POWER IN THE CLASSROOM V: BEHAVIOR ALTERATION TECHNIQUES, COMMUNICATION TRAINING AND LEARNING

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The current investigation is the fifth in a series of studies focusing on the communication of power in the classroom and its role in classroom management and student learning. The ultimate goal of the research program is the generation of a communication-based theory of teacher influence in the classroom with behavioral specifications for increasing student learning.

The first two studies in the series focused on a relatively limited conceptualization of teacher influence drawn from the work of French and Raven (1968) relating to power (McCroskey and Richmond, 1983; Richmond and McCroskey, 1984). The results of these studies indicated a substantial association between student perceptions of their teachers' use of power and their cognitive and affective learning.

Recognizing the limitations of the original conceptualization and drawing upon previous work done in the area of compliance-gaining, the next two studies generated a much broader conceptualization of teacher influence which focused on communication techniques, known as Behavior Alteration Techniques (BATs), and specific communicative messages associated with those techniques, known as Behavior Alteration Messages (BAMs: Kearney, Plax, Richmond, and McCroskey, 1984, 1985).

The present study was designed to investigate the relationship between use of these techniques and student affective learning as well as the impact of communication training of teachers and student quality on differential use of the techniques.

Research Questions

In the first two studies in this research program (McCroskey and Richmond, 1983; Richmond and McCroskey, 1984) it was found that teacher and student perceptions of teachers' use of power, although related, were substantially different and the students' perceptions were most associated with learning. The more recent studies (Kearney, et al., 1984; 1985), which have been designed to generate and refine BAT categories, primarily have examined perceptions of teachers. The first research question addressed in this study, therefore, was:

RQ1: Do perceptions of BAT usage vary as a function of being a teacher or a student?

In the most recent Kearney, et al. (1984) study, it was found that sex of teacher

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and level of instruction both had some impact on reports of BAT use. This led us to question whether other teacher and/or student variables may also have meaningful impact on these perceptions. Since all of the teacher subjects in the previous studies had at least some training in communication in instruction, it is important to determine whether such training has a meaningful impact. If results of these studies can only be generalized to teachers who have had training in communication, their worth would be substantially reduced. This concern led to our second research question:

RQ2: Do perceptions of BAT usage vary as a function of training in communication?

Interviews with subjects following data collection in the preceding study led us to be concerned about another variable that could substantially impact teachers' (as well as students') perceptions of BAT use. Several teachers in that study indicated they had some difficulty responding to the instrument requesting their perception of how often they used each BAT because they felt they treated different students in different ways. Thus, it would seem possible that the responses obtained in that study were reflective of hypothetical "typical" students that might not even exist. In earlier research the observed correlations between teacher and student perceptions of power usage were low (McCroskey and Richmond, 1983). In another study (Richmond and McCroskey, 1984) it was found that correlations between teacher perceptions and student learning were much lower than correlations between student perceptions and student learning. While it may be that teachers are simply not very accurate in their perceptions, it seems at least as likely that in requesting those perceptions in a generalized form, researchers force the responding teacher to generate an average response that does not represent anything real.

It seems quite unlikely that a teacher always behaves in the same ways with all students, or even always behaves the same way with a given student. Students differ in their responses to instruction and teachers should be expected to adapt to those responses in many cases. Students may differ in many ways, including their academic ability, their sex, their personality, and their classroom behavior. Any or all of these variables, as well as many others, might cause teachers to employ BATs differentially. If so, asking teachers to report their perceptions of what BATs they use in the classroom, as has been done in the two previous studies in this series, may be a weak and/or inappropriate research methodology.

In order to probe this possibility, we examined BAT usage, as perceived by both the teachers and the students, in conjunction with one individual difference variable—the teacher's perception of the quality of the student. While other student differences could as easily have been chosen, student quality was chosen because of the ease with which it could be operationalized and because in our conversations with teachers in previous studies they commonly mentioned this variable when indicating they had some difficulty completing a research instrument. Thus, our third research question was:

RQ3: Do perceptions of BAT usage vary as a function of quality of student?

