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ABSTRACT
                The major purpose of this study was to determine if
there were meaningful differences between work-related problems of
310 first-grade teachers assigned to small classes, regular size
classes, and regular size classes with full-time aide assistance.
This paper reports on the analysis of results of a single data source
from the second year of Project STAR (Student Teacher Achievement
Ratio), a comprehensive 4-year longitudinal study. Teachers involved
in the project were asked to rate 61 items or statements about
problems on a Frequency or Bothersomeness scale of a modified version
of the Teacher Problem Checklist. The study found that all
first-grade teachers, regardless of class size or the addition of a
full-time aide, reported that problems related to time were more
frequent and bothersome than other types of problems. Teachers of
regular classes, in comparison with teachers of small classes,
reported that problems related to time occurred much more frequently.
(RJC)

Teacher Perceived Problems and the Context of Teaching

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Teacher perceptions of work-related problems have become an area
of increasing interest to teacher educators and educational
researchers for a variety of reasons. One is the belief that teacher
education programs can address these problems if we know their nature
(Veenman, 1984). Another is that we can teach teachers how to handle
or eliminate a problem if we understand how it came about (Cruickshank,
1980a). And still, another broad reason is that we can better
understand teacher burnout, stress, and dissatisfaction if we know what
problems are faced in the classroom (Hines et al, 1988). These three
broad areas could be thought of as attempts to provide a prevention, a
cure , and a treatment for teacher problems.

Until the last decade or two, teacher problems were reported with
much similarity across grade levels, school locations, teacher
experience, and other such demographic variables thought to influence
the types and nature of teacher problems. In a summary of the results
of 83 studies of beginning teacher problems, Veenman (1984) found
that classroom discipline was by far the most serious problem reported
in most of the studies and that it retained its critical importance
across all levels and locations of the studies included in the summary.

Based on a series of teacher problem studies over a variety of k-
12 settings, Cruickshank (1980a) reports that teacher problems can be
grouped and defined in terms of five relatively stable areas.

1. Affiliation. The need to establish and maintain good
   relationships with others in the school, both pupils and
   staff.
2. Control. The need to have pupils behave appropriately.
3. Parent relations and home conditions. The need to
   relate and work well with adults outside the school who are
   important in the lives of children and the need to understand

home conditions.
4. Student success. The need to have students be successful, academically and socially.
5. Time. The need to be effective managers of our personal and professional lives. (pp. 31-32)

In summary Cruickshank (1981) asserts:

> Across the studies, the problems teachers report are relatively stable. Elementary and secondary teachers, and teachers of the rurally disadvantaged -- all have problems that are more alike than different. They differ only slightly in their perceptions of the frequency and severity of the problem. (p.402)

Cruickshank's assertion has been challenged by more recent research suggesting that the context and structure of the work environment do affect teacher's perceptions of their work-related problems. More recent studies suggest that there are important differences in teacher perceived problems across grade levels (Johnston, 1983), across school types or locations (Bainer, 1987), within class contexts (Bainer, 1988), and in relation to class size (Sellers & Johnston, 1988).

Furthermore, recent studies also indicate a shift in the focus of teacher's perceptions of problems from classroom discipline and control toward a greater concern with problems associated with time and student success (Bainer, 1988; Hines. Mann, Swarzman, & Homan, 1988; Sellers & Johnston, 1988).

Bainer's (1987) study suggests that educational efforts by the federal government in the past 20 years have changed not only the composition of the classroom from homogeneous to more heterogeneous, but that society itself is now responsible for a different type of elementary pupil today. In an attempt to see if problems other than

those covered by Cruickshank's Teacher Problem Checklist (Cruickshank, 1980a) would surface, Bainer's study (1987) added 8 problem statements to the already existing Teacher Problem Checklist(TPC). She concluded however, that there were still 5 basic areas of teacher problems in a factor analysis of the TPC including the 8 additional items, but that the strength with which some problems were reported varied by school location and classroom context.

In a study by Hines, Swarzman, Mann, & Homan (1988), 18 problem statements were added to the TPC and the results were again factor analyzed. Their conclusion concurred with the basic set of 5 problem areas, although they renamed two of the factors from student success and parent relationships to influencing and professional competence. They found the problem areas to be consistent across elementary and secondary levels although the strength of the problems varied across levels.

Manaf (1987) suggested in his study of teacher problems that the current Teacher Problem Checklist was too long and used linear structural analysis to confirm a 3 factor structure that he found by factor analyzing Bainer's (1987) data as well as another sample of data. He proposes that there are really only three main teacher problem areas: professional behavior (which includes 29 items from student success, affiliation, and parent relationships in the current TPC); time management; and student centered behavior (reflecting the role of the teacher being in control). He was thus able to reduce the current TPC to an instrument with 40 problem statements instead of the usual 60, or 68 in the Bainer study (1987), or 76 in the Hines at all

study (1988).

In view of the above findings, Veenman's (1784) conclusions and directions for future research in the area of teacher problems can be emphasized even more. One conclustion is that problems cannot be attributed solely to the personal characteristics of the teacher, to the situational characteristics of the workplace, or solely to deficiencies in teacher training. It is his suggestion that we look not only at those factors, but beyond those factors to conditions inherently connected with the task of teaching a group of students" (p. 166-7), if we are to look for solutions to these problems. It is Veenman's contention that since beginning teachers have the same responsibilities as those teachers of 40 years and since the teaching profession has no codified body of knowledge and skills, that we rarely emphasize the fact that many teacher problems arise from the job of "teaching" as a profession. This brings us back to the need to look at teacher's perceptions of problems within the context of the classroom and to seek relationships among those problems and contextual variables. McDonald and Elias (1983) also noted that one of the methodological weaknesses in teacher problems research was the failure to compare and contrast teachers' perceived problems across the contexts in which teachers work. Another of Veenman's suggestions was that the questionnaire is useful for listing problems, but that we can only get at the teacher-environment interactions by collecting other important information, such as features of the educational situation that the teachers experience or situation specific variables.

Attention to teacher problems in varying contexts and work

environments is therefore timely as states and school systems consider reductions in class size and use of full time teacher aides as a means of improving pupil achievement, self-concept, and attitudes toward school. Swan, Stone and Gilman (1987) note that at least 20 states have implemented or are developing programs to reduce class size in the primary grades. More specifically, in selected Tennessee elementary schools a comprehensive statewide demonstration project and policy study is in progress to explore the effects of reduced class size and reduced teacher-pupil ratio on pupil achievement in primary grades K-3. In Tennessee's Project STAR (Student Teacher Achievement Ratio), some teachers are assigned to classes reduced from an average of 1:25 to 1:15, while others teach an average of 25 pupils, but also receive assistance from a full time aide. Given thses significant alterations in the work environment of Project STAR teachers, data were collected in order to explore the effects on teachers' perceived problems of significantly reduced class size, and the presence of a full time teacher aide.

Purpose

The major purpose of this analysis was to determine if meaningful differences exist between the work related problems of first grade teachers assigned to small classes, teachers assigned to regular size classes, and teachers assigned to regular size classes with full time aide assistance. A secondary purpose of this analysis was to examine the contextual or classroom variables along with teacher variables so that the teacher-environment interaction could be viewed in relation to the perceived teacher problems of teachers in each of

the three class types, thus allowing for identification of the
variables of greatest influence on the major teacher problems.

