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JOB DESIGN THEORY: School Structure, Teachers' Job Characteristics and Microeconomic Resource Allocation in Classrooms

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What is the relationship between structure, site-based management, and performance in schools? Such a relationship is clearly implicit in the push for schools to "restructure" and adopt site-based management. But, there is little agreement about what "restructuring" means in practical terms and few coherent theoretical models describing its potential effects.

Structural theories are helpful in defining school structure. Combining these with microeconomic resource theory clearly depicts one means by which policy and administrative practices affect student performance via teaching jobs. This perspective on school structure differs substantively from mainstream structural inquiry in education which focuses predominantly on the describing and classifying the degree of conflict,

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bureaucracy, or anarchy observed in schools (Sousa and Hoy, 1981; Firestone and Herriott, 1982).

This article presents a theory and investigation of job design in education. It is an elaboration and application of job characteristics theory (Hackman and Oldham, 1974). Job design theory asserts that the macro-structure in a school unit determines the micro-structure of a teacher's job. The resulting job characteristics then affect the nature of teaching work which subsequently influences student performance and thus a school unit's effectiveness. Subjects used for a partial test of this theory were elementary teachers in a southeastern state. The study follows the derivation of the theoretical framework.

School Structure

Structure is the pattern of relationships, interactions, beliefs, and activity resulting from the ways tangible and intangible resources are distributed in an organization (Weber, 1946; Hage & Aiken, 1969; Hall, 1972). From a rational perspective, structure is prescribed and dynamic. That is, it is determined by the most efficient and effective means to accomplish a unique set of goals, given available technologies and resources, which will change from time to time.

Because structure is so complexly intertwined with goals, culture, and technology, once in place, it is extremely resistant to change. Thus, it perpetuates deeply embedded patterns of relating, thought and action in schools (MacPhail-Wilcox & Alford, 1988). Indeed, private sector organizations often find it necessary to lay off and rehire individuals in order to break the regularities associated with a previous structure.

The macro-structure of a school is established by the policy decisions which distribute and configure tangible and intangible educational resources. Tangible resources include employees, the students themselves, space, programs, materials, equipment, and supplies. Structural effects are illustrated by things like established teacher-student ratios, priority access to instructional materials, mandatory curricula, and grade level organization patterns. Intangible resources include symbols, rituals, responsibilities, decision authority, time, energy, incentives, information, affect, incentive and reward opportunities. These affect structure by establishing who makes what kinds of decisions, when they are made, how much time is allocated for instruction in a subject, who gets what amount of salary increment, and the like.

Ideally resources are distributed and arranged so that school goals can be optimized. Hence, restructuring schools and using site-based management requires that a school staff identify and implement structural changes which will improve school performance, enable the pursuit of new goals or the use of new technologies. As a result of these changes, new patterns of relating, authority, organization, ways of doing things, and roles will emerge.

This definition of structure is implicit in job characteristics theory (Hackman & Oldham, 1976) which seeks to predict and explain the effects of structure on employees. Few educators have suggested using (MacPhail-Wilcox, 1988) or actually used (Pastor & Erlandson, 1982) job characteristics theory as a framework for investigation in education. Given the practical value of the theory, rising levels of job dissatisfaction among teachers (Metropolitan Life, 1986), and the clear demand for better performance, this is unfortunate.

Structure and Job Characteristics

Job characteristics theory, a micro-structural perspective (Hackman & Oldham, 1974), asserts that five core job characteristics affect three critical psychological states of employees. The core job characteristics are the variety of skill demanded by the job, clarity of task identity, perceived task significance, level of autonomy, and receipt of feedback from the job. Critical psychological states are the experienced meaningfulness

of work, perceived level of responsibility for work outcomes, and knowledge of the results of one's work activities. Performance outcomes affected by job characteristics and critical psychological states are work motivation, job satisfaction, absenteeism, turnover, and work performance. Relations between these independent variables and work outcomes are moderated by three employee characteristics, knowledge and skill, strength of growth need, and satisfaction with the work context. These mediating variables allow for obvious instances of over- and under-stimulation in jobs for specific individuals, a theoretical modification derived from activation theory (Berlyne, 1967).

