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Effects of Positive Praise on the Classroom Behavior of Middle School Technology Education Students

Samuel E. Benson Jr.
Old Dominion University

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Effects of Positive Praise on the Classroom Behavior of Middle School Technology Education Students

A Thesis
Presented to
the Vocational Education Department
Old Dominion University

In Partial Fulfillment
of the Requirements for the Degree
Master of Science in Education

by
Samuel E. Benson, Jr.
May 1989
Preface

I am grateful for the input of my colleagues and the students of the Fred M. Lynn Middle School in Woodbridge, Virginia. Particularly, William Stephens, Principal, Samuel Vitas - Technology Education Department Chairman, Steven Plitt - Technology Education Teacher, Grace Gallagher - Computer Specialist and Hess Moore - Graduate Student at George Mason University.

I have especially appreciated the following researchers from the Prince William County School System in Manassas, Virginia for their helpful comments and suggestions. Namely:

La Donna Thompson
Professional Staff Librarian

Constance Murphy
Staff Library Secretary

Dr. Mary Weybright
Supervisor of Program and Planning

John Pitt
Supervisor of Mathematics

Special thanks goes out to the following persons for their expertise and professional assistance.

Dr. Robert Pasnak
Professor of Mathematics
George Mason University

Mrs. Elizabeth Johnson
Professor of Sociology
Catholic University

George Wilcox
Supervisor of Northern Virginia Technology Education
Virginia State Department of Education

Doris C. Benson
My Wife
This thesis was prepared by Samuel E. Benson, Jr. under the direction of Dr. Malvern Miller in Vocational and Technical Education 636, Problems in Education. It was submitted to the Graduate Program Director as partial fulfillment of the requirements for the Degree of Master of Science in Education.

Approved by: Malvern Miller, Ph. D.  4/25/89
Advisor

John Turner, Ed. D.  Date
Graduate Program Director
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Chapter One - General Introduction

Introduction

The purpose of this investigation was to study the effects of positive feedback on the classroom behavior of seventh and eighth grade middle school students enrolled in Technology Education.

Statement of the Research Problem

This study was designed to determine whether students who receive positive praise would exhibit a more acceptable level of classroom behavior than students who receive no positive praise. This study compared the classroom behavior of students receiving teacher perceived positive feedback with the classroom conduct of students receiving normal feedback to determine if any correlation exist between positive feedback and acceptable classroom behavior.

Theoretical Framework

The problem under consideration was timely not only for technology education teachers in middle schools, but all teachers who appear to be experiencing difficulty staying on task due to the number of class disruptions stemming from unacceptable classroom behavior. The data gathered and the
conclusions of this study will help teachers in all disciplines to conserve instructional time and enhance their classroom management skills.

Limitations

The study was limited to the study of the effects of positive praise on students enrolled in technology education. The purpose and focus of this investigation limited itself to the study of student classroom behavior as it was measurable and observable in the technology education laboratory.

Hypotheses

To fulfill the purpose of this study, the following hypothesis was tested:

1. The classroom behavior of the students receiving positive praise will not be significantly different from that of students receiving normal feedback.

2. The classroom conduct grades of the students receiving positive praise will not be significantly different from the students receiving normal feedback.
Definition of Terms

Marking Period: A portion of the school year containing six weeks of instructions for the purpose of evaluation.

Teacher's Daily Grade Register: A book used by classroom teachers to record the daily grades and the attendance record for each student.

Normal Feedback: The verbal or unspoken response given to a student by a teacher after answering a question satisfactorily.

Academic School Year: Consist of approximately 190 days from September to June.

Classroom Conduct Grade: The grade given to a student as a result of evaluating their daily behavior as it compares with what is considered to be the norm by a given classroom teacher.

Grade Reporting Register: The computer print-outs onto which each students grades for a given six week marking period must be recorded.
Chapter Two - Review of Existing Literature

Introduction

In this study, an attempt was made to search some of the available literature for evidence that correlations exist between the independent variable: positive praise and the dependent variable: classroom behavior. The pertinent literature on classroom behavior may be classified under the categories of: Acceptable Behavior, Non-Acceptable Behavior, and Modified Behavior.