More specifically, the research reported here was designed to
answer three main questions: (1) What differences and similarities
exist in the perceptions of both frequent and bothersome problems
reported by first grade teachers in small classes, regular classes, and
regular classes with full time teacher aides? (2) What differences and
similarities among global problem areas can be inferred from these
teachers perceptions of their work related problems? (3) Which
classroom contextual variables or teacher variables have the greatest
influence on the more critical teacher problem areas as defined by
Cruickshank (1980a).

<center>Research Methodology</center>

This paper reports analysis results of a single data source from
second year Project STAR (Student Teacher Achievement Ratio), a
comprehensive four-year longitudinal study. Background of the complete
study, its design, sample and the specific instruments analyzed for
this report are described below.

Background ·

The Tennessee legislature mandated in May, 1985, a major 12
million dollar policy study of the effects of reduced class size and
reduced teacher-pupil ratio on pupils in primary (K-3) grades. The
legislation initiated the major four year project by establishing a
demonstration to allow the study of achievement and development of
pupils in three different class conditions: a small class defined as
one teacher with approximately 15 pupils (13-17), a regular class

defined as one teacher with approximately 24 pupils (22-25) and a
regular class with approximately 24 pupils (22-25) with a full time
teacher aide. Representatives from Memphis State University, Tennessee
State University, University of Tennessee-Knoxville, Vanderbilt
University, the State Department of Education, the State Board of
Education, and the State Superintendent's Association joined as a
consortium to conduct and monitor the project.

Initial Sample and Overall Design

Legislation specified that the participating schools should
represent four demographic types: inner-city, surburban, urban, and
rural; and should be generally spread evenly across the three geo-
political divisions of the state. All state school systems were sent
project guidelines and were invited to participate by the Commissioner
of Education. After consideration of project guidelines and design
criteria, 79 schools in 42 of the state's 141 school systems became
participants.

Comparison of Project STAR participating school districts and
schools with non-participating districts and schools in Tennessee found
Project STAR systems similar to the statewide system average on most
key variables. The average system size of Project STAR schools was
larger than the size for non-project systems since Memphis, Nashville,
and Knoxville (the largest systems in the state) participated. Project
STAR schools are also larger than the state average since small schools
were excluded by the nature of the project's design.

A within-school design was selected as the most likely to support
the purposes of the study, to accommodate the longitudinal nature of

the study, and to also allow examination of one-year effects.
Guidelines of the within-school design mandate that each of the
participating schools will contain at least one small class (13-17
enrollment), one regular class (22-25 enrollment), and a regular class
with a full time aide (22-25 enrollment). Schools with at least 57
kindergarten students met these criteria, and in schools with larger
enrollments additional classes of each type were established in
accordance with the design.

Kindergarten pupils were then randomly assigned into the three
class types. Kindergarten teachers were also randomly assigned to each
of the three class types. In the 1985-86 year (Kindergarten level),
Project STAR had 128 small classes (approximately 1,941 students), 101
regular classes (approximately 2,304 students), and 99 regular classes
with full time teacher aides (approximately 2,230 students). Since
legislation specified that project schools were to be drawn from the
three geo-political divisions of the state and from the four
demographic types, schools were selected so that all types and all
areas were represented in the sample: 35 rural schools, 10 urban
schools, 17 inner-city schools, and 17 surburban schools.

Every effort was made to keep the same children in the same group
and, in particular, in the same class type they had been assigned to
when the project started in their kindergarten year. If students were
transferred into a school from another project STAR school, they were
placed in the same class type they left. If students were transferred
from a school where the project was not being implemented, they were
placed in a regular class, making every effort to keep the class sizes

within the ranges specified. First grade teachers were then randomly
assigned to one of the three class types.

Teacher Sample Characteristics

Of the 310 first grade teachers completing the TPC 113 were small
class teachers, 104 were regular class teachers, and 93 were regular
class teachers with full time aides. The teacher sample was
predominantly female with less than 1% male and over 99% female and
predominantly white (81.8% white and and 18.2% black). All of the
teachers held at least a bachelor's degree, with 14.5% of them holding
a master's degree in education and 21.4% holding an MA or an MS degree;
thus over one third of the sample held masters degrees. Two of the
teachers held a second masters degree, two held an educational
specialist's degree and one teacher held a doctorial degree (Table 1).
Over 58% of them also reported currently or recently attending
additional college courses. Approximately 38% of the teachers had TIMS
(Tennessee Instructional Model) training, and over two thirds of them
had recently attended a reading workshop or a math workshop or both.
Over 50% of the teachers had also attended some kind of classroom
management workshop. Only 8% of these teachers were not on the
Tennessee Career Ladder Program, with 10.3% on apprenticeship status,
9.1% on probationary status, over two thirds at level I, 1.7% at level
II and 4.3% at level III of the career ladder program (Table 2). These
teachers had a mean total years teaching experience of 11.86 years with
a minimum of 1 year experience (13 beginning teachers) and a maximum
of 42 years experience (Table 3). Over 70% of them had more than one
year of teaching experience at the school they were in for first grade,

with a mean of 7.3 years experience at that same school and a range of
1 to 36 years. These teachers had a mean of 8 years experience at the
first grade level, with a range of 1 to 42 years teaching experience at
the first grade level.

Class Sample Characteristics

These classes came from four school types : 65 were inner city
school classes, 61 were surburban classes, 144 were rural classes, and
38 were urban classes with 2 teachers not reporting school type. The
actual class sizes for first grade teachers ranged from 9 to 29 , with
a mean size of 19.7 (Table 4 - with small and large numbers due to
fluctuations in class enrollment throughout the school year). The
percent of children on free lunch per class ranged from 0 to 100
percent with a mean of 49.84% on free lunch (Table 5). The percent of
retainees in the current first grade classes ranged from 0 to 18.2
percent with a mean of less than one half percent because 289 of the
classes had no first grade repeaters (Table 6). At the end of the
first grade year the percent promoted to second grade ranged from 52.6
to 100 with a mean percent promoted of 91 percent. The class
composition by sex ranged from 18.2 percent male to 80 percent male
with a mean of 51.9, a median of 52.4 and a mode of 50 (Table 8). The
class composition by race ranged from 0 percent minority to 100 percent
minority with a mean of 32.5 percent (Table 9). The enrollment per
school ranged from 154 to 1131 with a mean enrollment of 620 as shown
in Table 10. The teachers in the sample reported spending from 4 to 81
percent of their day in whole class instruction with a mean of 34
percent or about one third of their day in whole class instruction

(Table 11). The teachers in this sample reported spending an average

of 27 percent of their day in small group instruction with a range of 0

to 67 percent (Table 12). The number of days absent per class ranged

from 2.89 to 14 with a mean days absent per class of 7.62 (Table 13).

The average class kindergarten reading achievement (used as a measure

of ability of students coming into the first grade classrooms) as

measured by the Stanford Achievement Kindergarten form ranged from an

SA score of 18.13 to an SA score of 473.22 with a mean of 223.43 of all

the first grade classes (Table 14). The SCAMIN (Milchus, 1968)

instrument was used to measure self-concept and motivation. The

average class self-concept scores ranged from 39.4 to 53.5 with a mean

of 45.5 for all the classes (Table 15).

Instrumentation

A slightly modified version of the Teacher Problem Checklist (TPC)

was used to identify teacher concerns. Developed by Cruickshank and

associates (Cruickshank & Meyers, 1980), the TPC used by Project STAR

was modified by the addition of one item, and consists of 61 items or

problem statements. Teachers were asked to rate each problem on a five

point Frequency scale (1: never, 3 :occasionally, 5: always) and on a

five point Bothersome scale (1: not at all, 3: somewhat, 5: extremely).