While the above questions were considered very important concerns because of their potential information concerning the external validity of this research program, the primary focus of this study was on the relationship between BAT use and affective learning. Thus, our two major research questions were:

RQ4: Is affective learning a function of teacher perceptions of BAT usage?
RQ5: Is affective learning a function of student perceptions of BAT usage?

Because of the possibility that the results relating to RQ2 and RQ3 would indicate potential contamination in our results as a function of communication training and/or student quality, we examined two additional research questions to determine the importance of that contamination. These questions were:

RQ6: Is affective learning a function of training in communication?
RQ7: Is affective learning a function of quality of student?

PROCEDURES

Design

The basic design of this study was similar to that of the Richmond and McCroskey (1984) study. Teachers were contacted and requested to complete the instruments discussed below and have their students complete similar instruments. Code numbers were employed to insure anonymity of both teachers and students. All teachers contacted were teaching in grades 7–12, since younger students could not be expected to handle the research instruments.

In order to obtain a sample of teachers with communication training, 42 individuals who had recently completed an M.A. in Speech Communication with an emphasis in Communication in Instruction and currently were teaching in grades 7–12 were invited to participate. Slightly over half (N = 22) were able to cooperate. Although none refused the invitation, five did not teach regular classes (speech pathologists, music teachers, etc.) and 15 were unable to obtain permission from their school districts to collect the necessary data from their students. Although all of these teachers provided their own responses, these data were not included in any analyses to be reported below. Thus, the "teachers with communication training" condition included data from 22 teachers and their students.

In order to obtain a sample of teachers with no communication training, the cooperating teachers described above were asked to secure the cooperation of another teacher in their school who was teaching at the same level as they were but had had no communication courses beyond what may have been available in their undergraduate program. In all but two cases, the cooperation of an appropriate individual was obtained. In those two instances the investigators were informed that all of the teachers in the school had taken graduate courses in communication. Thus, the "no communication training" condition included data from 20 teachers and their students.

Each participating teacher was provided with instruments to be given to 15 students. In order to manipulate the quality of student variable, each teacher was asked to give the instruments to "five of your very best students," "five average students," and "five of your very worst students." The instruments were coded by level in such a way that the teachers and researchers could keep them separated but would not be noticeably different to students. Thus, for each of the three student quality levels, data were obtained from 210 students, a total of 630 respondents.

Measurement

Use of Behavior Alteration Techniques. The students and teachers were provided with the representative Behavior Alteration Messages (BAMs) for the 22 BATs generated in the Kearney, et al. (1984) study (see Table 1). BAT labels were not

