A challenging problem for educational administrators has been the identification of effective teachers for purposes of reward. The lack of agreement on what an effective teacher is or does is a major reason for teacher opposition to merit rating. A study of 21 fifth grade classrooms in a Midwestern school system having homogeneous socioeconomic characteristics used multiple regression and correlation analysis to determine the effects on pupil achievement of classroom environmental elements controllable by teachers. Results show that the teacher through environmental manipulation does influence pupil achievement. Years of teaching experience were found to be insignificantly related to pupil achievement. The findings suggest a new approach to merit rating for teachers—rating the quality of manipulation of classroom environments. This approach would probably be acceptable to teachers because they could be given precise information about needed and controllable changes and because bonuses of an improved environment would be a better rating and subsequent higher pay. In addition, a teacher's merit rating would be based upon factors over which he has control. (TT)
A NEW APPROACH TO MERIT RATING OF TEACHERS

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(Teachers remain the individuals most directly responsible for children's learnings in school classrooms. Paying teachers for their services consumes the major portion of the financial resources available to the schools. Merit ratings have evolved in an attempt to allow teachers salaries to reflect differences in teaching abilities. The study reported here questions the bases on which salaries are determined, whether by merit or by schedule. The author, Dr. Bobbie M. Anthony, is assistant professor of education at Chicago State College.)

A long-standing problem challenging educational administrators and policy makers is how to identify effective teachers for purposes of reward. On the one hand, there is lack of unanimity on the particular type of educational outcome which should serve as a basis for reward; on the other, research evidence is inconclusive that a given aspect of the teacher is significantly and positively related to some desirable outcome for all types of pupils. Thus, there is neither consensus as to the type of effect that a teacher termed "effective" should produce nor conclusive evidence that a given aspect of teachers optimally influences suggested educational outcomes. In short, there is not agreement on what an effective teacher is or does.

Teacher Effectiveness

In the search for correlates of effective teaching, researchers have focused on social, academic, physiological and psychological characteristics of teachers. They have examined teacher classroom behavior and materials. Substantial research suggests that background, training, sex and marital status (6, p. 270); age (3, p. 725); and intelligence (4, p. 572-73) are teacher characteristics insignificantly related to pupil achievement. One research conclusion implies that relationships of teacher personality to pupil achievement might help to explain differences in classroom average achievement (9, p. 425). However, "prodigious research effort" has yielded little conclusive evidence on the relation between teacher personality and teaching effectiveness (4, p. 574).

External Criteria of Effectiveness: Teacher-related measurements can be used to predict teacher effectiveness if they correlate significantly with an outside criterion indicative of the desired effect. Researchers have long employed pupil learnings as external criteria, but some believe appropriate criteria must be determined in the light of values rather than by empirical research (10, p. 709). It seems generally agreed that an effective teacher influences some type of change in pupils. The question appears to be whether effective teachers produce measurable pupil change reflecting improvement in academic achievement. Researchers may have raised this question because of low relationships usually found between pupil achievement and proposed criteria of teacher effectiveness. Most formal learning occurs in classrooms of schools, unique institutions established by society to advance academic learning. Many stated school objectives stress academic skills and abilities. Schools are generally adjudged "good" or "bad" on the basis of pupil academic achievement. Thus, it would seem that effective teachers should somehow be defined in terms of such achievement.

Rating Forms: Most investigators attempting to identify criteria of effective teachers have used as teacher measurements ratings by pupils, by school personnel and/or by researchers. Such ratings have not been fruitful in studies where teacher effectiveness has been defined in terms of pupil academic learnings (6, p. 257). One extended large-scale study
was made for the purpose of finding measures to facilitate merit rating of teachers. Ratings on teachers led to the conclusion that the research suggested nothing upon which salaries of all teachers could be based. Particularly interesting was the finding that principals, who customarily are responsible for making merit ratings, tended to misjudge teachers (7, p. 366). Yet it was recently found that a substantial majority of the school districts studied supplied principals with some type of form for rating teachers (5, p. 17).

Although school board members and some administrators favor ratings for salary differentiation, teachers generally do not. Teacher opposition is based on "the possibilities of favoritism, of lowered morale and efficiency among those 'passed over,' of inter-teacher tensions, and, above all, the fact that there are no generally accepted criteria of teacher merit" (7, p. 366). However, it would seem that if teacher reward were based on objectively obtained teacher measurements which teachers themselves could influence in preplanned ways, their opposition to merit rating would be negligible. Hence, the real problem for those charged with adjusting teachers' salaries may not be simply to determine what teacher effects are worthy of reward and to know how to obtain evidence on whatever aspects of teachers produce these effects. Perhaps, they should also determine which of these aspects are under the control of teachers. Then all teachers could be potentially eligible for reward and would probably consider the merit system fair. Eliminated from consideration would be extra-class static teacher variables and, also, personality characteristics not easily altered.