Thus for each of the 61 specific problems listed on the TPC, teachers

provided information about the extent to which the problem was

perceived to be bothersome and the frequency with which the problem was

experienced. Given the purposes of Project STAR, a single item was

added to the original 60 item TPC, which asked teachers to respond to

problems concerning working with teacher aides or volunteer assistants.

Analysis

The first research question in this study was: (1) What
differences and similarities exist in the perceptions of both
frequent and bothersome problems reported by first grade
teachers in small classes, regular classes, and regular classes
with full time teacher aides? To address this question the
following analyses were performed. Standard scores for all the
individual problem means were computed to determine if any of
the problems by frequency or bothersomeness were reported
significantly higher in comparison to the overall problem
frequency and bothersomeness means. The standard scores ranged
from -.93 to +1.43, indicating no overall statistically
significant problems. To determine which work related problems
occurred most frequently, the means of individual items were
rank ordered by frequency for the entire sample of first grade
teachers as well as for each of the class types. The same
procedure was completed with the bothersome responses. To
determine if the rankings of the problems by frequency were
significantly related to the rankings by bother-someness a
Spearman Rho Rank Order Correlation Coefficient was calculated.

The second research question in this study was: (2) What
differences and similarities among global problem areas can be
inferred from these teachers' perceptions of their work related
problems? To answer this question an index for each global

problem area, as defined by Cruickshank (1980b), was created by
summing the responses for all problems in each catagory including
problems of (1) affiliation, (2) control, (3) parent relation-
ships, (4) student success, and (5) time. Since previous research
has shown differences by school type as well as by class type, a
twoway analysis of variance was performed across the global
problem areas by class type and school type or location so that
possible interactions, as well as main effects could be observed.

The third research question in this study was: (3) Which
classroom context variables or teacher variables have the
greatest influence on the more critical teacher problem areas as
defined by Cruickshank (1980b)? To determine which classroom
context variables or teacher variables had the greatest influence
on the five global problem areas , each global problem area was
regressed on the context or teacher variables controlling for
teacher race and percent minority in each class. Since each of
the five global problem areas can also be viewed as separate
dependent variables, they were entered into a canonical regression
analysis along with the teacher and class context variables as a
set of independent variables to see what patterns might occur by
each of the three types of classroom teachers.

And, finally, to confir Cruickshank's (1980b) five factor
structure for the Teacher Problem Checklist a factor analysis was
performed on the problems by frequency responses.

RESULTS

Results for research question 1: what differences and similarities exist in the perceptions of both frequent and bothersome problems reported by first grade teachers in small classes, regular classes, and regular classes with full time teacher aides?, are presented by reporting statistics for the total sample of teachers, then by statistics for each of the three class types. Resulting comparisons for each of the three class types are then reported.

Results for research question 2: what differences and similarities among global problem areas can be inferred from these teachers' perceptions of their work related problems?, are presented by reporting the results of a twoway analyses of variance by class type and school type across the five global problem areas.

The next section presents the results of a factor analysis performed on the frequency and bothersome responses to confirm Cruickshank's 5 global problem areas for this population.

Results for the third research question : which classroom context variables or teacher variables have the greatest influence on the more critical teacher problem areas?, are presented by reporting statistics for multiple regression runs with each of the five problem areas used as dependent variables. Then the five problem areas are each treated as dependent variables and used in a canonical regression analysis to see if any patterns by class type emerge when the problem areas and the teacher and class context variables are all looked at simultaneously.

Total First Grade Teacher Sample

Table 16 presents the mean responses for the top ten problems
ranked in order by decreasing degree of bother someness. Of those top
ten problems, the first three are related to teacher use of time, two
are related to concern for student success, three are related to
problems of control in the classroom, and one is concerned with
parental relationships. Six of the most bothersome problems co-occur
with the top ten most frequently occuring problems. Of the problems
ranked as the ten most frequently occuring problems, the first three
and two others are related to teacher use of time, four are related to
concern for student success, and only one is related to control in the
classroom. No problems related to affiliation or parent relationships
were among the most frequently occurring problems.

Insert Table 16

To determine the relationship between the frequency and the
bothersome responses, a Spearman Rho Rank Order Correlation Coefficient
was computed between the rank order of bothersomeness and frequency
rankings. The coefficient was calculated to be .93 which is significant
at the .01 level, rejecting the null hypothesis that there is no
relationship between the two sets of answers. Thus, we can conclude
that there is a strong relationship between the frequency with which
teacher problems occur and the degree to which they are bothersome;

indicating that if a problem is reported to occur frequently, then it
is also likely to be bothersome.

Small Class Teacher Problems

Table 17 presents the ranking of the means for the top ten
problems identified as bothersome and frequent by small class teachers.
The most bothersome problem relates to teacher use of time, followed
by two other problems related to student success, and two other
problems related to teacher use of time. Also in the top ten
bothersome problems is one problem relating to parent relationships,
two control problem statements, and another time and another student
success problem. Notice the wording of the items labeled as control by
Cruickshank (1980a). Self-discipline and student attention could both
be a concern on the part of the teacher for student success. However,
the three most frequently reported problems relate to teacher use of
time, followed in this case by two problems related to student
success. Other than problems of time and student success small class
teachers report one problem re uted to control and one related to
parent relationships, ranked 7 and 9 respectively.

Insert Table 17

Regular Class Teacher Problems

Table 18 presents the ranking of the means for the ten most
bothersome and frequently occuring problems identified by regular class

teachers. The three most bothersome problems for regular class
teachers were reported to be in the area of teacher use of time,
followed by one student success problem, one more time problem, three
control problems, a parent relationship problem, and one more student
success problem. Regular class teachers report that there are more
bothersome problems of classroom control in the top ten than do small
class teachers. Regular class teachers also report more frequently
occurring problems related to the use of time, including four of the
top 5 problems, than do small class teachers. Other frequently
occurring problems are in the areas of student success (5 items) , with
only one frequent problem in the area of parent relationships.

_____

Insert Table 18

_____

Regular With Aide Class Teacher Problems

Table 19 presents the ranking of the means for the ten most
bothersome and frequently occuring problems reported by regular with
aide classe teachers. The most bothersome problem for regular with
aide teachers relates to time, as do three more time related problems
on the ten most bothersome list. Other most bothersome problems are
related to student success and parent relationships, while only one
control problem is ranked in the top ten.

The most frequently occurring problems for regular with aide
teachers are reported to be related to time as was also the case for

both small and regular class teachers. Other frequently occurring

problems include four student success problems, one control problem,

another time problem, and a parent relationship problem.

Insert Table 19

Comparisons By Class Type

Tables 20 and 21 present a clearer contrast between the top

rankings across the different class types as well as the total sample

rankings for bothersome and frequency responses respectively. The

abbreviations for Cruickshank's (1980b) hypothesized problem areas also

make it easier to identify the important problem areas for each class

type. Note that small and regular with aide class teachers show a

similar pattern in their perceptions of bothersome and frequently

occuring problems. Reasons for this similarity will be addressed in

the discussion below. It is also much clearer to see that teachers in

all three class types perceive problems of time to be the most

frequently occurring problems.

Insert Tables 20 & 21

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control, student success, and affiliation to be significantly less bothersome than their surburban, rural, or urban counterparts.