Review of Literature

In this study, an attempt was made to search some of the available literature for evidence that correlations exist between the independent variable: positive praise and the dependent variable: classroom behavior. The pertinent literature on classroom behavior may be classified under the categories of: Acceptable Behavior, Non-Acceptable Behavior, and Modified Behavior.
Grossnickle (1988) agrees that motivating human beings, whether it be in the classroom or the workplace, is an amazingly complex problem.¹

According to Susan and Daniel O’Leary (1976), “the initial research in behavior modification in the public school classrooms came in the period from 1965 to 1970. Studies of praise and positive forms of teacher attention . . . token reinforcement programs . . . and teacher reprimands . . . were prominent in the development of the behavioral thrust in the classroom.”²

Garth J. Blackham and Adolph Silberman (1971) has written that, “Historically, two basic propositions have served as theoretical cornerstones for promoting behavior change. Behavior is learned for two reasons. First, behavior is learned in order to terminate a condition that is noxious, distressing, or painful. Second, behavior is learned in order to induce positive sensations or lead to


some satisfying state (Ford and Urban, 1963). This means that we learn behavior that is positively reinforced."³

Algozzine, Schmid, and Mercer (1981), stated that, "Behavior is defined as 'that portion of the individual's interaction with its environment which is characterized by detectable displacement in space through time of some part of the (individual) and in which results in a measurable change in at least one aspect of the environment' (Johnson & Pennypacker, 1980, p.48). Behavior is some action or movement that can be seen having a beginning and an end (White & Haring, 1976). Behavior is a function of an individual's genetic endowment, history of reinforcement,

current physiological state, and current stimulus conditions (Skinner, 1938, 1953)."

"Recent classroom studies have made us aware of several effective strategies for improving the classroom behavior of students in general, including teacher attention, token reinforcement, time out for positive reinforcement, behavioral contracting, and self-modification".

However, it has already been tested and proven that teachers are reluctant to use behavior management techniques."*

Susan and Daniel O'Leary revealed that studies have been done claiming that both praise and ignoring can serve to modify inappropriate behavior:

"Systematic praising and ignoring is a basic procedure for modifying behavior. Praising and ignoring are usually instituted together. There has only been one noted study (Madsen, Becker, & Thomas, 1968) that attempted to separate the effects of these


two components. The study revealed that rules, had
little or no effect on the children's inappropriate
behavior. Ignoring plus rules led to an increase in
disruption, while ignoring without rules resulted in no
change. The inappropriate behavior of all three
children decreased in frequency when rules, ignoring
and praise were all in effect."

Geoffery G. Hett (1985) pointed out that, "teachers at
all levels view the areas of student motivation, classroom
management, and disruptive behavior as primary problems."

The effectiveness of systematic teacher attention is
well documented. However, some questions remain
unanswered . . . If the teacher is praising appropriately,
one might question whether ignoring disruptive behavior is
necessary. A second question with extensive practical
implications is how often must a teacher praise or attend to
appropriate behavior in order to produce significant behavioral changes?"

The role of positive reinforcement in traditional teaching or therapy has not been adequately understood, although some efforts have been made to analyze the student's behavior in terms of the teacher's reinforcement potential. Finesinger (1951) theorized that there are several classes of responses, ranging from vigorous approval to absolute indifference which can be used to direct the patient (student) to talk about certain materials.

Susan and Daniel O'Leary (1976) explains that:

"The systematic use of teacher attention was one of the first behavior modification techniques to be applied in the classroom (Zimmerman & Zimmerman, 1962) and remains one of the most effective means of changing children's behavior. Teacher attention in its various forms, e.g., smiles, praise, words of encouragement, and hugs,


tends to stimulate the same type of behavior again. Thus, teacher behavior acts as a reinforcer for many children."

According to Robert Algozzine, Rex Schmid, and Cecil D. Mercer (1981), "Behavior can be changed by modifying any of the elements that cause its occurrence (i.e., genes, reinforcement, physiological states, and current stimulus conditions)."

Summary

Volumes have been written on improving classroom behavior by way of positive feedback. Numerous papers have been written on methods of developing acceptable behavior, but very few studies have addressed the behavior problems experienced in the technology education departments of middle schools.

---


Chapter Three - Design of the Study

Introduction

This study was limited to the study of the effects of positive praise on students enrolled in technology education. In this study the researcher addressed the effects of praise as a reinforcer. The measurement was an acceptable classroom conduct grade expressing success or failure over a six week period.

Population

The population (or target group) used by the researcher was 450 seventh and eighth boys and girls enrolled in technology education. From this population a convenient sample was drawn. The classroom behavior of each student was monitored and evaluated; a letter grade was assigned and recorded onto a grade reporting register\(^1\) to produce a report card for each student. These grades were recorded at the end of the first six week marking period and again at the end of the second six week marking period for the

\(^1\) Appendix O Prince William County Grade Recording Register
1988-89 academic school year at Fred Lynn Middle School in Prince William County, Virginia.