Job Characteristics Research

Hackman and Oldham (1975) developed the Job Diagnostic Survey to examine the effects of job characteristics. It yields a measure called the motivating potential of a job (MPJ) and research generally correlates this to other variables. Relationships between the JDS variables and external criterion variables are generally in the direction predicted by the theory. The reliability and discriminant validity of the instrument is characterized as satisfactory (Hackman and Oldham, 1975).

Research supports the theoretical contention that job characteristics affect internal job motivation (Hackman and Oldham, 1976; Pastor and Erlandson, 1982). A recent review of 200 studies (Fried and Ferris, 1987), suggested that the number of salient job characteristics may be greater than the original five and that the relationship between job characteristics and performance is mediated strongly by the growth needs of the employee. However, limited efforts to expand the theory (Evans et al., 1979) by adding another job characteristic—interaction with other people—and two expectancy variables, did not improve the model's explanatory strength.

There is evidence that actual job changes do alter perceptions of job characteristics and that supervisors and employees view the job characteristics of the same job similarly (Fried & Ferris, 1987), but research findings have not been as powerful or unambiguous as anticipated. It has been suggested that the same job characteristic can have both positive and negative effects (Evans, et al., 1979). For example, increasing the skill variety required in a job may increase meaningfulness and simultaneously increase role conflict and job ambiguity. While the former would contribute to motivation, the latter would not, and what moderates the direction of these effects is attributes of the job incumbent.

Factors such as age, income, tenure, father's education, income and attitudes toward work also affect employee perceptions of their task (O'Reilly, et al., 1980). With respect to affective work outcomes, job feedback, autonomy, and skill variety are most strongly correlated with overall job satisfaction, growth satisfaction, and internal work motivation, respectively (Fried and Ferris, 1980). Correlations with behavioral indices of performance and absenteeism are much weaker, though stronger for absenteeism. Task identity appears to have the strongest relationship with productive work outcomes. Relationships between psychological states and work outcomes show the same pattern, but it is weaker. Thus, the validity of retaining the psychological states as mediators between job characteristics and work outcomes is questionable.

In summary, job characteristics theory enjoys moderate support. The mediating effects of the critical psychological states are questionable. Job characteristics have consistent effects on affective work outcomes. And, the effects of job characteristics on performance appear to be mediated by personal and situational differences. In other words, the effects of job characteristics on performance can be offset or enhanced by personal dispositions and other internal and external conditions in the work unit.

The Relevance of Job Characteristics Theory in Education

Teacher motivation and resource allocation literature in education illuminate the relevance of job characteristics theory for educators. A steady exodus of veteran teachers and concurrent decline in persons entering the field indicates that many persons are not inclined to pursue or persist in a teaching career (MacPhail-Wilcox, 1981; Carnegie Corporation, 1986; Metropolitan Life, 1986). Why, apart from the notorious salary problems in education and the opening of alternative labor markets, might this be the case? Can school structure, as reflected in teacher job characteristics help explain this?

Teacher Work Motivation

Persons who pursue educational careers are strongly motivated by psychological benefits derived from "the work itself" and opportunities for self-improvement or growth (Gould, 1954; Sergiovanni, 1967; Lortie, 1969, 1975; Bruno, 1986). Further, veteran teachers report serious deficits in the availability of these rewards on the job (Sergiovanni, 1967). The presence and size of the deficit seems to be influenced by personal variables like age, gender, ethnicity, level of teaching assignment, years of teaching experience (Sergiovanni, 1967; Bartel, 1981; Blase, 1982; Anderson and Iwanicki, 1984).