Insert Tables 22 & 23

Global Problem Areas — Frequency Responses

The twoway analysis of variance procedures also showed no interactions and only main effects between school types for the frequency responses (Tables 24 and 25). The global problem area frequency means for both small and regular classes in decreasing order of frequency are: (a) time, (b) control, (c) student success, (d) parent relationships, and (e) affiliation. Regular with aide class teachers frequency responses in decreasing order are: (a) time, (b) control, (c) parent relationships, (d) student success, and (e) affiliation. Inspection of table 23 shows that the largest gap in the reported frequencies of all five problem areas lies between problems of time and the second most frequent problems of control. Also, with the exception of the affiliation problem area, small class teachers preceived problems to occur less frequently than their regular or regular with aide counterparts. This trend did not reach significance, however.

The differences between the reported problem frequencies by school type show a similar pattern to the bothersome responses, except for one significant difference. The one significant difference is between

inner-city and surburban teachers in the area of parent relationships.
Inner-city school teachers report a greater frequency of parent
relation-ship problems than do surburban teachers.

Insert Tables 24 & 25

Using the Project STAR population factor scores for the frequency
responses by class type and school type showed similar results to the
frequencies by the Cruickshank scale scores, except that two other main
effects appear to be significant. Table 26 shows that regular with
aide teachers report a significantly higher frequency of parent
relationship problems than do small class teachers. Table 27 shows
that inner-city teachers report a significantly higher frequency of
parent relationship problems than do surburban teachers. And table 26
also shows that urban teachers also report a significantly higher
frequency of control problems than do rural teachers. The discussion
of the factor analysis done on the TPC for Project STAR first grade
teachers can explain some of the differences in the factor score
results versus the Cruickshank scale results.

Insert Tables 25 & 26

Factor Analysis

Recall that part of our purpose, in reporting these results in comparison to other studies using the five global problem areas as defined by Cruickshank (1980a), was to verify the existence cf a five factor structure and determine if those factr could logically be identified as the same or different global problem areas.

Table 28 shows the results of the factor analysis of the TPC for the first grade teacher frequency responses obtained in this study. The intercorrelation matrix of the 61 item frequency responses was analyzed initially with a maximum liklihood method and the extracted factors were rotated to a varimax solution. The scree test (Guilford, 1977) was then examined and evaluated by Thurstone's criteria (1968) for a scund rotation which eliminated all but the 5 factors with the largest eigenvalues of 8.410, 2.377, 1.762, 1.382, and 1.062. Factor loadings greater than .32 were considered significant for interpretation. The second analysis extracted 5 factors using maximum liklihood analysis with a varimax rotation. The scree test legitimately suggested the five factor solution which accounted for 45.2% of the total variance. Factor I accounted for 29.5% of the variance, while factors 2,3,4 and 5 accounted for 4.6%, 4.1%, 3.7% and 3.3% respectively.

Insert Table 28

Due to complex loading on two or more factors, thirty items were

removed from the analysis for the second factor analysis. The
remaining items displayed a simple structure with moderate to high
loadings of the 31 remaining items on the five factors. A labeling of
the factors by Cruickshank's (1980b) hypothesized problem areas does
indicate that a five factor structure, as he hypothesized, could be
recovered. As both Bainer (1988) and Veenman (1984) suggest, the
problem areas for teachers are given labels without adequate
definitions, making it difficult to differentiate or to combine those
areas which theoretically are either different or alike. The wording
of the problems statements may lead one teacher to think in terms of
one area and another teacher to think in terms of a different area for
the same problem. For example, the three problem statements that
remained on the control factor have a very different connotation than
the control items that were eliminated because they tended to load on
the student success factor as well as on the control factor. The three
control problem statements that remain are clearly related to
discipline in the classroom, whereas the eliminated control problem
statements like, "getting students to use their leisure time well",
could very well mean that the teacher is as concerned with student
success as she is with control when she reports that item to be either
bothersome or frequent. Therefore, close inspection of the complex
items and their exact wordings suggested that some of the problem
statements could be deleted from the TPC because they seem to measure
two different underlying constructs at the same time.

An inspection of the problem statements comprising each of the
five factors suggests that the five factors can be identified as the

same five underlying factors Cruickshank (1980b) hypothesized them to be. Factor 1 can be identified as student success, factor 2 as affiliation, factor 3 as parent relationships, factor 4 as control, and factor 5 as time.

A factor analysis of the bothersomeness responses was attempted in the same manner as above, but simple structure with more than two or three factors, could not be achieved, nor could the factors be labeled with any certainty. This could lend support to the Manaf (1987) paper that suggests there are only three factors with labels different from the Cruickshank labels, with the exception of the time factor. Or, it could be indicative of a pattern of responses from this particular sample in terms of the bothersomeness of the problems. When factor analyzed, the bothersome responses seemed to cluster into three factors, with the global problem areas of parent-relationships and control no longer identifiable as separate factors. Problem statements from these two groups tended to load on the factor identified as student success in this study. There is much less variability in the bothersome responses than there is in the frequency responses for this sample which may also explain why five factors or constructs could not be recovered.

Table 29 lists the problem statements that were eliminated from the frequency response factor analysis due to their complexity (loading on two or more factors).

Problem areas related to teacher and context variables

Recall that the third research question this paper planned to address was: which classroom contextual variables or teacher variables

have the greatest influence on the more critical teacher problem areas as defined by Cruickshank (1980b). A set of possible predictor variables from the data collected was chosen based on teacher demographics and class context variables. Table 30 shows the correlations, means, and standard deviations for all of the variables to be entered in the multiple regression and canonical correlation runs. Tables 31,32, and 33 show the correlations, means and standard deviations for all the variables, broken down by small class teachers, regular class teachers, and regular with aid class teachers respectively. This portion of the study was primarily exploratory, since previous studies had suggested that teacher problems be viewed in relation to teacher and class context variables, although no specific class context variables had been suggested as predictors of specific teacher problems. All regression runs were made using the Project STAR factor scores on the TPC for each of the five teacher problem areas. The square of the part correlations were used as indicators of the amount of influence a predictor had on the criterion.

Time Problems

When the teacher problem area as defined by the average teacher score for the Cruickshank defined area of time was regressed on the predictor variables, the following results were obtained. The variables left in the equation after controlling for teacher race and racial composition of the class were the ones most likely to influence whether a teacher reports problems related to time. For the entire sample teachers' experience at the current grade level (part corr.=.15371 or 1.9%), class average scores on the failure avoidance

portion of the SCAMIN or self-concept measure (part corr.=-.12865 or
1.7%) and the percent of time the teacher reports spending in small
group instruction (part corr.=.12570 or 1.6%) were the variables most
likely to influence whether a teacher reports problems related to time.
These three predictors along with teacher race and racial composition
of the class only accounted for about 8.5% of the overall variance in
predicting teacher reports of time related problems. For the small
class teachers only, teachers' experience at the current grade (part
corr.=.25841 or 6.7%) and the teachers' reports of problems of student
success (part corr.=.25327 or 6.4%) were the most influential
predictors of teacher time related problems. These two predictors
along with teacher race and racial composition of the class accounted
for about 13.6% of the overall variance in predicting small class
teacher reports of time related problems. For regular class teachers
the most influential predictors of time related problems were the class
size (part corr.=.36581 or 13.4%) and the amount of time spent in small
group instruction (part corr.=.24766 or 6.1%). These two predictors
along with teacher race and racial composition of the class accounted
for about 24% of the overall variance in predicting regular class
teacher reports of time related problems. After controlling for
teacher race and racial composition of the class, regular with aide
class teachers did not retain any predictors and race accounted for
only about 4.9% of the overall variance in predicting regular with aide
class teachers' reporting of time related problems.