Method and Procedures

A conduct report grade was placed on file by the teacher in charge from the first six week marking period (pretest) to be compared with the conduct grade recorded from the second six week marking period (posttest) during which time the treatment was administered.

The hypotheses were tested using a one-tailed T-test. The results were observed and compared after treatment (Posttest) and recorded.

An attempt was made to control for interfering variables by decreasing the df by two ($df = (n-2)-2$). Teacher perception of students was an important variable influencing the way the teachers responded to the students.

Brodhy and Good (1970) found that teacher expectation influenced the number and type of questions asked students, the type of feedback given to student answers to questions.²

Description of Study Sample

The subjects for this experiment were drawn from a handi-sample of fourteen classes of technology education students. Each class contained approximately 25 students according to the student enrollment laws for the State of Virginia. Four classes of seventh and eighth grade boys and girls from a middle class suburban public school system in Prince William County, Virginia, totaling seventy-six students enrolled in technology education at Fred Lynn Middle School served as the control group for this investigation. Four other classes consisting of seventy-six students from the same sample, with the same history, served as the treatment group. An attempt was made to control for history, maturation, and regression by drawing the sample from the same population.

Instruments for and Methods of Gathering Data

In this experiment, a pretest-posttest control group design was used.

\[
\begin{array}{ccc}
R & O_1 & X & O_2 \\
R & O_3 & O_4
\end{array}
\]

Plans for gathering data for this research were to utilize two groups of subjects. One group served as the experimental group receiving a treatment \((X)\) while during
the same time period the second group, serving as the control group received no treatment. The conduct grades from the first six weeks served as the pretest \( O_1 \) and \( O_2 \). The grades from the second six weeks served as the posttest \( O_3 \) and \( O_4 \). These grades were recorded in the teacher's daily record book, then finally onto the grade register by each of the three technology education teachers participating in the experiment.

**Schedule for Gathering Data**

Data was gathered during the first and second six weeks of the 1988–89 academic school year. The school principal and the three technology education teachers participating in the experiment were briefed and given a detailed explanation of the purpose, focus, and design of the study.

**Summary**

Each six weeks, the teachers kept daily records on each student using the Teacher's Daily Attendance and Record Book and/or a Teacher-Made Technology Education Behavior Rating Scale. However, the Prince William County Grade Reporting Register served as the primary source for gathering data.
Chapter Four - Statistical Analysis of Results

Introduction

The figures obtained for this investigation were critically examined and analyzed according to their content. Statistical formulations for variance, standard deviation, and the one-tailed t-test were utilized to determine if there was a statistical significance (t) for the data collected.¹

The grades were assigned a numerical value so that a test could be made to determine the likelihood that a statistically significant mean difference existed in the behavior of both the treatment group and the control group. The Appleworks computer program was utilized to assist in the statistical analysis of data collected. A one-tailed t-test was utilized to determine if the null hypothesis could definitely be rejected at the p = .05 level of significance.

¹ Appendix N - Standard Deviation Comparison Chart
Interpretation of Results

The statistical analysis shows that the critical region for the conduct (classroom behavior) of the sample was greater than or equal to 2.116. This figure exceeds the table value when entered at $p = .05$ level of significance with $df = 150 (N_1 + N_2 - 2)$. Therefore, the statistics show that the null hypothesis which states that the variables positive praise and classroom behavior are not related can be rejected at the specific $p$ level stated above. Based on the data collected a significant difference appears to exist in the classroom behavior of the treatment group and the classroom behavior of the control group during the second six weeks of the 1988-89 school year at the $p = .05$ level when $df = 150$.

Summary

The results of this study seems to suggest that a correlation does exist between positive feedback and acceptable classroom behavior. Such a correlation was validated by performing a statistical $t$-test on the data gathered. The research determines that the null hypothesis can be rejected even to the $p = .025$ level of significance with 150 degrees of freedom. Statistical analysis of the data produced a $t$ equalling 2.11.
Chapter Five - Summary, Conclusions, and Recommendations

Introduction

One hundred and fifty middle school technology education students served as subjects for this experiment. An attempt was made to test whether or not positive praise had any effect on the their classroom behavior.

Summary

The subjects responding to the independent variable of positive (verbal) praise received classroom conduct grades which were 35.6 % higher than the classroom conduct grades of the subjects in the control group. All three teachers involved in this study saw a 3.7 percent decrease in the number of behavior related problems of the students receiving the treatment.