TABLE 1

Technique	Sample Messages
1. Immediate Reward from Behavior	You will enjoy it. It will make you happy. Because it's fun. You'll find it rewarding/interesting. It's a good experience.
2. Deferred Reward from Behavior	It will help you later on in life. It will prepare you for college (or high school, job, etc.). It will prepare you for your achivement tests. It will help you with upcoming assignments.
3. Reward from Teacher	I will give you a reward if you do. I will make it beneficial to you. I will give you a good grade (or recess, extra credit) if you do. I will make you my special assistant.
4. Reward from Others	Others will respect you if you do. Others will be proud of you. Your friends will like you if you do. Your parents will be pleased.
5. Self-Esteem	You will feel good about yourself if you do. You are the best person to do it. You are good at it. You always do such a good job. Because you're capable!
6. Punishment from Behavior	You will lose if you don't. You will be hurt if you don't. It's your loss. You'll feel bad if you don't.
7. Punishment from Teacher	I will punish you if you don't. I will make it miserable for you. I'll give you an "F" if you don't. If you don't do it now, it will be homework tonight.
8. Punishment from Others	No one will like you. Your friends will make fun of you. Your parents will punish you if you don't. Your classmates will reject you.
9. Guilt	If you don't, others will be hurt. You'll make others unhappy if you don't. Your parents will feel bad if you don't. Others will be punished if you don't.
10. Teacher/Student Relationship: Positive	I will like you better if you do. I will respect you. I will think more highly of you. I will appreciate you more if you do. I will be proud of you.
11. Teacher/Student Relationship: Negative	I will dislike you if you don't. I will lose respect for you. I will think less of you if you don't. I won't be proud of you. I'll be disappointed in you.
12. Legitimate—Higher Authority	Do it, I'm just telling you what I was told. It is a rule, I have to do it and I will have to give you an "F" if you don't. If you don't do it now, it will be homework tonight.
13. Legitimate—Teacher Authority	Because I told you to. You don't have a choice. You're here to work! I'm the teacher, you're the student. I'm in charge, not you. Don't ask, just do it.
14. Personal (Student) Responsibility	It is your obligation. It is your turn. Everyone has to do his/her share. It's your job. Everyone has to pull his/her own weight.
15. Responsibility to Class	Your group needs it done. The class depends on you. All your friends are counting on you. Don't let your group down. You'll ruin it for the rest of the class (team).
16. Normative Rules	We voted, and the majority rules. All of your friends are doing it. Everyone else has to do it. The rest of the class is doing it. It's part of growing up.
17. Debt	You owe me one. Pay your debt. You promised to do it. I did it the last time. You said you'd try this time.
18. Altruism	If you do this, it will help others. Others will benefit if you do. It will make others happy if you do. I'm not asking you to do it for yourself; do it for the good of the class.
19. Peer Modeling	Your friends do it. Classmates you respect do it. The friends you admire do it. All your friends are doing it.
20. Teacher Modeling	This is the way I always do it. When I was your age, I did it. People who are like me do it. I had to do this when I was in school. Teachers you respect do it.
21. Expert Teacher	From my experience, it is a good idea. From what I have learned, it is what you should do. This has always worked for me. Trust me—I know what I'm doing. I had to do this before I became a teacher.
22. Teacher Feedback	Because I need to know how well you understand this. To see how well I've taught you. To see how well you can do it. It will help me know your problem areas.

included. The students were asked to rate on a 1–5 scale "how frequently your teacher uses statements of each type to get you to change your behavior in the classroom." Higher scores indicated greater frequency. The teachers were asked to complete the instrument three times, indicating how frequently they use each BAT with good, average, and poor students.

Affective Learning. Affective learning was conceived as positive attitudes toward the course, its content and the instructor as well as increased likelihood of engaging in behaviors taught in the class and taking additional classes in the subject matter. Attitudes toward the content of the course, behaviors recommended in the course, and the instructor were meaured by four, seven-step bipolar scales: good/bad; worthless/valuable; fair/unfair; and positive/negative. To measure behavioral intention, the subjects were asked to respond to two statements on four bipolar, seven-step scales. The statements were 1) "In real-life situations; your likelihood of actually attempting to engage in the behaviors recommended in the course," and 2) "Your likelihood of actually enrolling in another course of related content if your schedule so permits." The scales were likely/unlikely; impossible/possible; probable/improbable; and would not/would. Alpha reliabilities for each of the measures for the student sample were above .90. As an indication of general affect, a total score was generated by adding the scores on all five measures. Alpha reliability for this measure was .94.

Data Analysis

All data analyses were performed with the assistance of the SAS statistical package. Data for individual subjects were entered separately and teacher and student data paired by means of the MERGE procedure available in this statistical package. Student data for each teacher were grouped by quality level and the mean for the five students at each quality level was used as the unit of analysis for correlations and analyses of variance involving both teacher and student responses. For analyses involving only student data, the student data were not aggregated.

In order to answer our first research question, one-way analyses of variance between teacher and student perceptions of BAT use were computed. For these analyses all of a given teacher's responses were aggregated to generate the "teacher" score and all of that teacher's students' responses were aggregated to form the "student" score. Simple correlations were also computed between these scores.