Parent Relationship Problems

    When the teacher problem area as defined by the average teacher

score for the Cruickshank defined area of parent relationships was
regressed on the predictor variables the following results were
obtained. Once again teacher race and class racial composition were
controlled for by entering them into the regression equation first.
For the entire sample the most influential predictors were class size
(part corr.=.15474 or 2.4%) and class average scores on the failure-
avoidance portion of the SCAMIN self-concept measure (part corr.
=-.13147 or 1.7%), accounting for an overall variance in predicting
teachers' reporting of parent relationship problems of about 8.2%. For
the small class teachers only, the most influential predictor of parent
relationship problems was teacher reports of student success related
problems (part corr.=.23040 or 5.3%), which, along with race accounted
for only abou 3.0% of the overall variance in predicting teachers'
reporting of parent relationship problems. For regular class teachers
only, the most influential predictors were teachers' reports of
affiliation problems (part corr.=.-2304 or 5.3%) and class size
(part corr.=.21808 or 4.8%), which, along with race accounted for only
about 20% of the overall variance in predicting teachers' reporting of
parent relationship problems. For regular with aide class teachers
only, the only influential predictor left in the regression equation
was the percent of students promoted (part corr.=-.32594 or 10.6%),
which, along with race accountied for only about 11.7% of the overall
variance in predicting teachers' reporting of parent relationship
problems.

Student Success Problems

When tie teacher problem area of student success was regressed on

the predictor variables the following results were obtained. Again teacher race and class racial composition were controlled for by entering them into the regression equation first. For the entire sample the most influential predictors of student success problems were teachers' reporting of control problems (part corr.=.13722 or 1.9%) and percent of time spent in whole class instruction (part corr.=-.12688 or 1.6%), which, along with race accounted for only about 4.5% of the overall variance in predicting teachers' reporting of student success problems. For small class teachers only the most influential predictors of student success problems were teachers' reporting of time problems (part corr.=.19548 or 1.9%), percent of the class on free lunch (part corr.=.22304 or 5.0%), teachers' reporting of parent relationship problems (part corr.=.24604 or 6.1%), and amount of time spent in small group instruction (part corr.=.21590 or 4.7%), which, along with race factors accounted for about 22.6% of the overall variance in predicting small class teachers' reporting of student success problems. For regular class teachers only, the most influential predictors of student success problems were only the race factors, accounting for only about 4.3% of the overall variance in regular class teachers' reporting of student success problems. For regular with aide class teachers only, the most influential predictors of student success problems were class average scores of the self-efficacy scores of the SCAMIN self-concept instrument (part corr. =-.34104 or 11.6%) and teachers' reporting of time problems (part corr. =-.25458 or 6.5%), which, along with race accounted for about 22.4% of

the overall variance in regular with aide class teacher's reporting of
student success problems.

Control Problems

When the teacher problem area of control was regressed on the
predictor variables the following results were obtained. Again teacher
race and class racial composition were controlled for by entering them
in to the regression first. For the entire sample, the most
influential predictors of teachers' reporting of affiliation problems
were the percent of students promoted that year (part corr.=-.14810 or
2.2%), the average class score of the failure avoidance portion of the
SCAMIN self-concept measure (part corr.=.16534 or 2.7%), and teachers'
reporting of student success problems (part corr.=.14452 or 2.1%),
which, along with race accounted for only about 13.3% of the overall
variance of teachers' reporting of control problems. For small class
teachers only, the most influential predictors were only the race
variables, accounting for only about 2.6% of the overall variance in
small class teachers' reporting of control problems. For regular
class teachers only, the most influential predictors of control
problems were class average Stanford reading scores (part corr.=-.29329
or 8.6%), and average class scores on the failure avoidance portion of
the SCAMIN self-concept measure (part corr.=.22492 or 5.1%), which,
along with race accounted for about 25.7% of the variance in regular
class teachers' reporting of control problems. For regular with aide
teachers, the most influential predictors of control problems were
class average Stanford reading scores (part corr.=-.28082 or 7.9%) and

the percent of first grade repeaters in the class(part corr.=-.23196 or

5.4%), which, along with race accounted for about 22.7% of the overall

variance in regular with aide class teachers' reporting of control

problems.

Affiliation Problems

When the teacher problem area of affiliation was regressed on the

predictor variables the following results were obtained. Again teacher

race and class racial composition were controlled for by entering them

into the regression equation first. For the entire sample of first

grade teachers, the most influential predictor of affiliation problems

was the percent of students promoted that year (part corr.=.1500 or

2.3%), which along with the race variables accounted for only about

4.3% of the overall variance in teachers' reporting of affiliation

problems. For small class teachers only, the most influential

predictors were only the race variables, accounting for only about .5%

of the overall variance of small class teachers' reporting of

affiliation problems. For regular class teachers only, the most

influential predictor was teachers' reporting of parent relationship

problems (part corr.=-.22767 or 5.2%), which, along with the race

variables accounted for only about 12.1% or the overall variance of

regular class teachers' reporting of affiliation problems. For regular

with aide class teachers only the most influential predictors were only

the race variables, which accounted for only about 8.1% of the total

variance in regular with aide class teachers' reporting of affiliation

problems.

Canonical correlation results

In view of results of the regression analyses above, it is unlikely that predictors of the five teacher problem areas can be discussed on the basis of those results. The percent of variance explained using these variables as predictors of the measures of teacher problems in this study is small. A canonical correlation analysis can, however, allow a study to see if patterns exist among a set of dependent or criterion variables and a set of independent or predictor variables. It is for this reason that a canonical correlation analysis was performed on the variables in this study. The Project STAR factor scores from the five teacher problem areas as defined by Cruickshank (1980b), were used as a set of five dependent or criterion variables. The previous set of independent variables, consisting of teacher variables and classroom context variables, was used as the set of independent or predictor variables.

Four analyses were performed, one for the entire sample of first grade teachers, and one for each of the subpopulations of small class teachers, regular class teachers, and regular with full time aide teachers.

Table 34 shows the results of the analyses performed on the entire sample and Table 35 shows the results of the regular class teachers only. Each of those analyses resulted in one significant canonical correlation. The canonical correlation analyses for only the small class teachers and for only the regular with aide class teachers resulted in no significant cannocical correlates in either case.

For the entire sample only the first of 5 canonical correlates was

significant. For the X variables in the entire sample in table 34, the canonical variable is largely determined by teacher race, Stanford Achievement Reading scores, the percent of students promoted in the class, and the racial composition of the class. Thus a teacher who is white (TRACE coded 0 for white and 1 for black), with students who score relatively low on the Stanford Reading scale, with a lower percentage of students promoted, and with largely minority or black children would score high on the first canonical variable. That canonical variable based on the Y's or dependent variables would give a large positive weight to problems of parent relationships, and problems of control, and a large negative weight to affiliation problems.

For the subpopulation of regular class teachers, only the first of 5 canonical correlates was significant (Table 35). For the X variables the canonical variable is largely determined in this case by class size, Stanford Reading scores, the percent of small group instruction, and the racial composition of the class. Thus a teacher with a relatively small class, with students who score relatively high on the Stanford Reading scale, with primarily white students, and who spend a relatively small percent of their day in small group instruction would score high on the first canonical variable. That same canonical variable based on the Y's would give a large negative weight to the problems of parent relationships, control and time.

