

A NOTE ON A SIMPLE PROCEDURE FOR REDISTRIBUTING A TEACHER'S STUDENT CONTACTS¹

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A class of twelve third-grade students in a rural school of two grades per teacher was observed to determine the frequency of student-teacher contacts for each student. Requiring each child to go to a play area when he completed his work resulted in changing the distribution of these contacts so that the better students used fewer teacher contacts. In addition, the number of completed assignments of all students increased and data are presented which imply that the poorer students of the class received more of the teacher's available time than previously. The application of this procedure to special pupil populations would probably be very useful. A number of advantages and limitations of the procedure are described.

Many teachers face too many students representing too broad a range of academic achievement. Particularly is this true in rural settings where two or more grades may be taught by a single teacher. By the time a student completes the first and second grades, a legacy of ever-widening class spread is passed on to each successive teacher. Under these conditions, teachers may attend to the "good" students and ignore the "poorer" students because the former are more rewarding students to instruct. Also, the good students are more likely to make more demands on a teacher's time. The result is that poorer students get less education and often fall even farther behind, thus adding another increment to the spread of class achievement.

Hall (1968), Madsen, Becker, and Thomas (1968), and Thomas, Becker, and Armstrong (1968) have shown that teacher contacts with or teacher attention to students reinforce student learning behavior. That is, when teacher contacts or attention depend on the good behavior of the students, students behave well.

Teacher contacts in the situations such as the rural setting described above could be redistributed to ensure that the slower class members make contact with the teacher for instructional or testing purposes with nearly the same frequency as the better students. There may be a number of procedures for redistributing a teacher's contacts but any procedure that will be practical and possible for the teachers to use must be simple to employ, cost the school system little, if anything, and be immediately effective in order for it to be perpetuated. The present study describes a procedure that has these characteristics.

PROCEDURES

Setting

The study was carried out during spring term in a rural grade school room of 23 third and fourth grade children instructed by one teacher. Each grade worked with the teacher individually. Thus, while one grade was preparing an assignment, the other grade was having a previous assignment graded. The results of the third grade only are reported.

The classroom was partitioned into two parts. Two thirds of the room was devoted to desks and chairs and one third to play area containing tables and games. A partition was made from discarded 7-ft closet doors set on end and nailed together edgewise.

Data were collected before and after the procedures described below. All work periods reported were 45 min long.

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Condition I (Before)

At the beginning of each subject work period for the third grade, the teacher put the assignment on the blackboard. When a student had finished the assignment, the teacher checked the work and, if the work was correct, the child was given additional work or no more work to do, at the teacher's option. This method of instruction continued until that work period was over and the next work period began.

During this condition, data on teacher-student contacts were gathered as follows. Observation Period I was 50-min session of observation from parts of two work periods: spelling and language. Observation Period II was a 30-min session like that of Period I for part of a math work period. The authors recorded a teacher-student contact when a verbal exchange between the teacher and a student occurred or when the teacher touched a student or his work. Contact was considered terminated when either the teacher or the student left the presence of the other or stopped talking. Thus, though the teacher might touch a student's work a number of times and talk to him intermittently for a minute or two, it would all be considered to be part of the same contact if it had gone on uninterrupted. Contacts were scored as appropriate or inappropriate depending upon whether they were related to the correct work assignment or not. During each of the observation periods, the two observers compared the number of contacts after they had written them on their recording sheets. Specifically, whenever, one observer recorded a contact, he checked to see if the second observer had recorded the same contact. Only one disagreement was noted between the two observers for the 120 contacts recorded.

In addition, for the 14 consecutive work periods before Condition II, the per cent of assignments completed by each student was recorded.

Condition II (After)

Condition II differed from Condition I only in that as soon as a pupil had completed his assignment for the period, the pupil was withdrawn from the teacher's presence by requiring him to move into the play room for the remainder of that work period. During this

condition, data on teacher-student contacts were gathered as during Condition I. Observation Period III was taken three school days after the change to Condition II for a 45-min period of language and a 45-min period of math. Observation Period IV was taken eight school days after the change to Condition II and was for the same periods and classes as Period III. The per cent of assignments completed by each student was recorded for the 12 consecutive work periods after the change to Condition II.

Observers

The observers sat at desks at the rear of the desk area of the classroom. Observers singly and in pairs had been frequenting the room for a period of three weeks before the time of the data collection herein reported. The observers at no time interacted with the teacher in the presence of the pupils during the observation periods of this report.

Daily Lessons

The teacher had been asked to set up a lesson plan describing the material to be covered for each day in each book representing each course of study. This was done one week before the period covered by this report began and covered the entire report period. The day-to-day lesson plan represented a criterion which, if met everyday, would result in the pupils finishing the text by the end of the school year. This, then, was an equal number of pages per day for a given subject.

Assignment Completion

A 100% mastery criterion was employed. Failure in any part of an assignment resulted in the pupil being required to do the entire assignment over before being given credit for assignment completion. All assignments were graded by either the authors or the teacher. Since a 100% mastery criterion was employed, no reliability checks on grading were deemed necessary. Further, most assignments were in workbooks requiring fill-in answers and were thus easily graded.