In order to generate results related to our second and third research questions, a series of two-way analyses of variance were computed. The independent variables were communication training level (trained/untrained) and quality of student (good/average/poor). For the teacher generated data, the quality of student variable represented a repeated measure. Preliminary analysis indicated very low and mostly non-significant correlations among BAT scores. However, a multivariate analysis of variance resulted in significant effects for both training level and quality of student but no significant interaction. The weights of the BAT scores differed substantially. Thus, the univariate results will be reported and discussed here.

To generate results related to research questions 4 and 5, simple correlations between BAT use as reported by teachers and students and the various learning measures were computed.

To generate results related to our last two research questions, a series of two-way analyses of variance were computed. The independent variables were communication training level (trained/untrained) and quality of student (good/average/poor). The dependent variables were the various affective learning measures. Preliminary

analysis indicated the five affect sub-scores were significantly related. Thus, these scores were subjected to a multivariate analysis of variance. The results indicated significant main effects for both independent variables but no significant interaction. The results also indicated, however, that weights of the affect sub-scores differed substantially. Thus, the univariate results will be reported below since they provide a clearer picture of the results obtained.

RESULTS

Table 2 reports the results of the analyses of variance relating to teacher and student perceptions and the simple correlations between these perceptions. Teachers reported perceiving significantly greater use of 12 of the BATs while the students reported perceiving greater use of only one, Legitimate—Teacher Authority. No differences were obtained on the remaining 9 BATs. The variance accounted for in these analyses ranged upward to 17 percent.

The teachers saw themselves as using more of all four types of reward BATs, Self-Esteem, Teacher/Student Relationship: Positive, Expert Teacher, and Teacher Feedback—all of which might be judged to be prosocial techniques. They also saw themselves as using more Guilt, Responsibility to Class, Normative Rules, and Peer Modeling. The latter four are much less likely to be seen as prosocial by students. Thus, the teachers' reports of their perceptions do not seem to be a simple function of a desire to be seen in a positive manner.

The obtained correlations between the teacher and student scores are also reported in Table 2. For the most part these correlations are very low and indicate very little shared variance in perceptions. Thus, the differences between teacher and student perceptions are more than just ones of magnitude. They are not reporting seeing the

TABLE 2

MEAN TEACHER AND STUDENT PERCEPTIONS OF BAT USAGE

BAT	Teacher	Student	F-ratio	Simple r
1	3.4	2.7	79.62*	.15
2	3.5	3.1	21.44*	.13
3	2.0	1.6	23.22*	.01
4	2.4	1.9	39.50*	.11
5	3.3	2.4	119.23*	.10
6	1.8	1.9	.52	.03
7	1.8	1.9	3.18	.20*
8	1.8	1.3	3.51	.21*
9	1.5	1.4	4.94*	−.02
10	2.5	2.0	44.65*	.04
11	1.4	1.4	.12	.10
12	2.6	2.7	.33	.10
13	2.0	2.3	14.84*	.28*
14	2.4	2.5	.25	.00
15	2.2	1.8	42.52*	.13
16	2.4	1.9	67.87*	.04
17	1.5	1.4	1.42	.06
18	2.1	2.0	1.11	−.04
19	2.2	1.6	82.42*	.02
20	2.1	2.0	.09	−.08
21	3.1	2.7	26.78*	.10
22	3.6	3.4	10.88*	.02

*Significant at .05 Alpha level.

same things in the classroom. This raises a question of validity which will be considered later.

Table 3 reports the results of the analyses of variance for differences in BAT use of trained vs. untrained teachers from both teacher and student perceptions. The obtained results are dramatically different. Based upon teacher perceptions, 15 of 22 analyses are significant and in each case the trained teacher reports *greater* use of the given BAT. In contrast, based upon student perceptions, 15 of 22 analyses are significant and in each case the trained teachers' students report *less* use of the given BAT.