DISCUSSION

This study had three purposes. One was to show what differences and similarities exist in perceptions of both frequently occurring and

bothersome problems reported by teachers of small classes, regular size classes, and regular size classes with full time teacher aides. A second purpose was to show what differences and similarities among global problem areas can be inferred from these teachers' perceptions of their work related problems. And, a third purpose was to look at the relationships of teacher and class context variables collected for Project STAR with the five global teacher problem areas and determine which variables have the greatest influence on teachers' perceptions of any of those five global problem areas.

Class Type and Teacher Perceived Problems

It is somewhat surprising, given the extensive review of the literature on teacher problems by Veenman (1984) that time related problems would appear to be the most frequent as well as the most bothersome problems of first grade teachers. It is possible as Bainer (1988) suggests, that a problem area in one study is really a proxy for a problem area in another study. As was suggested earlier in the factor analysis results, a catagory that seems straightforward like control may really be perceived by a teacher as a hindrance to their students' success.

The theme of time runs throughout the literature even though it may not be catagorized as time. Johnston (1989) found in teacher interviews that small class teachers say they are more aware of individual needs and problems and as a consequence must sometimes spend more time planning to keep students busy and on task. The Indiana Prime Time study on class size (Mueller, 1987) reported that teachers in small classes report having more time to spend with each student,

assign more homework, and thus focus more on the time and resources to work with individual students. Bainer (1988) also found time to be a prominent teacher problem and suggested t t it may be due to the expectancy of increased accountability from teachers. The context in which this study takes place requires more than the usual accountability on the part of the participating teachers and this is reflected in the teacher interviews (Johnston, 1988).

There seems to be a more generalized focus on time and how best to use it since the nation is looking more carefully at educational processes and variables like time on task now more than ever before. The curriculum units are more complex and not only are students held accountable for learning certain skills on time, but it is the teachers who are being held accountable for seeing that the students do adhere to these "time-bound" units of instruction. Many states have adopted basic skills programs that are planned by units in specified amounts of time to complete those units. In addition, the teachers are also accountable to supervisors and evaluators who step into their classes and expect them to be at a precise unit in time for their grade level. Perhaps it is not surprising that teachers perceive most of their problems in terms of time, a unit that virtually controls all these new innovations in instruction, curriculum, and evaluation. Teacher preparation programs also focus a lot on time management and have for some time according to Applegate (1980). It is as though learning to use one's time wisely will create more of it or eliminate problems perceived as time related. The fact still remains that no matter what problems observers report teachers to have, teachers only have the

problems the way they do. With the pressure to perform, Bainer (1988) also reports that teachers contend that they have "more" problems today, and "more" problems take up more time. Thus the report of high frequency and degree of bothersomeness of time related problems seems inevitable, especially if teachers are prompted to respond to their perception of time issues as they are on the Teacher Problem Checklist. Other studies may not have listed teacher problems in such as way that they were so attached to the notion of time.

The issue of why small class teachers report significantly different responses to issues of time than do regular class teachers, and why small class teachers and regular with aide class teachers seem to have more similar perceptions of problems with time is yet to be explained in full. Insight can be gained from other studies addressing these and similar issues.

In a summary on the effects of class size on teaching practices Robinson & Whittboles (1986), report that Wright (1977) found that observers reported no differences in teaching practices by class size; however, teachers, themselves, reported that they believed they had made changes in their teaching practices. According to Cruickshank (1980b), a teacher problem is only a problem if the teacher perceives or believes there to be a problem. In exit interviews with teachers in this current study, Johnston (1988) found evidence to conclude that teachers with aides perceived their time and their duties to be different than when they had no assigned full-time aide, and likewise small class teachers report a difference in perception of problems than when they had regular size classes. Thus regular with aide teachers

may be perceiving less total responsibility and accountability for all students, as if they had fewer students or a small class due to the presence of the aide or another responsible adult. It is also possible that regular class teachers feel overwhelmed in the light of the project expectations while working side by side with teachers they may feel were more fortunate by their random assignment of smaller classes or full time aides, a problem of compensatory rivalry.

In summary, this study found that all first grade teachers, regardless of class size or the addition of a full time aide, report that problems related to time are more frequent than other types of problems; and they also report these problems of time to be more bothersome than other types of problems. However, when one looks at the differences in the reported problems by class type, even though all 310 of the teachers in this sample reported similar problems, there are striking differences in the reports of how frequently problems of time occur for small class teachers compared to regular class teachers. Regular class teachers report that problems dealing with time occur much more frequently than small class teachers report problems with time. The same is also true when comparing regular class teachers with regular class teachers with aides. There seem to be more similarities in the perceptions and reporting of teacher problems between small class teachers and regular with aide class teachers. Regular class teachers report the same problems, but report much greater frequency of these problems as well as reporting that these same types of problems are much more bothersome. This study also supports Cruickshank's (1980b) hypothesis that there are five global problem areas. It does

not however **support** his assertion that teachers of all levels in differing **contexts**, for example class size, "differ only slightly in their perceptions of the frequency and severity of the problem" (Cruickshank, 1981, p.402). This study also supports the Bainer (1987) study that found that teachers' perceptions of problems depend on the setting or school location.

Attrition

This study had some attrition problems, since only 310 of the total 351 teachers in the teacher file for the Project actually completed the Teacher Problem Checklist. Inspection of the records for those teachers who did not complete the TPC showed that they were either teachers who taught only a portion of the first grade year and were no longer teaching when the TPC was completed, or they were part of random pattern of teachers who did not complete the TPC. Thus, no patterns could be found concerning the teachers who did not complete the TPC.

Predictors of Teacher Problems

The most puzzling aspect of this study is the small percent of variance accounted for in any one of the five global teacher problem areas when each of the areas was regressed on teacher and classroom context variables believed to be influential or predictive of the type of problems a teacher would report. Exploratory regression analyses here did not identify a set or sets of predictor variables for any one of the five teacher problem areas. Thus, there is little reason to attempt an interpretation of the variables that did stay in the regression as influencial or predictive.

Thus, logically, the canonical correlation analyses can be shown
to indicate patterns of relationships between the five global teacher
problem areas and the set of independent or predictor variables if it
satisfies the assumptions necessary to interpret this type of analysis.
The significant multivariate test results of the canonical correlation
run indicate that the predictor set of variables may have a significant
impact on the global problem areas as a set ʻ ̓ dependent variables.
Not finding any significant canonical correlates for the subpopulation
of small class teachers, or for the subpopulation of regular with aide
teachers, may indicate that there are similar factors operating inside
of these two types of classrooms, that somehow make them different from
regular class teachers or from the entire population of first grade
teachers in this sample. It is likely that this study has not
identified the more important variables that would predict teacher
problems, or that this study has not measured what it presumed to
measure as measures of classroom context variables.

The canonical correlation runs on the entire sample population and
on the regular class teachers only, both resulted in one significant
correlate or combination of the set of problem areas and how they
relate to the set of independent variables - teacher or classroom
context.

To summarize the results for the entire sample population in Table
74, one can conclude from the strength of the standardized canonical
coefficients for both the dependent and independent variables that the
following pattern emerges. If the teacher is white, relatively
inexperienced at grade 1 teaching, and has students who score

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relatively low on the Stanford Reading scale, are mostly minority or black students for this sample, and he or she promotes less than the average number of students promoted in other classes; then that teacher is likely to experience significant problems of control, problems with parent relationships, and yet reportedly gets along well with colleagues, superiors, and students.

To summarize the results for the regular class teacher sub-population (Table 35), the following pattern emerges. If the teacher has a relatively small class, has a good group of reading achievers, spends relatively little time in small group instruction, and has a greater percentage of white students, then that teacher is less likely to experience problems related to parent relationships, control, or time. and more apt to report problems of affiliation with their students, the principal, or other colleagues.

