NATURAL RATES OF TEACHER APPROVAL AND DISAPPROVAL IN GRADE-7 CLASSROOMS¹

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The natural rates of teacher verbal approval and disapproval in ten grade-seven classrooms were determined and compared with those described by White (1975). Although there were differences in the observation techniques used and the behavioral, cultural, and ethnic groups sampled, the results were similar. The majority of the teachers displayed individual rates of disapproval that were higher than their individual approval rates. The correlations between levels of on-task behavior and approval and disapproval rates were low. The issues raised by these findings are discussed in terms of directions for further research.

DESCRIPTORS: child behavior, classroom reinforcement, teacher approval, disapproval, natural rates of verbal reinforcement, on-task behavior, children

White (1975) asked how rates of teacher verbal reinforcement operate to maintain or increase the school behavior of pupils. She suggested that if the rates are measured appropriately we may be able to explain some of the learning problems that teachers encounter with children, *e.g.*, lack of interest, poor concentration, and poor motivation. Also, as a result of observing what is actually taking place in classrooms, we may be able to design more effective therapeutic intervention strategies and develop techniques of classroom management for use in teacher training. Other than White's study, which involved 104 teachers, little has been reported on naturalistic or existing rates of teacher verbal reinforcement in the classroom. In contrast to White's study, which examined various numbers of teachers' rates of verbal reinforcement over Grades 1 to 12, the present study presents data on individual teachers' rates of verbal reinforcement in Grade 7. An individual analysis of such rates may provide additional insight into White's question.

Subjects and Setting

The teacher rates of verbal reinforcement in this study were obtained as part of the work of an innovative education facility, the Mangere Guidance Unit (Thomas and Glynn, 1976). This Unit serves three intermediate (junior high) schools that requested special help to deal with their problem children. Using behavior-analysis techniques, two specially trained teachers in the Unit assist students, their parents, and teachers to develop and maintain adaptive learning behaviors. The Unit teachers operate in conjunction with a management team composed of university researchers and educational psychologists. Before assistance is given to teachers with problem children, baseline observations are taken in the classroom. Data for the present study were abstracted from observations made in the Mangere Guidance Unit and compared with that of White (1975).

Although a considerable number of baseline observations have been made, only those with reliability checks are considered in this report. Because the Unit has essentially a clinical or treatment role, the availability of additional personnel for reliability checks is restricted.

The ages of the children in the classes ranged from 11 yr six months to 13 yr six months. The

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average class size was 30. The area in which all three schools are situated is in a large low-cost state housing district. All three schools have 50% or more Polynesian children enrolled. The children in this study were in mixed-ability classes. Observations were conducted in classes taken by the target children's regular teacher in core subject areas (reading, mathematics, social studies, and science). The techniques of classroom management used by the teachers were similar. Procedures such as timeout and corporal punishment were practised when necessary by the teachers. However, observers did not note any use of these techniques during observation sessions.

Observation Procedures

The two Guidance Unit teachers and specially trained Teachers' College students were the basic observers. None of these observers served as teacher subjects in the study. They used the time-sampling instrument that has been developed for use in the Unit. This records children's on- and off-task behaviors, teachers' verbal responses contingent on on-task behavior (approval responses), and teachers' verbal responses contingent on off-task behaviors (disapproval responses).

Although it is the general policy of the Guidance Unit for individual teachers to define on-task and off-task behaviors for their class during observation sessions, all teachers in this study had individually evolved highly similar behavior specifications. This uniformity probably came about because the teachers who received Guidance Unit assistance typically taught formal, instructional lessons, rather than more informal lessons. Typical on-task behaviors specified for pupils were:

1. Put your hand up if you want to say something. No calling out.
2. Listen when the teacher is talking. No one talks while the teacher is talking.
3. Work quietly at your desk.
4. Ask the teacher if you want to leave your desk.

5. Move quietly about the room if you have to.
6. If you finish the set work, go on with the extra work that has been given.

Off-task behaviors were:

1. Noise: *e.g.*, calling out, talking, singing, whistling, screaming, yelling.
2. Inappropriate movement: *e.g.*, leaving desk without permission, banging classroom furniture, fighting, jumping out window.
3. Staring away from the focus of the lesson.

The same 10 children were observed during the 25-min observation sessions. One or sometimes two of these children were chosen by the teacher as target children. The teacher chose another child as the "control" or "well-behaved" subject. The remaining seven or eight subjects were randomly chosen. The observer watched the first child on the observation list for 10 sec and then spent the next 5 sec coding the subject's behavior as on-task or off-task.

If any off-task behavior occurred in the 10-sec observation interval, then that interval was classified as off-task. Otherwise, behavior was classified as on-task. The observation procedures were followed until all 10 subjects had been observed. The cycle was continued until each subject had been observed 10 times. If subjects were absent, then only the children that were present were observed.