Of particular interest in the student results is the fact that for the four BATs found to be positively associated with affective learning (to be reported and discussed below) the students saw no significant difference between trained and untrained teachers. In contrast, for the five BATs found to be negatively associated with affective learning, the students saw untrained teachers as employing each BAT significantly more than trained teachers.

Results of the analyses of variance relating to student quality level are reported in Table 4. Student and teacher agreement was present on only three BATs: Self-Esteem, Legitimate—Teacher Authority, and Peer Modeling. However, both teachers (in 6 of 22 analyses) and students (in 8 of 22 analyses) do perceive that teachers use BATs differentially with regard to quality level of student. The variance accounted for in these analyses, however, is not particularly high. The highest variance accounted for in teacher perceptions is slightly over 10 percent while the highest in student perceptions is slightly over 7 percent.

The significant correlations between teacher perceptions of BAT use and student affective learning are reported in Table 5. Similar correlations for student percep-

TABLE 3

MEAN TEACHER AND STUDENT PERCEIVED BAT USE BY TRAINING LEVEL

	Teacher			Student		
BAT	Trained	Untrained	F-ratio	Trained	Untrained	F-ratio
1	3.7	3.2	30.86*	2.7	2.7	.71
2	3.3	3.1	2.68	3.1	3.2	4.20*
3	2.6	1.9	38.11*	1.5	1.8	9.23*
4	2.9	2.5	15.50*	1.8	2.0	6.60*
5	3.7	3.1	39.16*	2.4	2.5	.43
6	1.9	1.7	2.44	1.8	2.0	7.70*
7	1.8	1.9	3.56	1.7	2.3	27.30*
8	1.3	1.2	3.62	1.2	1.4	8.99*
9	1.6	1.4	13.01*	1.3	1.5	12.08*
10	2.7	2.2	23.21*	2.0	2.1	2.79
11	1.5	1.2	13.85*	1.3	1.5	10.05*
12	2.6	2.2	11.79*	2.5	2.9	18.08*
13	2.0	2.0	.20	2.0	2.7	38.82*
14	2.5	2.5	.47	2.4	2.6	7.20*
15	2.5	2.2	10.65*	1.6	2.0	21.48*
16	2.4	2.2	5.77*	1.8	2.1	11.03*
17	1.5	1.4	1.83	1.3	1.5	12.37*
18	2.3	1.9	19.13*	1.9	2.0	.88
19	2.4	1.7	48.47*	1.5	1.7	4.65*
20	2.3	1.6	57.60*	2.0	2.1	.75
21	3.1	2.4	42.29*	2.7	2.7	.17
22	3.7	3.3	9.20*	3.5	3.4	.83

*Significant at p < .05 Alpha level.

TABLE 4

MEAN TEACHER AND STUDENT PERCEIVED BAT USE BY QUALITY LEVEL

BAT	Good	Teacher Average	Poor	F-ratio	Good	Student Average	Poor	F-Ratio
2	3.4	3.3	2.9	7.25*	3.2	3.2	3.1	.72
3	1.9	2.3	2.9	25.57*	1.5	1.6	1.8	2.73
5	3.7	3.5	3.4	5.78*	2.5	2.6	2.3	4.72*
6	1.8	1.9	1.8	.44	1.7	2.0	2.1	5.19*
8	1.2	1.3	1.3	1.24	1.2	1.3	1.4	4.09*
10	2.5	2.6	2.6	.03	1.8	2.1	2.2	7.08*
13	1.7	2.0	2.3	12.55*	2.1	2.4	2.6	9.34*
15	2.2	2.4	2.4	1.30	1.6	1.9	1.9	7.21*
17	1.3	1.5	1.6	2.79	1.2	1.4	1.6	14.30*
19	1.9	2.2	2.3	4.79*	1.4	1.7	1.7	5.15*
20	1.9	2.1	2.2	3.21*	1.9	2.1	2.1	1.78

*Significant at $p < .05$ Alpha level. Analyses for BATs which were non-significant for both teachers and students are not reported.

tions are reported in Table 6. The results indicate positive associations with affective learning for Immediate Reward from Behavior and Deferred Reward from Behavior for both responding groups. Similar associations are present for Self-Esteem and Teacher Feedback in the student data but not in the teacher data. Negative associations with affective learning were observed in both data sets for Punishment from Teacher, Legitimate—Teacher Authority, and Peer Modeling. The teacher data also indicated negative relationships for Punishment from Others and Legitimate—Higher Authority. The student data indicated additional negative relationships for Responsibility to Class and Debt.