This results of this study suggest that there may be both teacher variables and classroom context variables that deserve a closer and more controlled observation or a better means of measurement if we are to connect teacher and classroom variables to specific teacher problems, like teacher experience, ability level and racial composition of the students, class size, and instructional practices.

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TABLE 1

TOTAL SAMPLE DEGREES EARNED BY FIRST GRADE TEACHERS

Level of Education	Number	%
No degree	0	0
Associate degree	0	0
Bachelor's degree	220	62.7
Masters in Education	51	14.5
MA or MS degree	75	21.4
Masters plus	5	1.4
Total	351	100.0

Note: Attrition rate for teachers not completing the TPC was randomly distributed.

TABLE 2

TOTAL SAMPLE - CAREER LADDER LEVEL FIRST GRADE TEACHERS

Career Ladder Level	Number	%
Non-participant	28	8
Apprenticeship	36	10.3
Probationary	32	9.1
Level 1	233	66.4
Level 2	6	1.7
Level 3	15	4.3
Totals	350	99.7

Non-respondents 1

Note: Attrition rate for teachers not completing the TPC was randomly distributed.

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TABLE 3

TOTAL YEARS OF TEACHING EXPERIENCE REPORTED BY
FIRST GRADE TEACHERS

Years of Experience	Number	%	Cumulative %
1-3	68	19.4	19.4
4-10	104	29.6	49.0
11-20	126	35.9	84.9
21-30	35	10.0	94.9
31-42	18	5.1	100.0

Mean = 11.86   Standard Deviation = 8.93   N = 351

Note: Attrition rate for teachers not completing the TPC was
randomly distributed.

TABLE 4

ACTUAL CLASS SIZES OF FIRST GRADE TEACHERS

Class size	Number	Percent
9	1	.3
12	6	1.8
13	12	3.5
14	21	6.2
15	31	9.1
16	22	6.5
17	28	7.8
18	10	2.9
19	12	3.5
20	22	6.5
21	40	11.8
22	35	10.3
23	38	11.2
24	30	8.8
25	10	2.9
26	12	3.5
27	5	1.5
28	2	.6
29	1	.3
TOTAL	338	100.0

Mean: 19.7

TABLE 5

SOCIOECONOMIC STATUS REPORTED AS
PERCENTAGE OF STUDENTS ON FREE LUNCH PER CLASS

Percent on Free Lunch	Number	%
0	8	2.2
1-20	41	12.3
21-40	102	30.3
41-60	78	23.2
61-80	39	11.5
81-99	34	10.1
100	35	10.4
Total	337	100.0
Mean 49.84	Standard Deviation 28.33	

Note: Attrition rate for teachers not completing the TPC was randomly distributed.

TABLE 6

PERCENT OF STUDENTS REPEATING FIRST GRADE CLASSES

Percent of Repeaters	Number	%
0.0	289	95.4
4.7	1	.3
5.6	1	.3
6.7	2	.6
7.7	1	.3
8.3	3	1.0
10.0	3	1.0
14.3	1	.3
16.7	1	.3
18.2	1	.3
Total	303	100

Mean: .45   Standard Deviation: 2.2

Note: Attrition rate for teachers not completing the TPC was randomly distributed.

TABLE 7

PERCENT OF STUDENTS PROMOTED AT END OF FIRST GRADE/CLASS

Percent Promoted	Number	%
50-70	16	4.7
71-90	122	36.4
91-99	83	24.7
100	116	34.4
Total	337	100

Mean: 90.96   Standard Deviation: 9.87

Note: Attrition rate for teachers not completing the TPC was randomly distributed.

TABLE 8

TOTAL SAMPLE - PERCENT ETHNICITY PER CLASS

Percent white students	Number	%
0	74	22.0
1-25	9	2.6
26-50	11	3.3
51-75	38	11.3
76-99	109	32.3
100	96	28.5
Total	337	100.0

Mean : 66.26   Standard Deviation: 39.7

Note: Attrition rate for teachers not completing the TPC was
randomly distributed.

TABLE 9

GENDER DISTRIBUTION IN FIRST GRADE CLASSES

Percent males	Number	%
0-25	1	.3
26-50	156	46.3
51-75	178	52.8
76-100	2	.6
Total	337	100.0

Mean : 51.87   Standard Deviation: 8.76

Note: Attrition rate for teachers not completing the TPC was
randomly distributed.

TABLE 10

TOTAL SAMPLE - ENROLLMENT PER SCHOOL

Enrollment per school	Number	%
154-496	88	25.1
507-612	89	25.3
619-746	87	24.8
759-1131	87	24.8
Total	351	100.0

Mean : 619.56   Standard Deviation: 170.53

Note: Attrition rate for teachers not completing the TPC was
randomly distributed.

TABLE 11

PERCENT WHOLE CLASS INSTRUCTION / CLASS

Percent whole class instr.	Number	%
4-23	69	19.7
24-34	89	25.4
35-38	100	28.6
39-81	92	26.3
Tota 1	350	100.0

Mean : .34   Standard Deviation: .11

Note: Attrition rate for teachers not completing the TPC was
randomly distributed.

TABLE 12

PERCENT SMALL GROUP INSTRUCTION / CLASS

Percent whole class instr.	Number	%
4-19	86	24.6
20-26	66	18.8
27-34	110	21.5
35-62	88	25.1
Total	350	100.0

Mean : .27   Standard Deviation: .10

Note: Attrition rate for teachers not completing the TPC was randomly distributed.

TABLE 13

TOTAL SAMPLE - AVERAGE DAYS ABSENT PER CLASS

Average Days absent / Class	Number	%
2.89-6.08	87	25.8
6.09-7.45	84	24.9
7.46-9.20	84	25.0
9.23-14.00	82	24.3
Total	337	100.0

Mean: 7.72   Standard Deviation : 2.15

Note: Attrition rate for teachers not completing the TPC was randomly distributed.

TABLE 14

TOTAL SAMPLE - AVERAGE KINDERGARTEN READING SCORES
(Used as a measure of incoming ability)

Average Kindergarten Reading Scores (Stanford Kindergarten)	Number	%
18.13 - 140.88	51	25.9
142.35 - 243.58	85	25.0
243.59 - 328.73	85	25.0
329.95 - 473.22	82	24.1
Total	303	100.0

Mean: 223.43   Standard Deviation: 128.67

Note: Attrition rate for teachers not completing the TPC
was randomly distributed.

TABLE 15

TOTAL SAMPLE - AVERAGE SELF-CONCEPT SCORES (SCAMIN)

Ave Self-concept score/class	Number	%
39.41 - 44.14	86	25.7
44.18 - 45.40	83	24.7
45.42 - 46.73	84	25.1
46.75 - 53.50	82	24.5
Total	335	100.0
Mean: 45.50	Standard Deviation: 2.10	

Note: Attrition rate for teachers not completing the TPC
was randomly distributed.

