Chapter 26
The Effect of Written Approval on Pupils' Academic and Social Behavior: An Exploratory Study in a Northern Italian Middle School

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1 Introduction

A teacher and his/her classroom in interaction is a complex system: it is impossible to consider one aspect of their relationship in isolation from the rest. A considerable amount of research and demonstrational studies, carried out over the past 50 years, has consistently shown that teacher behavior may be a powerful influence on the behavior of both individual students and whole classes [16]. It has been clearly and unequivocally demonstrated, in a variety of educational contexts and settings, that such key teacher behaviors as contingent praise/approval and reprimand/disapproval may be systematically deployed by teachers so as to increase both academic and appropriate social behaviors and to decrease inappropriate behaviors (e.g. [2, 11, 13]).

Regarding teacher pupils interaction, Schwieso and Hastings [15] acknowledge that

> it is a little obvious to say that teaching is an interactive process

but observe that it is a point often ignored in the research into the complexities of the classroom (p. 124). In their discussion of teachers' rates of approval and disapproval in the classroom they emphasize the importance of the relationship between teacher behavior and student behavior.

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> Teachers' approvals and disapprovals may have some effect on pupils, but they are themselves in part the effects or consequences of pupils' actions: teachers do not approve or disapprove in vacuo (p. 124).

Or as Brophy [4] puts it,

> … much teacher praise is reactive to and under the control of student behavior rather than vice versa (p. 5).

A more balanced perspective, perhaps, may be that of Nafpaktitis et al. [14] who state that in the feedback system of the classroom,

> students continually influence teacher behavior and vice versa (p. 366).

So far, behavioral work has had its focus on verbal approval and disapproval, although some investigators (e.g. [3, 6]) have included the measurement of non-verbal behaviors. These are usually defined as facial expressions, head nods, etc. Yet when much of the teachers' time is spent on marking pupils' work, it is surprising not to find research on the effects of teachers' written comments, ticks, etc. There is surely considerable scope here for influencing pupils' behavior, the nearest approach having been the use of "a letter home saying how well the pupil has done", as reported by Harrop and McCann [9, 10]. The marks and the writing that teachers put on pupils' books can be interpreted as conveying approval or disapproval certainly as easily as can teachers' comments, and since they are not transient, the likelihood is that they can be more accurately interpreted than comments. Moreover, they have the potential for being witnessed by a different population—i.e. the parents rather than the other pupils in the classroom.

Increasing teacher verbal approval has been shown to produce both increased pupil "on-task" behavior (e.g. [11]) and academic achievement (e.g. [19]). However, as we have said, not much is known about the effects of written approval.

The aim of this exploratory study was to investigate the effect of written approval on pupils' academic performance and on-task behavior.

2 Method

The participants were two teachers and their classrooms (2 year 7 classes, respectively made up of 21 and 23 pupils, and 2 year 9 classes, respectively made up of 21 and 19 pupils) from a northern Italian middle school.

A multiple baseline design across participants was employed in order to guarantee that each child would receive written approval (independent variable) by their teacher for his/her performance in five standardized tests on Italian grammar. Children in the experimental group received extra positive comments/praise for doing a specific part well irrespective of the numerical grade. The dependent variable for this study was the number of correct answers and the percentage of time on-task.

Following a baseline phase in which we wanted to measure pupils' performance before any intervention, the introduction of written approval was staggered across little groups. After the teachers had scored the first test, each class was split in three groups similar for mean and standard deviation. The first group received written approval from the second test onwards; the second group received written approval from the third test onwards; the third group received written approval from the fourth test onwards. In order to guarantee the blindness of the procedure, the teachers were told by the project supervisor which tests had to be marked with extra positive comments after they had scored all of them. The number of correct answers and percentage of time on-task was measured before and after the introduction of written approval in order to see whether any change occurred. Pupils were considered on-task when engaged in behaviors that led to completing the assignment. Observations were made using an adapted version of The Pupil Behavior Schedule [12]. The schedule uses a momentary time sampling method. Pupils were observed at 10-min intervals and judged to be either "on-task" or "off-task". Momentary time sampling has been demonstrated to suit collection of time on-task data (e.g. [7, 8]) and to be practical when teachers are required to simultaneously teach and collect data [1]. Before the intervention the teachers had been trained in the use of the paper pencil tool by the project supervisors using videotapes. They practiced recording the data until they reached 90 % reliability. Once reliability was established, teachers scored the lessons, but were aware that two out of five, taken at random, would also be scored independently by the supervisor. Following this the inter-observer agreement was carried out. The subsequent checks produced level of inter-observer agreement at or above 80 %.

3 Results

Data has been analyzed using a general linear mixed model for repeated measures. To capture the variation between subjects both in performance and on-task behavior we included in the model a random effect associated with the intercept for each pupil. Intra class Correlation Coefficients of 0.83 for test results and 0.59 for on-task behavior justified the choice of the model. Indeed a random effect associated with the intercept, in both cases, explained more than 50 % of variance in our unit of analysis (subjects). This does mean that academic (as a number of correct answers) and social performance (as a percentage of on-task behavior) is highly variable between different individuals.