A supplementary analysis was computed to determine the degree to which affective learning could be predicted from student perceived use of BATs jointly. The

TABLE 5

SIGNIFICANT CORRELATIONS BETWEEN BAT USE AND LEARNING—TEACHER PERCEPTIONS

BAT	Course	Content	Teacher	Use	Enroll	Affect
1	—	.27	.28	.22	.26	.31
2	—	.27	.22	.24	.21	.28
3	—	—	—	—	—	—
4	—	—	—	—	—	—
5	—	—	—	—	—	—
6	—	—	—	—	—	—
7	—	—	—	−.18	—	−.20
8	—	—	—	−.21	—	−.19
9	—	—	—	−.18	—	—
10	—	—	−.18	—	—	—
11	—	—	—	—	—	—
12	—	−.19	−.20	—	—	−.20
13	—	—	—	−.23	—	−.20
14	—	—	−.21	−.19	—	—
15	—	—	—	—	—	—
16	—	—	—	—	—	—
17	—	—	−.19	—	—	—
18	—	—	—	—	—	—
19	−.24	−.18	−.22	−.21	−.20	−.24
20	—	—	—	—	—	—
21	—	—	—	—	—	—
22	—	—	—	—	—	—

TABLE 6
SIGNIFICANT CORRELATIONS BETWEEN BAT USE AND LEARNING—STUDENT PERCEPTIONS

BAT	Course	Content	Teacher	Use	Enroll	Affect
1	.22	.31	.34	.23	.22	.33
2	.22	.28	.25	.29	.24	.32
3	—	—	—	—	−.18	—
4	—	—	—	—	—	—
5	.24	.35	.31	.37	.25	.36
6	—	—	—	—	−.21	—
7	−.35	−.28	−.30	—	−.27	−.34
8	−.19	—	—	—	—	—
9	—	—	—	—	—	—
10	—	—	—	—	—	—
11	−.22	—	—	—	—	—
12	—	—	—	—	—	—
13	−.34	−.28	−.40	−.18	−.28	−.36
14	—	—	—	—	—	—
15	−.25	—	—	—	—	−.18
16	—	—	—	—	—	—
17	−.22	−.23	−.25	−.19	−.23	−.26
18	—	—	—	—	—	
19	—	−.20	−.26	—	−.19	−.21
20	—	—	—	—	—	—
21	—	—	—	—	—	—
22	.22	.33	.35	.23	—	.30

resulting multiple correlation was .69 for the general affect score. This suggests a substantial relationship between the ways students see their teachers attempting to influence them and their affective learning in the classroom. No single BAT accounts for more than about 13 percent of the variance, but taken together perceived BAT use can account for approximately 47 percent of the variance.

The results of the analyses of variance of the impact of communication training and quality of student on affective learning are reported in Tables 7 and 8. No significant interactions were observed. Significant effects for training were observed on the content, teacher, and general affect variables. The largest effect (approximately 6 percent of the variance) was on the teacher variable, as might have been expected. Significant effects for quality of student were observed in all of the analyses, with the largest effect (approximately 11 percent of the variance) being on general affect.

DISCUSSION

The results of this investigation relating to our first three research questions indicate that perceptions of BAT usage are not consistent between teachers and students and

TABLE 7
MEANS FOR AFFECTIVE LEARNING BY TRAINING LEVEL

Learning	Trained	Untrained	F
Course	22.9	22.4	2.02
Content	22.2	21.3	4.62*
Teacher	24.3	22.6	15.11*
Use	21.2	21.0	.13
Enroll	19.0	18.7	.42
General Affect	109.8	106.0	5.79*

*Significant at .05 Alpha level.

