, researchers, and clinicians have argued persuasively for a behaviour change model which incorporates inferred mediational events and which assumes that man's behaviour is interactive with his environment (Bandura, 1969; Mahoney, 1974; Ellis, 1962). Mahoney (1974) has discussed explicit inadequacies of the non-mediational model and has explained several lines of research which contradict a non-mediational model of behaviour. Bandura (1977) asserts that people do not react to situational inducements; they transform and regulate them. Mischel (1973b) postulated that self-regulatory systems include:

rules that specify goals or performance standards, consequences of achieving or failing to achieve these criteria; self-instructions and cognitive stimulus transformation to achieve self-control necessary for goal attainment and organizing rules (plans) for sequencing and termination of complex behaviour patterns in absence of external supports and, indeed, in the face of external hindrances. (p. 275)

Models of self-control or self-regulation have been discussed by several authors (Kanfer, 1970; Goldfried and Merbaum, 1973). These models have expanded upon operant models of behaviour to include transfer of control to the individual. Kanfer (1970), for example, proposed a

multi-stage model of self-regulation which includes three primary components: self-monitoring, self-evaluation, and self-reinforcement. Many studies have dealt with individual components of Kanfer's (1970) model, but few have put the multi-stage package to the empirical test.

Spates and Kanfer (1977) attempted to test Kanfer's multi-stage model using an arithmetic task with school children. They concluded that criterion-setting was a critical component for the model of self-regulation; although, some of the components in their study seemed to be poorly operationalized and overlapping in nature. Jones, Nelson, and Kazdin (1977) provided an excellent review of the status of self-reinforcement. Studies on self-monitoring have provided inconsistent data; however, it is becoming clear that various parameters (i.e., the specificity of monitoring techniques; whether one monitors prior to or after an event) might mediate the effects of self-monitoring (Marlatt and Kaplan, 1972; Bandura, 1977; Greiner and Karoly, 1976). In sum, one strategy in developing and testing behaviour change techniques which are aimed at fostering self-direction has been to transfer evaluative and reinforcement functions from change agents to the individual (Anderson, Fodor, and Alpert, 1976).

This would seem to be an appropriate strategy in view of research on operant techniques which has struggled to resolve the issue of generalization of behaviour change across time and situations. As an example of the

generalization problem, token economy programs in the classroom or in the hospital setting have often proved successful while in operation only to find that behaviour change reverts to baseline when the tokens are withdrawn. To enhance generalization, token and contingency management approaches to self-control have included cueing, fading of tokens, and other techniques. Glynn and Thomas (1974) effectively used a cueing procedure to maintain appropriate classroom behaviour. Turkewitz, O'Leary, and Ironsmith (1975) initiated a token program in the classroom under experimenter supervision which required children to "match" experimenter tokens. That is, children were first rewarded for self-awarding tokens which matched the number given by the experimenter; then the matching program and tokens were faded. This study resulted in generalization across time but not across situations. In general, there are many promising uses of token programs, but maintaining program changes or programming self-control tends to be an unresolved problem. This is frequently true of other standard behaviour change techniques.

Other attempts to foster self-direction and maintain behaviour change have focused on internal verbal commands and "cognitions." These attempts have sometimes approached cognitive therapies as therapies per se and sometimes approached them as integral parts of other techniques. For example, Meichenbaum and Cameron (1974) contrasted standard anxiety-relief counterconditioning procedures with a

procedure including a self-instructional component, and found that the latter yielded significantly more change in behaviour. Mahoney (1977) reviewed a series of studies on systematic desensitization and counterconditioning which provided evidence that cognitive factors played a central role in these processes. Meichenbaum (1977) also reviewed research in these areas, and in the areas of assertiveness training, obesity research, stress inoculation to anger and pain tolerance, suggesting that self-statements may mediate behaviour change. Goldfried, Decenteceo, and Weinberg (1974) developed a coping skills approach labelled "systematic rational restructuring", which incorporated rational-emotive therapy (Ellis, 1962) within a behavioural framework, and which emphasized the use of relaxation as a generalized coping skill. Goldfried and his co-workers, like Ellis, argued that the way an individual evaluates a situation determines his or her subsequent emotional reaction and performance. Thus, modifying a cognitive "set" can produce a more effective repertoire for dealing with anxiety. Other researchers have also provided empirical evidence for therapeutic techniques which emphasize training in generalized coping skills involving cognitive components (Suinn and Richardson, 1971). Meichenbaum (1977) noted some common treatment elements which seem to underlie these programs. These included teaching the client to monitor and modify self-statements, training the client in problem-solving techniques, using various behaviour therapy

procedures such as relaxation, and prescribing in vivo behavioural assignments.

It appears that clients engaged in behaviour change activities often learn a complex set of cognitive and behavioural skills. To ignore the role of cognitions or self-statements in any model of behaviour change appears unwise. As suggested by Patterson and Mischel (1976), models similar to those set forth by Kanfer (1970) need to include additional factors such as self-instructional statements, particularly if the model is aimed at predicting self-regulatory behaviour.

The area of cognitive-behaviour modification is finding a strong foothold within psychology. Research in the area has included work on generalized coping skills, cognitive restructuring, the role of cognitions or self-instructional statements, and more generally, models of self-regulation. The remaining portion of this paper will deal specifically with research on verbal control of behaviour and the role of cognitions or self-instructional statements.

Verbally Mediated Control of Behaviour

The pioneering work on the establishment of verbal control of behaviour was that done by Bem (1967) and Lovaas (1961, 1964). Bem (1967) established verbal self-control of motor behaviour in three-year-olds by means of a conditioning procedure, noting that otherwise such control does not appear until about the 4th or 5th year. Lovaas

(1961) observed increased aggressive play behaviour in young children immediately after they had undergone verbal conditioning sessions in which aggressive verbal responses were reinforced. In a later study, Lovaas (1964) examined some of the parameters of verbal operants (rate and content) which effected nonverbal operant responding. He suggested that prior training with verbal operants was an important variable in establishing control over other behaviour. He also suggested that for older children the meaning of words (i.e., "slow" vs. "fast") had a significant effect on rate of responding. In a study by Sherman (1964) it was observed that when children's verbal statements about one particular toy were reinforced, their statements about the toy became longer, and the amount of time they played with the toy increased. It should be noted that there were no significant long-term effects in this study and also particular subjects were primary contributors to the results again suggesting that prior training with verbal operants may be significant.

Luria (1961) proposed three stages whereby voluntary motor behaviours come under verbal control. In the first stage, the child's behaviour is directed by others, usually adults. In the second stage, the child's own overt speech begins to regulate his behaviour and finally in the third stage, the child's covert or "inner speech" assumes the role of self-regulation. Luria's model is perhaps not accurate since $2\frac{1}{2}$ -3 year-old children have been observed engaging in self-guiding speech (Meichenbaum, 1975). In fact,