An interaction was also noticed to exist between positive praise and the students academic achievement; at the \( p = .05 \) level of significance , a one-tailed \( t \)-test produced \( t = 1.763 \). Likewise, an interaction was noticable between positive praise and classroom effort. At the \( p = .05 \) and the \( p = .025 \) level of significance with \( df = 150 \), a one-tailed \( t \)-test produced \( t = 2.40 \) which allows the null hypothesis stating that positive praise does not
effect the classroom conduct of middle school technology education students to be rejected.

Conclusions

It was also observed that, not only positive praise, but the student's ability must be recognized as a variable to be controlled for. Results of this experiment may have also been biased by the expectations of the three technology education teachers as well as by the behavior cited as a result of certain students in the sample who did not understand the subject matter being presented.

Recommendations

Based on the conclusions of this research, the readers of this study must be made aware of the possibility that further analysis of this information as presented needs to be made before an attempt is made to establish validity between positive praise and classroom behavior. There were too many variables to be controlled for to show a real statistical significance.
APPENDIX
APPENDIX A

FIRST SIX WEEKS ACHIEVEMENT GRADES FOR THE EXPERIMENTAL GROUP

CLASS AB & CD (1.1.A)

Grade Equivalence: (A=4, B=3, C=2, D=1, F=0)

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**Population:** 76

**Mean Score:** 3.026

**Sum of Raw Scores:** 230

**Sum of Sq. Scores:** 750

\[(\text{Sum } x)^2: 52900\]

\[57000\]

\[52900\]

\[4100\]

\[5700\]

**Group Variance:** .719

**Standard Deviation:** .848
APPENDIX B

FIRST SIX WEEKS EFFORT GRADES FOR THE EXPERIMENTAL GROUP

CLASS AB & CD (1.1.E)

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APPENDIX B (cont.) FIRST SIX WEEKS EFFORT GRADES: EXPERIMENTAL GROUP

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POPULATION: 76

MEAN SCORE: 3.184

SUM OF RAW SCORES: 242

SUM OF SQ. SCORES: 828

\((\text{SUM } X)^2\): 58564

GROUP VARIANCE: .766

STANDARD DEVIATION: .875
APPENDIX C

FIRST SIX WEEKS CONDUCT GRADES FOR THE EXPERIMENTAL GROUP

CLASS AB & CD (1.1.C)

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APPENDIX C (cont.) FIRST SIX WEEKS CONDUCT GRADES: EXPERIMENTAL GROUP

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POPULATION: 76

MEAN SCORE: 3.184
SUM OF RAW SCORES: 242
SUM OF SQ. SCORES: 816

\[(\text{SUM} \cdot \text{X})^2: 58564\]

62016
58564
3452
5700

GROUP VARIANCE: .606
STANDARD DEVIATION .778
APPENDIX D

FIRST SIX WEEKS ACHIEVEMENT GRADES FOR THE CONTROL GROUP

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POPULATION: 76

MEAN SCORE: 2.895

SUM OF RAW SCORES: 220

SUM OF SQ. SCORES: 694

(SUM X)^2: 48400

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4344

5700

GROUP VARIANCE: .762

STANDARD DEVIATION .873
APPENDIX E

FIRST SIX WEEKS EFFORT GRADES FOR THE CONTROL GROUP

CLASS EF & GH (1.2.E)

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### APPENDIX E (cont.) FIRST SIX WEEKS EFFORT GRADES: CONTROL GROUP

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**POPULATION:**  
76

**MEAN SCORE:**  
3.079

**SUM OF RAW SCORES:**  
234

**SUM OF SQ. SCORES:**  
806

\[(\text{SUM} \times \text{SUM})^2: \]  
54756

61256

54756

6500

5700

**GROUP VARIANCE:**  
1.140

**STANDARD DEVIATION**  
1.068
APPENDIX F

FIRST SIX WEEKS CONDUCT GRADES FOR THE EXPERIMENTAL GROUP

CLASS AB & CD (1.2.C)

Grade Equivalence: (A=4, B=3, C=2, D=1, F=0)

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| 29 | 4 | 16 | 0.816 |
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| 31 | 3 | 9 | -0.184 |
| 32 | 4 | 16 | 0.816 |
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APPENDIX F (cont.) FIRST SIX WEEKS CONDUCT GRADES: EXPERIMENTAL GROUP