Though the meaning of "work itself" is unclear, an implicit logical link between it and job characteristics is compelling (MacPhail-Wilcox, 1988). For example, structural decisions about the distribution of assignments and students to teachers will affect the knowledge and skill demands of a teacher's job. Recall the strong relationship observed between autonomy, skill variety, feedback and personal growth satisfaction. It seems reasonable to expect that authoritarian and bureaucratic conditions in schools, along with accountability initiative which severely restrict teaching behaviors will compromise these three job characteristics. If so, they will obstruct opportunities for "personal growth." Because teachers desire personal growth opportunities from their work, teaching job characteristics may help to explain teacher shortages.

Additional evidence comes from comparing the behavioral indicators of affect toward work. Like job characteristics research, educational research indicates that teachers' level of job motivation is correlated with affective outcomes like absenteeism, turnover, and transfers (Spuck, 1974; Bridges, 1980; Bruno, 1986). In fact, Bridges (1980) suggested that relationships between job facet deprivation and absenteeism for teachers are mediated by job characteristics.

Relations between job characteristics and work productivity, or performance outcomes obtained by teachers have not been examined. However, in non-educational research, the job characteristic, clear task identity, is most strongly associated with performance measures. The ambiguous goals of education coupled with structural conditions which further muddy the precise task faced by individual teachers serve to exacerbate performance problems.

This brief analysis argues that the motivation, job satisfaction, and performance of teachers are important problems in education. It illuminates the link between work conditions which teachers want, need deficiencies they report, and job characteristics. It illustrates that the motivation and behavioral concepts investigated among teachers are similar to those investigated by job characteristic theorists. And finally, it illuminates how little is known about the effects of structure on teaching job characteristics and any subsequent effects on teacher satisfaction and student performance in education. Resource allocation literature provides the conceptual link between job characteristics and performance indicators.

Teaching Jobs and Resource Allocation in Schools

From a macroeconomic perspective, funds for schools are converted to educational resources—personnel, curriculum guides, books, supplies, equipment, facilities, and the like—which are then distributed to school units. These educational resources contain energy, information, skill, affect, space, and time, all of which are used to influence students' stocks of knowledge and skill.

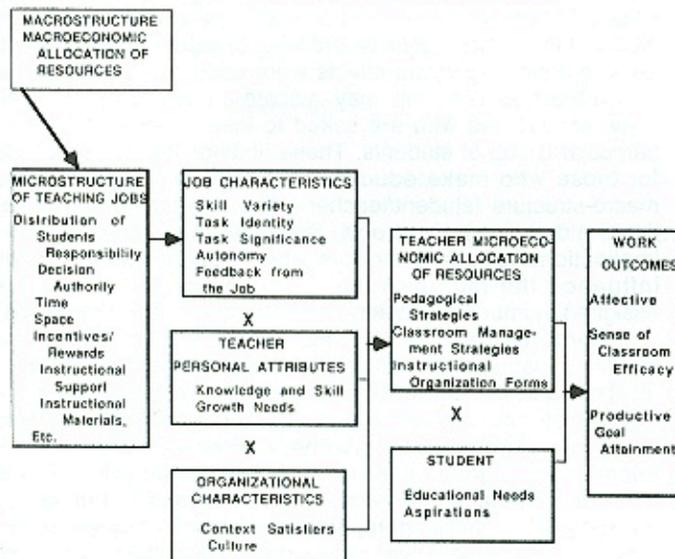
The structure of the school reflects the ways in which educational resources and students are distributed as a result of policy and administrative decisions. Thus structures establish the design of teaching jobs, and hence the job characteristics that teachers experience. The design of teaching jobs affects the stock and flow of energy, information, skill, affect, and time to students in the classroom, and these stocks and flows are the focus of microeconomic resource studies.

Microeconomic resource allocation theory considers classroom grouping, alternative instructional formats, differential time and material allocations as causal influences on student outcomes. When teachers use these strategies, they actually deliver different stocks of time, information, energy, space, and affect to students (Thomas, Kemmerer and Monk, 1982; Barr and Dreeben, 1983; Monk and Underwood, 1988). Research reports that teachers apply these technologies differentially across grades, content domains, and student aptitudes (Rossmiller, 1983).