Teacher Instruction

The teacher was asked if she would like to engage in some research to see what effect the playroom would have on student behavior. No hypothesis was stated, although one was

explicit: that an attempt was being made to find better ways to arrange the teaching environment. At the time of the change to Condition II no special instructions were given to the teacher. The teacher did not know the specific intention of the experimenters to attempt to reduce the teacher's contacts with the good students. The teacher merely continued to grade work assignments against the criterion.

Student Ratings

The teacher provided student ratings by indicating her four best students and her four poorest students before Condition I observations began, and these ratings were unknown to one of the observers.

RESULTS

Table 1 shows the data collected during Conditions I and II and indicates which students were considered by the teacher to be the best (+) and which were the poorest (-). Since different length observation periods were employed, the data on the number of appropriate teacher contacts were translated to rates by dividing the number of minutes of observation into the number of appropriate contacts recorded. It can be seen that a wide discrepancy obtained in number of contacts observed for different pupils; the four best students received an average contact per minute of 0.115

and the poorest four students received an average contact per minute of 0.064.

During Condition II, the procedure effectively blocked the high frequency of contacts in the good pupil group because when they finished their lesson, they were no longer available to the teacher and thus her time could be spent with progressively few students: the four best students received an average contact per minute of 0.041 and the poorest four students received an average contact per minute of 0.057.

Additionally, Table 1 shows the per cent of assignments completed for each student during the 12 school days before and after the change from Condition I to Condition II. All students showed an increase in assignments completed.

For three different 45-min work periods on three different days, starting three days after the change to Condition II, Fig. 1 shows the number of students left in class at various times during the class. As can be seen, the last 15 min of each of the three 45-min periods of instruction shown were devoted to three or four students. These were, in every instance, the same students designated "poorest" by the teacher and so indicated in Table 1.

DISCUSSION

The result of blocking the teacher's opportunity to make contact with the good stu-

Table 1

Number of appropriate contacts per minute for each period of observation and the per cent of lessons completed for each of the two conditions of the experiment for each student. The (+) and (-) after student #s indicate the best and poorest students in the class.

Student	Before			After				
	Condition I			Condition II				
	Period I	Period II	% Complete	Period III		Period IV		% Complete
Spell-Lang.	Math	All lessons	Lang.	Math	Lang.	Math	All lessons	
1 (+)	0.10	0.13	71	0.04	0.07	0.04	0.07	100
2	0.10	0.13	50	0.02	0.02	0.04	—	92
3	0.10	0.13	43	0.04	0.04	0.02	—	92
4 (+)	0.18	0.07	71	0.07	0.02	0.02	0.04	100
5 (+)	0.14	0.13	85	0.02	0.02	0.02	0.02	92
6 (-)	0.00	0.07	7	lost	lost	0.07	0.07	25
7 (-)	0.00	0.07	14	0.04	0.04	0.07	0.02	42
8	0.04	0.16	21	0.02	0.07	0.02	0.04	75
9	0.10	0.07	57	0.02	0.02	0.02	—	100
10 (+)	0.14	0.03	43	0.02	0.07	0.02	0.10	100
11 (-)	0.07	0.13	21	0.07	0.02	0.02	—	33
12 (-)	0.04	0.13	0	0.07	0.13	0.09	0.04	8