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POPULATION: 76

MEAN SCORE: 3.184

SUM OF RAW SCORES: 242

SUM OF SQ. SCORES: 828

(SUM X)²: 58564

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58564

4364

5700

GROUP VARIANCE: .766

STANDARD DEVIATION .875
APPENDIX G
SECOND SIX WEEKS ACHIEVEMENT GRADES FOR THE EXPERIMENTAL GROUP
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**Population:** 76

**Mean Score:** 3.237

**Sum of Raw Scores:** 246

**Sum of Sq. Scores:** 834

**SUM X)**²: 60516

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**Group Variance:** .503

**Standard Deviation:** .709
APPENDIX H

SECOND SIX WEEKS EFFORT GRADES FOR THE EXPERIMENTAL GROUP

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POPULATION: 76
MEAN SCORE: 3.447
SUM OF RAW SCORES: 262
SUM OF SQ. SCORES: 940
(SUM X)²: 68644

GROUP VARIANCE: .491
STANDARD DEVIATION: .700
# APPENDIX I

SECOND SIX WEEKS CONDUCT GRADES FOR THE EXPERIMENTAL GROUP

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APPENDIX I (cont.) SECOND SIX WEEKS CONDUCT GRADES: EXPERIMENTAL GROUP

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POPULATION: 76

MEAN SCORE: 3.303

SUM OF RAW SCORES: 251

SUM OF SQ. SCORES: 889

(SUM X)^2: 63001

67564

63001

4563

5700

GROUP VARIANCE: .801

STANDARD DEVIATION .895
APPENDIX J

SECOND SIX WEEKS ACHIEVEMENT GRADES FOR THE CONTROL GROUP

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POPULATION: 76

MEAN SCORE: 3.013

SUM OF RAW SCORES: 229

SUM OF SQ. SCORES: 745

(SUM X)²: 52441

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4179

5700

GROUP VARIANCE: .733

STANDARD DEVIATION .856
APPENDIX J (cont.) SECOND WEEKS ACHIEVEMENT GRADES: CONTROL GROUP

APPENDIX K
SECOND SIX WEEKS EFFORT GRADES FOR THE CONTROL GROUP

CLASS EF & GH (2.2.E)

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### APPENDIX K (cont.) EFFORT SIX WEEKS EFFORT GRADES: CONTROL GROUP

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POPULATION: 76

MEAN SCORE: 3.105

SUM OF RAW SCORES: 236

SUM OF SQ. SCORES: 812

(SUM X)²: 55696

61712

55696

6016

5700

GROUP VARIANCE: 1.055

STANDARD DEVIATION: 1.027
APPENDIX L

SECOND SIX WEEKS CONDUCT GRADES FOR THE CONTROL GROUP

CLASS EF & GH (2.2.C)

Grade Equivalence: (A=4, B=3, C=2, D=1, F=0)

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POPULATION: 76

MEAN SCORE: 2.947

SUM OF RAW SCORES: 224

SUM OF SQ. SCORES: 762

(SUM X)^2: 50176

57912

50176

7736

5700

GROUP VARIANCE: 1.357

STANDARD DEVIATION: 1.165
APPENDIX M
MEANS COMPARISON CHART

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MEANS FOR EXPERIMENTAL GROUP
CLASS AB-CD
FOR THE FIRST SIX WEEKS
MEANS FOR THE CONTROL GROUP
CLASS EF-GH
FOR THE FIRST SIX WEEKS

MEANS FOR THE EXPERIMENTAL GROUP
CLASS AB-CD
FOR THE SECOND SIX WEEKS
MEANS FOR THE CONTROL GROUP
CLASS EF-GH
FOR THE SECOND SIX WEEKS

MEAN DIFFERENCE BETWEEN THE TWO GROUPS OF SUBJECTS

* A = ACHIEVEMENT SCORES
* E = EFFORT SCORES
* C = CONDUCT SCORES
APPENDIX N

STANDARD DEVIATION COMPARISON CHART

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At the p= .05 level with df = 150, t = 1.763 2.400 2.116

*A = ACHIEVEMENT SCORES
*E = EFFORT SCORES
*C = CONDUCT SCORES
APPENDIX O

SAMPLE COPY OF GRADE REPORTING REGISTER FOR PRINCE WILLIAM COUNTY SCHOOLS
APPENDIX P

SAMPLE PAGE OF TEACHER'S CLASS RECORD BOOK FOR PRINCE WILLIAM COUNTY SCHOOLS
Periodicals


Dickinson, Donald J., Kopp, Katherine H., and Lankford, Gary P. "Instructional Behavior of Teachers When Teaching Different Learning Task." Teacher Education And Special Education 8, no 3 (Summer 1985) 164-171.


Books


Magazine