Hence job design influences the nature of teaching work—"the work itself"—and subsequently the affective and productive outcomes of that work. The present framework argues that teachers use instructional technologies purposefully to "cope with" the design of their jobs. The strategies enable teachers to distribute their resources to students in ways which they believe will enable them to accomplish their goals. Thus, teacher job designs result in job characteristics that affect the nature of the "work itself." Teacher job designs, then, can be expected to influence both affective and productive outcomes in schools. The impact of job characteristics is mediated by individual and other organizational variables (Figure 1). This job design framework formed the theoretical basis for designing a data collection instrument and conducting an exploratory study of part of the model.

FIGURE 1

JOB DESIGN THEORY IN EDUCATION



An Exploratory Study of Job Design Theory in Education

This study conducted a partial test of the validity of the job design theory. An experimental design was combined with a survey method, using a stratified random sample of teachers who were randomly assigned treatments. The study assessed the effects of three structural elements (range of student achievement, class size, and subject domain) on teachers' perceptions of the job and their intentions to use particular classroom technologies to optimize performance.

The Teacher Job Questionnaire (TJQ), a 37-item survey was developed and pilot tested using a test-retest method (Carmines and Zeller, 1979) to assess reliability. No attempt was made to assess construct validity.

Test-retest analyses for 20 of 21 items produced coefficients ranging from .68 to 1.0. One item concerning the use of test data for instructional planning produced a coefficient of .41.

The survey requested responses to several sets of theoretically relevant items embedded in 12 hypothetical situations which were equivalent in all other aspects. The 12 hypothetical situations were created by permutation of three teaching job characteristics resulting from structural decisions—range of achievement among students assigned to the class (wide and evenly distributed, narrow and restricted to high achievement, narrow and restricted to low achievement), class size (15 or 25), and subject matter (reading or mathematics).

The survey was distributed to a stratified random sample of the population (N=29,500) elementary school teachers in a southeastern state (N=3,150). A nine-cell stratification, based on degree of urbanization and median household income was used to strengthen the generalizability of the findings. Personal tragedy delayed mailing the survey until very near the end of the school year, and this may have contributed to the low response rate (31%).

Follow-up analysis of respondents by identification numbers indicated no extreme bias in the distribution of responses across the nine cells when compared to the population sampled. Response rates from the most urbanized areas were slightly higher, as were response rates from teachers holding advanced degrees. Respondents were comparable in age, years of experience, and teaching assignments to the populations.

Teacher Job Interests and Characteristics

Most elementary teachers indicated that opportunities to be creative and imaginative (93.9%), to grow and develop personally (95.1%), and to have a sense of worthwhile accomplishment (97.7%) were either "very" or "extremely important" to them. However, 54% reported that it is either "very" or "somewhat" unrealistic to expect them to maximize student learning under present job conditions. What are some of these conditions?

Most elementary teachers (62.1%) reported working with classes that have a combination of advantaged, average, and disadvantaged students. They (86.9%) are assigned 21 to 30 students in a class, and 48.4% indicated that students in their classes have a "very wide" range of ability. Many respondents (43.6%) are assigned responsibility for teaching 5 to 6 subjects per day and 41.7% of the respondents reported that they prepare between 5 and 6 lesson plans per day.

Teachers were asked to use a 5-point scale (where 1="very little" or "never" and 5="always") to describe the amount of control they have over a selected set of eight job characteristics. These job characteristics included work schedule, type of students assigned, number of students assigned, content taught, staff development, curriculum development, tests administered, and teaching assignments. All mean scores fell between 1.17 and 2.78, indicating very minimal per-

ceived control of job characteristics. Lowest mean scores were for the numbers and types of students assigned to them. Highest mean scores were predictable. Teachers perceived themselves to have more control over content taught and tests used in the classroom. They report that their instructional content is most influenced by curriculum guides, the types of students they are assigned, and mandatory state testing. Mean scores were 4.6, 4.06, and 3.74 respectively.