TABLE 8

MEANS FOR AFFECTIVE LEARNING BY STUDENT QUALITY LEVEL

Learning	Good	Average	Poor	F
Course	23.7	22.7	21.6	10.35*
Content	23.0	22.1	20.3	14.56*
Teacher	24.1	24.0	22.2	7.37*
Use	22.2	21.6	19.5	12.85*
Enroll	20.3	18.6	17.6	7.14*
General Affect	113.1	109.1	101.6	18.29*

*Significant at .05 Alpha level.

that perceptions of both are related to communication training of the teacher and the quality of the student. Our first research question, "Do perceptions of BAT usage vary as a function of being a teacher or a student"? must receive an affirmative response. Not only are there numerous differences between teacher and student responses, the differences do not appear in a consistent way. Teachers do not simply see themselves using more or less BATs, which might be explained by a higher sensitivity to the need for influence in the classroom. These results suggest that future research should focus on student, rather than teacher, perceptions, at least when *student* affective responses to teacher BAT use are examined.

It should be stressed, however, that this conclusion does not call into question the methodology employed in the two studies preceding the present one (Kearney, et al., 1984; 1985). In those studies teacher and student perceptions were obtained to generate lists of possible BATs, not simply to determine which ones were most commonly used, although that was a topic of speculation. The primary outcome of those research studies was the list of BATs employed in the present study.

The results of this study relating to communication training indicate an affirmative response to our second research question, perceptions of BAT usage do vary as a function of training in communication. Based on the above analysis, we will discount the findings based on teacher perceptions. However, the findings based on the student perceptions are clear cut. The students reported no differences between trained and untrained teachers relating to the BATs found to be positively associated with affective learning. However, for all five of the BATs found to be negatively associated with affective learning, the students reported significantly higher use by untrained teachers.

Exactly what should be concluded from these results is not as clear as it may seem. The design of this study was not a true experiment. The trained teachers self-selected themselves into the training program. Thus, it is possible that the observed differences could have been observed even before the training occurred. However, a comparison between the perceptions of the untrained teachers in this study with those of a group of teachers on the first day of their first course in the training program (not reported in this paper) revealed no significant differences. Thus, it appears that the training rather than self-selection probably produced the observed results. This conclusion must be considered tentative, of course, in the absence of a true experimental design that can address this issue directly.

The results relating to student quality indicate an affirmative response to our third research question, BAT usage does vary as a function of student quality. While these results are not particularly interesting in and of themselves, their importance comes from the fact that student quality is but one of many student difference variables

which could have been examined. The fact that seven percent of the variance in BAT use (as perceived by students) could be explained by teacher-identified student quality suggests that a very large percentage of variance might be accounted for if a broad range of student differences were studied. This is *not* a call for such research, however. The number of such studies could be almost endless. They would only lead to the conclusion we can draw from this study, and probably should have assumed at the outset of this research program. The exercise of power in the classroom, hence the selection of BATs to employ, is rooted in the relational context of teacher-student interaction. Teachers make different choices with different students. It is quite possible that if teacher perceptions were obtained relating to specific students and paired with comparable student perceptions, the association between the two would be much higher than observed in this study. Teacher-student communication is relational communication, for the most part, and should be examined from this vantage point in future research.

Research questions 4 and 5 both addressed the primary concern of this research, the relationship between BAT usage and affective learning. While both can be answered affirmatively based on the obtained results, because of the questionable validity of the teacher perception data, we will only address the results relating to research question 5 here.