At the same time that children's behavior was being time-sampled, the observer took a continuous record of all teacher verbal approval and disapproval responses made in the observation session. This record covered both the 10-sec observation intervals and the 5-sec recording intervals of the behavior classification procedure. Approval and disapproval responses were directed at individual children, groups of children, and to the class as a whole. A verbal approval response was defined as a comment that followed on-task behavior, *e.g.*, "Rangi, your handwriting is beautiful". A verbal disapproval response was defined as a comment that followed off-task be-

havior, *e.g.*, "Class, stop your silly giggling". Every such comment made by the teacher was recorded by the observer with a check mark on the observation sheet. Instructional comments such as "Here is a map of New Zealand" were not recorded. Rates of teacher verbal approval and disapproval were calculated by dividing the total number of such responses by the total number of minutes in which the teacher was observed. The number of minutes in which teachers were observed varied according to the number of baseline observation sessions taken and the number of absences of observed children.

Observer reliability for on-task behavior was calculated in terms of the number of intervals in which two observers agreed, divided by the total number of observation intervals $\times 100$ (Wasik, Senn, Welch, and Cooper, 1969). Observer reliability for teacher verbal approval and disapproval responses was calculated in the following manner. The differences in respective totals of approval and disapproval responses between observers were considered to be disagreements. Reliability was computed by dividing the number of agreements by the sum of the agreements and disagreements and multiplying the quotient

by 100 to obtain a percentage (Hall, 1970). All checks on reliability covered the entire 25-min observation session.

RESULTS

Table 1 summarizes results for 10 Grade-7 teachers depicting approval, disapproval, and overall rates for teachers' verbal comments. Also listed is the mean daily on-task score for the children observed in each class, reliability data, the number of teaching subjects in which observations were carried out, and the number of minutes each teacher was observed.

The average approval rate of 0.20 is slightly below the rate reported by White for seventh graders, (1975) while the average disapproval rate is the same.

Seven of the 10 teachers had disapproval rates at least three times greater than their approval rates. Teacher B had the converse trend and Teacher E had an approval rate more than half her disapproval rate. Teacher rates of approval and disapproval did not consistently relate to the level of on-task behavior in the children observed. Spearman's correlation coefficient

Table 1
Natural Rates of Teacher Verbal Reinforcement per Observed Minute

Teacher	Approval Rate	Dis-approval Rate	Overall Rate	Mean Daily On-task % Score	Reliability Checks	Average Reliability for Teacher Comments	Average Reliability for On-task Behavior	Teaching Subjects Sampled	Minutes Observed	Grade
A	0.11	0.34	0.45	90	1	92	83	4	227	7
B	0.43	0.17	0.60	81	2	85	92	4	342	7
C	0.21	0.72	0.92	69	2	94	95	4	197	7
D	0.11	0.36	0.47	66	1	100	99	3	195	7
E	0.32	0.54	0.86	65	3	80	93	5	187	7
F	0.09	0.49	0.58	65	3	87	95	5	272	7
G	0.12	0.78	0.90	62	3	89	95	5	177	7
H	0.51	1.09	1.60	61	2	85	93	1	237	7
I	0.08	0.28	0.36	46	1	100	96	2	205	7
J	0.06	1.04	1.10	43	2	89	96	3	185	7
Means	0.20	0.58	0.88	66	1.8	90	93.7	3.6	Total 2456	

cients for on-task behavior and approval rates and for on-task behavior and disapproval rates were low, being 0.40 and -0.48 respectively. The inconsistency is reflected in results for Teacher A, for example, who had a high level of on-task behavior in her class (90%), yet whose verbal attention to on-task behavior was low (0.11) and whose verbal attention to off-task behavior was higher (0.34). Overall, her verbal attention to child behavior (0.45) is well below the average for the group (0.88). Teacher I, however, showed a similar trend, but her overall rate of verbal attention (0.36) was lower than Teacher A, yet the level of on-task behavior was only 43%. One could have hypothesized that Teacher A might have had a higher approval rate, since her children were so "good", and that Teacher I would have had a much higher disapproval rate, as did Teachers H and J, since her children had such a low rate of on-task behavior.

DISCUSSION

This analysis of teachers' verbal behavior shows that the averaged natural rates of approval and disapproval were similar to the rates reported by White for seventh graders (1975). This similarity is especially interesting, given the different observation techniques used and the different behavioral, cultural, and ethnic groups sampled.

The majority of teachers had individual rates of disapproval that were higher than their individual approval rates. Heller and White

(1975) obtained a similar trend with teachers who were working with low-ability children. The hypothesis put forward by these authors, that teachers find the use of disapproval more reinforcing than the use of approval, warrants further investigation, as it has implications for behavioral intervention programs and teacher training. For example, it would be important to identify the source of reinforcement for teachers' disapproval comments if one were trying to define ways of reducing these comments. It could be that disapproval comments are maintained because it is reinforcing for a teacher to know she/he has correctly detected inappropriate behavior. Finally, it is possible that some teachers clearly feel that appropriate behavior deserves little recognition (Thomas and Glynn, 1976).

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