Teachers were asked to describe five structural elements under real and ideal conditions. They specified the degree to which student achievement levels do influence the structural decisions and the degree to which student achievement levels should influence these structural decisions. The structural elements were the number of students they were assigned in a class, the way the class is organized, the time allocated to particular instructional topics, the availability of instructional aides, and instructional methods used with the class. In all instances, real and ideal structural decisions were discrepant. The largest discrepancies between the real and ideal conditions were observed for the number of students assigned a teacher and the availability of instructional aides. In other words, when student achievement is low, teachers believed a lower ratio of students to instructional personnel would improve their effectiveness.

Perceived Structural Influences on Instructional Practices and Performance Outcomes

Each respondent received one randomly assigned hypothetical teaching situation. The hypothetical situations were identical except for systematic variation in the independent variables. The independent variables were three configurations of student range of achievement in the classroom, two levels of class size, and two levels of subject domain.

Teachers were asked to characterize the hypothetical job and indicate how important each of 41 strategies would be if they were required to guarantee the success of each student in the scenario. They responded on the basis of an appropriate indicator arrayed on a Likert-type scale ranging from "not at all" to "extremely."

Analyses of variance tested whether the independent and interaction effects of the independent variables were significant in determining teacher responses ($\alpha p < .001$).

Of the 41 instructional strategies presented to teachers, 27 (61%) met the criterion of significance. Range of student achievement generated significant differences in teachers' responses for 51% of the strategies. In other words, teachers often reported that they would change instructional strategies on the basis of the level or mix of student achievement in the class. By comparison, they reported intentions to change instructional strategies on the basis of subject assigned in only 7% of the instances. Specifically, subject generated significantly different intentions concerning the use of study groups or seminars, skill practice and drill activities, and range of students' achievement in the class. Class size led to intentions to change instructional strategy in only 5% of the instances. Here teachers reported that class size would influence the amount of instructional time lost to behavioral management.

The interaction of the three independent variables, range of achievement, class size, and subject, met the criterion of significance in only one instance when none of the independent variables showed a main effect. Thus, teachers appear to react most strongly to the macrostructural variable of range of student achievement among students assigned to a class. Subject domain and class size did not have as frequent or appreciable impact on teachers' choices of instructional strategies in the hypothetical situations. Survey questions, teachers' choices, and statistical data are presented in Table 1.

There were 15 items which teachers indicated would not

change in response to student ability, class size, or subject domain. These were collaboration with other teachers about student performance, instructional plans and materials, classroom organization, teaching methods and behavioral management. The three independent variables did not alter the extent to which teachers would design unique instructional plans and materials for individual or subgroups of students, use learning resource centers, cooperative learning, demonstrations, discovery activities, skill practice, peer tutoring, or learning contracts. Apparently teachers do not view these instructional technologies as adaptive responses to the range of student achievement among those in a class, class size, or subject domain.

When teachers were asked which of five instructional strategies would affect the likelihood of their success with students in the hypothetical scenarios, their responses were consistent. Time allocated for instruction, the number of subjects the teacher was assigned, the kind of instructional materials available, and the ability to reschedule or reassign students based on their performance were viewed as very influential. Only differences in the range of achievement among students in a class elicited significantly different responses about the impact of an instructional aide on student performance. Post hoc analysis showed that teachers responding to the hypothetical scenario with homogeneous classes of low-achieving students believed an aide would influence their ability to succeed with students.

Teachers were asked to characterize the hypothetical job in terms of the degree to which it would be custodial, the breadth of knowledge they would need to be effective, how emotionally demanding it would be, how important it would be for them to observe other teachers, and the clarity of the task with each student. Range of student achievement had significant effects on each response, in expected directions.