The results indicate a very substantial relationship between student perceived BAT usage and affective learning. A multiple correlation of .69 indicates that perceived BAT usage can account for approximately 47 percent of the variance in general affective learning. Results relating to the subscores on affect (not reported in detail here) are very similar. The results indicate that Immediate Reward from Behavior, Deferred Reward from Behavior, Self-Esteem and Teacher Feedback contribute to positive affect. In contrast, Punishment from Teacher, Legitimate—Teacher Authority, Peer Modeling, Responsibility to Class, and Debt are negatively associated.

While these results generally are comparable with those obtained in previous research by Richmond and McCroskey (1984), the replication definitely is not perfect. In both studies coercive (punishment) and legitimate power use are found to be negatively associated with affective learning. In the former, expert power and referent power were found to be positively associated, but neither was found to be related to affective learning in this study. We believe that these differences may be explained in terms of the methods used in the two studies. In the first study expert and referent power were described generally with no specific communicative messages presented to illustrate them. In the present study both power bases were represented only by illustrations of verbal messages. It seems in retrospect that such a choice may have been unwise. It is quite probable that sources rarely use the kinds of verbal messages used as illustrations when they actually are perceived as having these types of power. Such verbal communication may be quite unnecessary. In fact, the person who uses such messages may actually be the person who lacks such power. In the McCroskey and Richmond (1983) research there was a *negative* correlation between teacher and student perception of the use of referent power, for example.

The most striking difference in results between the two studies relates to reward power. In the Richmond and McCroskey (1984) research no association between reward power and affective learning was observed while in the present study two BATs based on reward power were found to be positively associated with affective learning. This discrepancy appears to be a result of the broadened interpretation of

reward power in the present research. Reward in the former study focused strictly on reward from the teacher and did not include any other kind of reward. Reward from Teacher also failed to be significantly associated with affective learning in the present study. Immediate Reward from Behavior and Deferred Reward from Behavior, the two significantly associated with affective learning in the present study, are not based on teacher power, per se. Hence, it is appropriate to conclude that the results of the two studies are consistent. The reservations about the use of teacher-based reward in grades 7–12 outlined by Richmond and McCroskey (1984) still appear to be appropriate.

The results of the data relating to the impact of communication training on affective learning indicate an affirmative response to our sixth research question. In general, students of teachers trained in communication reported higher affective learning than did students of the untrained teachers. While these effects, as discussed above, appear likely to be a function of the training, confirmation of this conclusion must await a true experimental test.

The results of the data related to quality of student and affective learning suggest an affirmative answer to our final research question. Better students reported higher affective learning. This result, of course, should not be seen as particularly surprising. For better students the whole learning environment provides more positive elements. What may be even more important is that an examination of the pattern of means indicates that on average all student groups had positive affect. This is not to suggest that all *individual* students had positive affect toward all classes and teachers, however. There were instances of the absolutely lowest possible score obtained on each measure. Nevertheless, on average, even the poor students in this study had positive affect toward the classes and teachers studied. If similar patterns could be found in a broadly representative group of students nationwide, some of our present concerns about the quality of our teachers and schools might be brought into serious question.

While the current investigation produced results which suggest that appropriate use of BATs can assist teachers in increasing student affective learning and inappropriate use can detract from that learning, and that it likely is possible to increase appropriate use of the techniques as a result of appropriately designed communication training, we must not conclude without highlighting two reservations about this research program at its present stage of development. First, few teachers (or others) view the primary goal of behavior alteration techniques (or compliance-gaining strategies) to be enhancing affective learning or relationships. Their real goal is altering behavior by gaining compliance. Thus, this research has focused on secondary, not primary, functions of BATs. In future research the primary function needs to be addressed.

The second reservation concerns the focus on affective learning. While some might argue that the focus should be on cognitive learning, that is not the reservation with which we are concerned. Extensive research is extant indicating how cognitive learning can be enhanced. The affective domain is the one which has received insufficient attention and probably is the one over which the teacher can have the most control. Such control almost certainly must center on appropriate communication behavior. To this point the research program has focused on communication behavior which has only a secondary relationship to affective learning. Future research must address communication behaviors which have their primary focus on developing positive affective relationships between teachers and students.

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