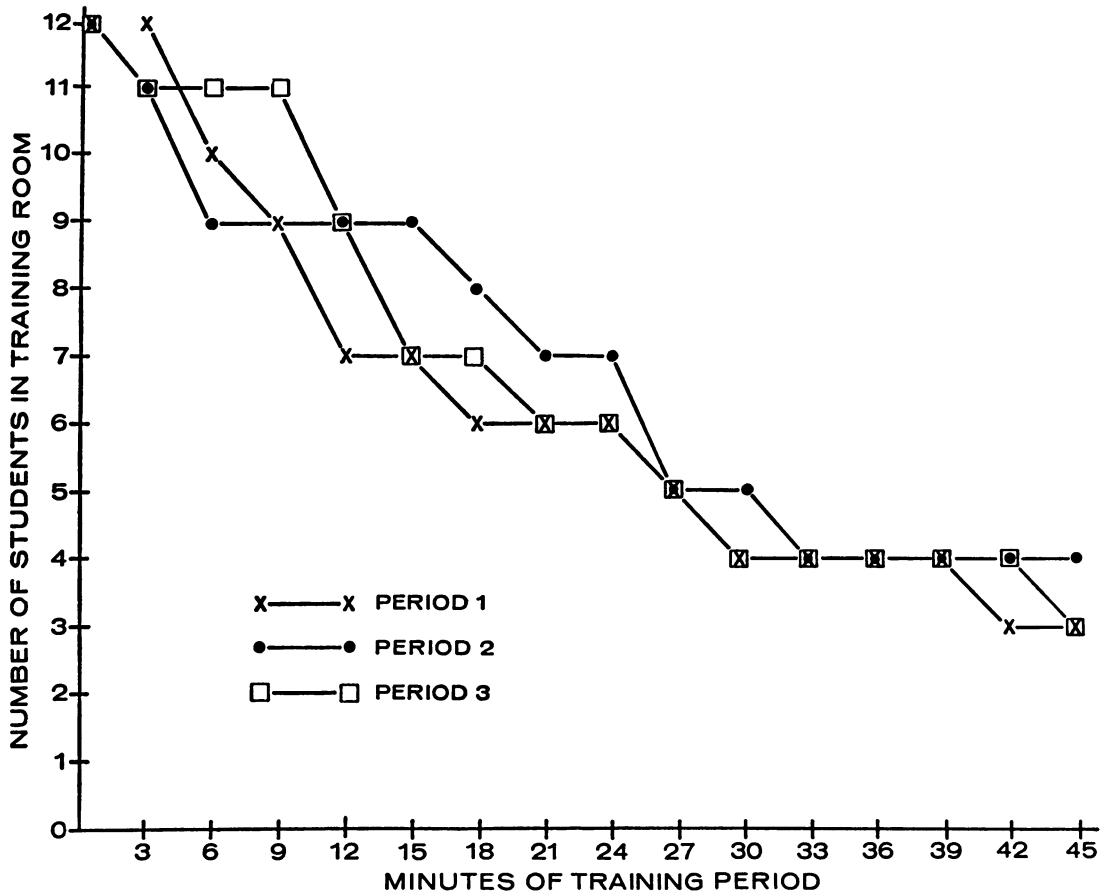


Fig. 1. Number of students remaining in the training room during progressive 3-min segments of three successive 45-min training periods.

dents beyond the time of their finishing their assignment was to allow more time to be divided among the poorer students in class. Heretofore, the teacher had assigned additional material to the good students when they finished their regular assignment and then had proceeded to teach or test the new assignment as necessary. This meant that rather than getting to all the pupils during a work period, she spent the bulk of her time with the good students. If the teacher failed to give an advanced assignment to the students finishing early in a work period, these pupils often continued to ask for more work or for play privileges and/or had to be quieted by the teacher. The data in Table 1 reflect these behaviors, in that there were nearly twice as many contacts with the good students as with the poorer ones, although the percentage of inappropriate contacts was about

the same for each group during Condition 1; 67 and 71 respectively.

The major effect of the condition change on student-teacher contacts was to reduce those of the good students to the rate associated with the poorer students and not to change the rate of contacts for the poorer students.

The data of Fig. 1 indicate that some members of the class were not finishing their assignments during Condition II. These were the students described as poorest by the teacher; their contacts, as seen in Table 1, were not only of the lowest rate but were in general observed to be contacts that did not result in their finishing their assignments. However, reference to Table 1 shows that these students were completing many more assignments than the data of Fig. 1 would indicate. Many of these completions, therefore, were accom-

plished during the last 3 min of the work period.

Allowing the children to finish their assignment and leave for a play area produced some disruption in the classroom and the play area was a source of moderate noise. The fourth grade followed the Condition II procedure but due to the limited availability of assistants, no research data were collected on this class. The disruptive effects of this noise were, however, readily accommodated to because of the apparent desirability of finishing work assignments in order to go to the playroom. If any interference with classwork obtained, it was thoroughly offset by the increase in number of assignments completed. In fact, Table 1 indicates that for all students there was an increase in the number of assignments completed after the change to Condition II. Thus, the free time in the playroom itself appears to have been a reinforcer for completed assignments. This is in general agreement with data reported by Osborne (1969), which show that free time is a reinforcing event for school children. Of course, the poorer students rarely completed an assignment in time to get much use out of the playroom. However, with more teacher time available for each of these students, many more of them finished their assignments during the regular work period and their increase in finished assignments was probably a function of both the reinforcing properties of the playroom and those of the teacher-contacts, as well as being helped sufficiently with the assignments. It is not possible to determine which, if any, of these factors alone or in combination might be a sufficient or necessary condition to produce the effects described.

The procedure described has some limitations and if misused, perhaps some undesirable outcomes. One effect of the procedure as described is to reduce the extra work assignments of the best students. They get the same amount of material as everyone else; in the case reported, the minimum daily amount of material to certify them for the next grade at the end of the school year. However, there is no reason why, after this procedure has been established to help a group of poorer students, that as those poorer students start getting

caught up, more extra assignments may not be given to the better students. The purpose of the procedure is not to level the class to a grand mean of minimum State of Illinois requirements, but rather to bring up the poorest students of the class to that level. Once this is accomplished, the other students may be accelerated without the great cost to the poorer students that had previously obtained.

The procedures described should be applicable to a number of special populations, as they may be useful in work with any population in which there is a great amount of variability in academic achievement between pupils.

There are probably a number of such simple procedures for managing the teaching environment in order to help teachers be more effective. The particular procedure reported here solves one particular problem. Other procedures need to be developed to solve other routine educational problems.

In summary, the simple procedure described allowed the teacher to have more time to spend with children who need it rather than the pupils who were already "good students". Though this procedure does not solve all educational problems, it does offer some help to teachers who find themselves confronted with the problem of too high a demand for their time from good students at the expense of the education of the poorer students.

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