Discussion

The evidence of this exploratory study appears to support several aspects of this tentative job design theory in education. First, teachers do perceive and react to important differences in the hypothetical job scenarios, which manipulate the range of achievement among the students assigned to them, the class size, and subject domain of instruction. Thus, teachers do appear to perceive differences in their jobs brought about as a result of macro- and micro-structural variations.

Second, teachers do report the intention to make adaptive responses to these macro- and micro-structural elements of their jobs in order to "guarantee the learning of students in the class." The most frequently significant changes resulted from variation in the homogeneity and level of student achievement. Less frequent significant effects were observed for class size and subject domain. This may indicate a hierarchy of job difficulty for teachers who are asked to insure the learning of a particular group of students. These findings have implications for those who make educational policy which determines macro-structure (student/teacher ratios, availability of instructional aides, etc.) of schools. Similarly, these findings have implications for administrators who through their decisions influence the micro-structural elements (i.e., subjects assigned, number of subjects assigned, etc.) of teachers' jobs.

Third, teachers clearly view such things as testing and planning, instructional methods, and instructional group organization, and the use of teacher aides as technologies to be varied systematically with classes in which students have wide or narrow ranges of achievement. However, they did not appear to recognize other instructional, organizational, and classroom management technologies included in the survey as being differentially appropriate for students or classes. This may suggest an intuitive, rather than an explicitly reasoned

Table 1
Main Effects of Teacher Use of Classroom Resources By Student Range of Achievement, Class Size, and Subject

If you are to succeed with every student, how important would it be:	Source	DF	Type III SS	Mean Square	F Value	Pr>F
1. To:						
a. Analyze student performance as a basis for planning.	Achieve	2	6.94	4.47	11.72	.0001*
b. Have access to adequate information for diagnosing and assessing student performance by subject or skill.	Achieve*Size*Sub	5	12.28	1.12	2.61	.0003*
c. Design unique instructional plans and materials for individuals or subgroups of students.	Achieve	2	19.99	9.99	21.62	.0001*
2. To use the following instructional formats with this class?						
a. Small group instruction.	Achieve	2	66.29	33.15	48.97	.0001*
b. Whole group instruction.	Achieve	2	83.83	41.92	3.61	.0001*
	Subject	1	11.08		8.94	.0030
c. Independent work.	Achieve	2	16.52	8.26	7.72	.0005*
d. Individualized instruction.	Achieve	2	43.67	21.84	24.69	.0001*
3. To use the following instructional methods with these students?						
a. Learning resource centers.	Achieve	2	2.83	1.42	2.05	.1298
b. Cooperative learning.	Subject	1	4.63		6.71	.0097
c. Demonstrations.	Achieve	2	0.26	0.13	.20	.8228
d. Lectures.	Achieve	2	43.84	21.93	17.46	.0001*
e. Discussion groups/seminars.	Achieve	2	60.63	30.32	23.49	.0001*
	Subject	1	33.59		25.47	.0001*
f. Discovery activities/manipulatives.	Achieve	2	4.71	2.36	5.84	.0030
g. Skill practice/drill.	Achieve	2	15.41	7.57	6.98	.0100
	Subject	1	37.56		35.44	.0001*
h. Peer tutoring.	Achieve	2	13.44	6.72	4.63	.0100
i. Individualized learning contracts.						
4. For you and other teachers to collaborate about:						
a. Student performance information.	Achieve	2	5.159	2.58	2.46	.0861
b. Teaching methods and tips.	Achieve	2	1.941	0.971	1.71	.1813
c. Instructional plans and materials.	Achieve	2	0.341	0.170	0.24	.7832
d. Classroom organization tips.	Achieve	2	0.591	0.296	0.35	.7062
e. Behavioral management tips.	Achieve	2	5.370	2.685	3.12	.0447
5. To assign the following to individuals or small groups of students :						
a. Different books and materials.	Achieve	2	35.34	17.67	18.55	.0001*
b. Different amounts of time for study and practice.	Achieve	2	45.27	22.65	26.74	.0001*
c. Different lesson content.	Achieve	2	74.48	37.24	34.66	.0001*
6. To control :						
a. The range of achievement levels in your class.	Subject	1	11.22		11.47	.0007*
b. The teaching methods you use (Methods= discovery, etc.)	Achieve	2	4.2111	2.11	3.38	.0346
7. How much instructional time would be lost to:						
a. Controlling student behavior in order to "have class."	Achieve	2	129.21	64.04	43.68	.0001*
	Size	1	22.46		14.08	.0002*
b. School or environmental distractions.	Achieve	2	33.16	16.68	13.56	.0001*
c. Students' lack of preparation in preceding years.	Achieve	2	170.48	85.24	58.55	.0001*
d. Students' disruptive family circumstances.	Achieve	2	45.81	22.91	17.50	.0001*
e. Teaching students appropriate social behaviors.	Achieve	2	78.57	39.29	30.64	.0001*
	Size	1	10.24		7.62	.0059