The interaction between group and test results was not significant (Fig. 26.1). Therefore, there was not enough evidence to reject the null hypothesis of equality of population means. There were no differences between younger pupils and older pupils; there were no differences between male and female.

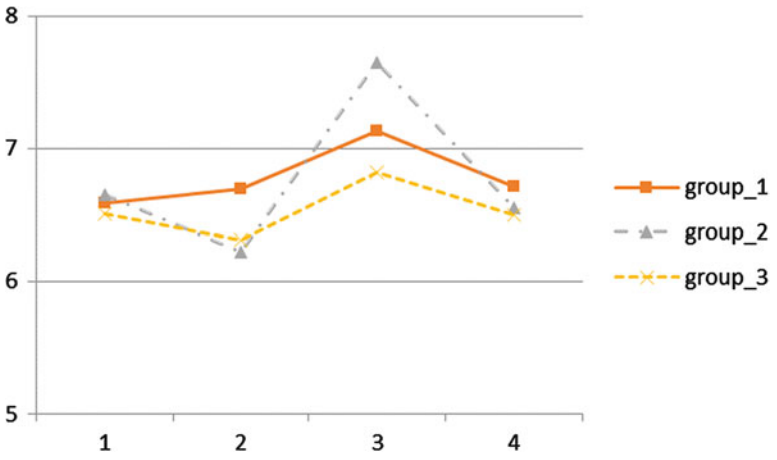

Fig. 26.1: Pupils' number of correct answers in the written test

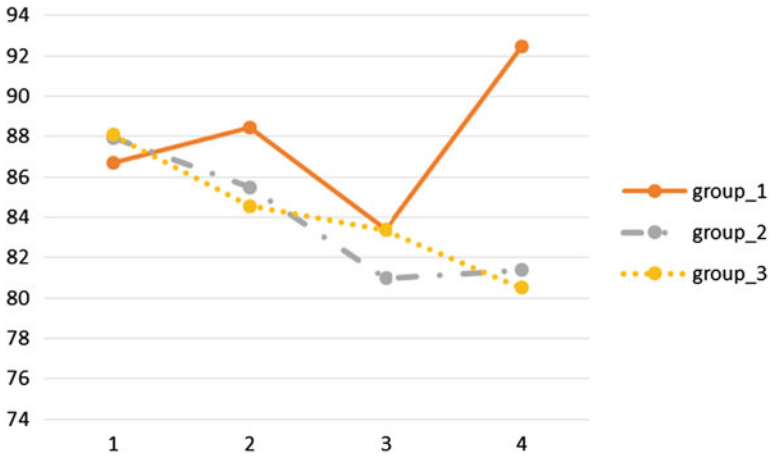

Fig. 26.2: Percentages of pupils' time on-task

Regarding pupils' time on-task, the contrast between the first group (pupils who received written approval from the second test onwards) ($M = 92.50$, $S.D. = 17.59$) and the other two groups (who received the written approval in a staggered fashion: respectively the second group after the third test and the third group after the fourth test) ($M = 81.40$, $S.D. = 23.73$; $M = 80.54$, $S.D. = 27.74$) at the last assessment was significant ($t[56,742] = 2.180$, $p \leq 0.01$) (Fig. 26.2).

4 Discussion

Increasing teacher verbal approval has been shown to produce both increased pupil "on-task" behavior (e.g. [11]) and academic achievement (e.g. [19]). Although much of the teacher's time is spent on marking pupils' work, not too much is known about the effect of written approval on pupils' academic and social behavior. Therefore, the aim of this exploratory study was to investigate the effect of written approval on pupils' academic performance and on-task behavior.

We have not found any effect of written approval on pupils' academic performance measured as a number of correct answers in a standardized Italian grammar test. Among possible explanations for the increased approval group not scoring higher than the other groups might be a possible overlap between approval and numerical grade functions. For some students, only the numerical grade is of interest to them—simple, unambiguous and meaningful in terms of achievement and progression [5]. Taras' [18] suggestion of withholding the grade until students have read and digested the qualitative feedback may reduce that behavior.

Regarding pupils' social behavior measured as a percentage of time on-task, pupils who had received written approval from the second test onwards have shown a growing trend. Although the trend was not significant, on final assessment the first group scored significantly higher than the other groups. These results confirm what Apter et al. [2] have found, studying the effect of verbal approval on pupils' time on-task: approval for academic behavior is one of the most relevant variables which influences pupils' social behavior.

Further study should examine the effect of written approval withholding the numerical grade in order to avoid any interferences. In addition, it would be valuable to identify the conditions necessary for long-term maintenance of the effects of written approval on pupils' time on-task. For example, it is possible that high levels of on-task behavior would be maintained with intermittent teacher written approval.

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