A Suggested Criterion

Since past measurements on teachers per se usually have correlated low with pupil achievement, it would seem desirable to study non-teacher aspects of the classroom environment along with aspects of teachers. This seems logical since pupils undoubtedly interact with classroom environmental elements other than the teacher. Some of these other elements are held to also influence pupil achievement. Furthermore, it is possible for a teacher to manipulate many of these other elements. Indeed, the interaction between these elements and pupils are largely controllable by teachers. It is therefore reasonable to assume that relationships between these elements and pupil achievement are influenced by teachers. Thus, a fair and relevant criterion of teacher effectiveness might be the nature of teacher manipulation of classroom environmental elements, the teacher included.

Theoretical background: The relationship between a combination of classroom environmental elements and the average achievement of pupils in a classroom was studied by the writer (1). Both teacher and non-teacher elements were investigated. The elements were selected in accordance with a theory that a given human characteristic is influenced by a particular stratum of a given subenvironment, which, along with other subenvironments, constitute the whole of the external environment acting as a force upon the individual. Hence to obtain knowledge of the external forces influencing a given human characteristic, it is necessary to obtain knowledge about the variables or characteristics of the environmental stratum corresponding to the human characteristic (2, p. 187).

The subenvironment relevant for school achievement is that of the classroom. The particular stratum of the classroom environment corresponding to pupil academic achievement consists of only those elements which influence such achievement. This implies that not all classroom environmental variables or elements influence academic achievement. It was suggested that a search of pertinent theoretical and empirical literature should reveal some of the elements which are related to such achievement (2, p. 188).

Classroom Influencers of Achievement Behavior: Pupil achievement scores are the end products of pupil test performance. Hence, classroom environmental elements which influence these scores do so only indirectly -- by influencing pupil behaviors and psychological states pertinent to pupil performance on achievement tests. In other words, how a pupil performs in the test situation is dependent upon the extent to which he has developed relevant achievement-related behaviors. These behaviors, in turn, are suggested by the literature as being influenced by certain classroom environmental characteristics which impinge upon both psychological states and classroom behaviors of pupils. Hence, the writer first searched the literature to find which pupil behaviors and psychological states were considered relevant for academic achievement and then to find classroom characteristics which theory and research suggested to be capable of influencing these behaviors and states.

Research Design: The sample consisted of twenty-one fifth-grade classrooms in ten schools of a single Midwestern public school system serving a community of approximately 65,000 people. Most homes in the community -- which had no slums, foreign quarters or vice districts -- were inhabited by the owners. Schools housing the classrooms studied were randomly selected from three achievement strata of all schools containing at least two
Experienced teachers are usually considered more effective than relatively new ones though criteria of "effectiveness" have not yet been generally agreed upon or empirically validated. Thus, principals tend to visit newer teachers more frequently than those with tenure (5, p. 18). Most school systems consider seniority a major basis for reward. Perhaps, this criterion for reward should be de-emphasized unless it is felt that teacher loyalty is important regardless of teacher effectiveness.

Summary Discussion

The results of the study described above suggest that characteristics of the classroom environment do influence the average achievement of pupils grouped as a class. Characteristics measured for the study were concerned with teacher classroom behavior, but also with classroom academic adornments and concrete objects used by teacher and pupils. The amount and quality of these adornments and objects, the extent to which they are used and the manner of usage are largely determined by the resourcefulness and efforts of teachers. Likewise, teachers largely control their own classroom behavior. In this sense, the study suggests that the teacher through environmental manipulation does influence achievement. Hence, the findings suggest a new approach to merit rating of teachers if teacher worth is defined in terms of increase in average classroom achievement.

Those charged with rewarding teachers and who feel that teacher effectiveness should be measured in terms of the average academic growth of pupils grouped as a class might do well to examine a combination of classroom characteristics. These characteristics would concern teacher behavior directly connected with the teaching-learning process and teacher procurement and manipulation of classroom adornments and objects.

A customary function of principals is to observe teachers in the act of teaching. The usual purpose has been to aid the formation of teacher-effectiveness judgements to be symbolized by ratings, later made a part of teacher records kept in central administration offices. If these ratings were based on the quality of that portion of the educational environment which is manipulable by teachers, the latter would probably accept rating as a valid, objective and equitable method of teacher evaluation. Researchers have found that the usual form of rating contributes to the "halo" type of measurement, introducing a "pseudo objectivity" into the rating process. Thus, it is possible for the initial biases of the rater, rather than the actualities of the teaching-learning process, to be the determinants of ratings (5, p. 18).

In addition to being acceptable to teachers, rating the quality of manipulation of classroom academic environments would probably stimulate teachers to improve these environments. This is likely both because teachers could be given precise information about need of and controllable changes and because concomitant bonuses of an improved environment, a better rating and subsequent higher pay, serve as incentives. Better rapport and more professional relationships between principals and teachers might result from a rating procedure based on classroom environmental aspects identified as being related to achievement. Especially helpful to the teacher would be a written diagnosis from the principal detailing specific aspects of the environment which should be remedied.

Principals might take note of the fact that years of teaching experience was found to be insignificantly related to both classroom educational environment and average achievement. A second look at the practice of showing less concern for classes taught by teachers with long service records seems warranted.

References