Table continued on next page.

Table 1—Main Effects of Teacher Use of Classroom Resources By Student Range of Achievement, Class Size, and Subject (continued)

If you are to succeed with every student, how important would it be:	Source	DF	Type III SS	Mean Square	F Value	Pr>F
8. Your job would:						
a. Be primarily custodial.	Achieve	2	17.60	8.58	8.77	.0002*
	Size	1	9.08		9.21	.0025
b. Demand a broad base of knowledge.	Achieve	2	166.38	83.19	61.67	.0001*
c. Be emotionally demanding.	Achieve	2	48.83	24.42	17.57	.0001*
	Size	1	15.88		11.14	.0009*
d. Allow you to observe other teachers.	Size	1	12.49		7.20	.0074
e. Have a clear beginning and end with each student.	Achieve	2	43.20	21.60	12.69	.0001*
9. How much influence would the following have on your ability to succeed with a student:						
a. The time allocated for instruction in this subject.	Achieve	2	0.271	0.136	0.19	.8264
b. The number of students you are assigned to teach.	Achieve	2	3.791	1.895	2.40	.0915
c. The kinds of purchased instructional materials available.	Achieve	2	4.318	2.159	1.90	.1499
d. The assignment of an aide or another teacher to your class.	Achieve	2	18.80	9.40	7.57	.0005*
e. The ability to reschedule and reassign and/or reschedule students throughout the year based on their performance.	Achieve	2	1.11	0.555	0.47	.6265

*p<.001

Data for Achieve only are cited where p=nonsig. Complete statistical information is available from the authors.

approach to what educational microeconomic resource scholars call methods of deliberately varying the stock and flow of educational resources to students in the classroom. It might also reflect a simple value preference, instructional bias, or continuation of past practice.

For example, learning centers can be used by teachers to vary the content of information, reading level of that information, time for practice and drill, time for remediation, enrichment or discovery learning for different students in a class. But, teachers in this study did not report intentions to vary their use of learning resource centers to adapt to the three structural conditions. Similarly, cooperative learning, though touted as highly effective with particular groups of students and instructional situations, was not conditionally applied in response to either range of student achievement, class size, or subject domain. Teacher educators may need to give more deliberate attention to appropriate contingency uses of instructional, organizational, and classroom management strategies in teacher training and inservice programs.

The results of this exploratory study of job design in education are encouraging. As demands for accountability continue to mount, it is critical that policy makers, administrators, teachers, and teacher educators recognize the effects that their individual decisions have on the design of teaching jobs and the subsequent effects on affective and productive outcomes of teaching. Job design theory offers a promising explanation of school structure and an alternative theory of educational effects. With refinement and further investigation, particularly using quasi-experimental and experimental designs, it has the potential to impact policy, practice, and knowledge in education in ways which can improve accountability at all levels of the educational hierarchy.

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