TABLE 16

TOTAL SAMPLE — PROBLEM STATEMENTS FROM THE TPC HAVING
THE 10 HIGHEST RANKED MEANS FOR FREQUENCY

Item No.& Type	Problem Statement	Fre-quency Mean	Rank	Bother-someness Mean	Rank
20-T	Having enough preparation time	3.67	1	3.94	1
5-T	Having enough free time	3.66	2	3.84	3
35-T	Having enough time to teach & also to diagnose & evaluate learning	3.57	3	3.94	2
40-SS	Getting every student to work up to his/her ability	3.18	4	3.81	4
36-SS	Providing for individual learning differences	3.08	5	3.51	6
54-T	Teaching too many students or large classes	2.99	6	3.49	7
37-C	Getting students to use their leisure time well	2.99	7		
38-SS	Getting students to enjoy learning for its own sake	2.91	8		
23-SS	Getting my students to achieve competence in basic skills such as expressing themselves effectively in both writing and speaking	2.86	9		
50-T	Using time wisely to get both professional & personal things accomplished	2.83	10		

Item labels are those identified by Cruickshank (1980):

SS - student success   C - control   P - parent relationships
 T - time   A - affiliation

TABLE 17

SMALL CLASSES - RANKED ITEM MEANS

PROBLEM STATEMENTS FROM THE TPC HAVING THE 10 HIGHEST MEANS

Item No. & Type	Problem Statement	Bother-someness Mean	Rank	Fre-quency Mean	Rank
35 - T	Having enough time to teach & also to diagnose & evaluate learning	3.93	1	3.47	3
40 - SS	Getting every student to work up to his/her ability	3.93	2	3.11	4
20 - T	Having enough preparation time	3.82	3	3.61	1
5 - T	Having enough free time	3.73	4	3.59	2
36 - SS	Providing for individual learning differences	3.47	5	3.06	5
34 - P	Encouraging parental interest in school matters	3.47	6	2.78	9
60 - C	Teaching self-discipline	3.42	7	2.88	7
45 - C	Maintaining student attention	3.41	8	2.63	18
54 - T	Teaching too many students or large classes	3.36	9	2.75	12
53 - SS	Knowing how to differen-tiate between student learning & psychological problems	3.35	10	2.72	14
50 - T	Using time wisely to get both professional & per-sonal things accomplished	3.25	14	2.92	6
38 - SS	Getting students to enjoy learning for its own sake	3.11	23	2.79	8
21 - SS	Extending learning beyond the classroom	2.94	33	2.78	10

Item labels are those identified by Cruickshank (1980):

SS - student success   C - control   P - parent relationships
 T - time   A - affiliation

54

TABLE 18

REGULAR CLASSES - RANKED ITEM MEANS
PROBLEM STATEMENTS FROM THE IPC HAVING THE 10 HIGHEST MEANS

Item No. & Type	Problem Statement	Bother-someness Mean	Rank	Fre-quency Mean	Rank
20 - T	Having enough preparation time	4.06	1	3.75	1
5 - T	Having enough free time	3.88	2	3.60	2
35 - T	Having enough time to teach & also to diagnose & evaluate learning	3.81	3	3.51	3
40 - SS	Getting every student to work up to his/her ability	3.68	4	3.22	4
54 - T	Teaching too many students or large classes	3.62	5	3.21	5
7 - C	Getting students to behave appropriately	3.60	6	2 78	16
45 - C	Maintaining student attention	3.53	7	2.76	18
34 - P	Encouraging parental interest in school matters	3.52	8	3.06	7
3 - C	Maintaining order, quiet, or control	3.49	9	2.52	35
36 - SS	Providing for individual learning differences	3.49	10	3.18	6
37 - SS	Getting students to use their leisure time well	3.26	14	3.05	8
23 - SS	Getting my students to achieve competence in basic skills such as expressing themselves effectively in writing and speaking	3.19	21	2.93	9
38 - SS	Getting students to enjoy learning for its own sake	3.26	13	2.88	10

Item labels are those identified by Cruickshank (1980):
SS - student success   C - control   P - parent relationships
T - time   A - affiliation

TABLE 19

REGULAR WITH AIDE CLASSES - RANKED ITEM MEANS (FIRST)

PROBLEM STATEMENTS FROM THE TPC HAVING THE 10 HIGHEST MEANS

Item No.& Type	Problem Statement	Bother-someness Mean	Rank	Fre-quency Mean	Rank
35 - T	Having enough time to teach & also to diagnose & evaluate learning	3.89	1	3.55	2
40 - SS	Getting every student to work up to his or her ability	3.82	2	3.14	4
5 - T	Having enough free time	3.78	3	3.61	1
20 - T	Having enough preparation time	3.77	4	3.51	3
34 - P	Encouraging parental interest in school matters	3.55	5	2.96	7
36 - SS	Providing for individual learning differences	3.51	6	2.95	9
54 - T	Teaching too many students or large classes	3.47	7	2.98	6
10 - SS	Understanding and helping the atypical or special child	3.47	8	2.79	14
4 - P	Improving life for my students by correcting conditions both inside & outside school	3.45	9	2.88	11
7 - C	Getting students to behave appropriately	3.41	10	2.63	21
37 - C	Getting students to use their leisure time well	3.32	14	3.01	5
38 - SS	Getting students to enjoy learning for its own sake	3.38	12	2.96	8
23 - SS	Getting my students to achieve competence in basic skills such as expressing themselves effectively in both writing and reading	3.23	20	2.89	10

Item labels are those identified by Cruickshank (1980):

SS - student success   C - control   P - parent relationships
T - time   A - affiliation

TABLE 20

RANKED BOTHERSOMENESS OF ITEMS BY CLASS-SIZE AND ITEM TYPE

Rank	TOTAL SAMPLE	SMALL	REGULAR	REGULAR/AIDE
1	20 - T	35 - T	20 - T	35 - T
2	35 - T	40 - SS	5 - T	40 - SS
3	5 - T	20 - T	35 - T	5 - T
4	40 - SS	5 - T	40 - SS	20 - T
5	34 - P	36 - SS	54 - T	34 - P
6	36 - SS	34 - P	7 - C	36 - SS
7	54 - T	60 - C	45 - C	54 - T
8	7 - C	45 - C	34 - P	10 - SS
9	48 - C	54 - T	3 - C	4 - P
10	22 - C	53 - SS	36 - SS	7 - C

Item labels are those identified by Cruickshank (1980):

SS - student success   C - control   P - parent relationships
 T - time   A - affiliation

5'

TABLE 21

RANKED FREQUENCY OF ITEMS BY CLASS-SIZE AND ITEM TYPE

Rank	TOTAL SAMPLE	SMALL	REGULAR	REGULAR/AIDE
1	20 - T	20 - T	20 - T	5 - T
2	5 - T	5 - T	5 - T	35 - T
3	35 - T	35 - T	35 - T	20 - T
4	40 - SS	40 - SS	40 - SS	40 - SS
5	36 - SS	36 - SS	34 - P	37 - C
6	54 - T	50 - T	36 - SS	54 - T
7	37 - C	60 - C	34 - P	34 - P
8	38 - SS	38 - SS	37 - C	38 - SS
9	23 - SS	34 - P	23 - SS	36 - SS
10	50 - T	21 - SS	38 - SS	23 - SS

Item labels are those identified by Cruickshank (1980):

SS - student success   C - control   P - parent relationships
 T - time   A - affiliation

TABLE 22

MEAN BOTHERSOMENESS SCORES BY CLASS SIZE USING
CRUICKSHANK'S 5 TEACHER PROBLEM AREAS

Problem Areas	SMALL	REGULAR	REGULAR/AIDE
TIME	3.17	3.22	3.24
CONTROL	3.15	3.19	3.14
PARENT RELATIONSHIPS	2.89	2.87	3.14
STUDENT SUCCESS	2.87	2.82	2.88
AFFILIATION	2.27	2.00	2.09

Note: No significant differences exist.

TABLE 23

MEAN BOTHERSOME RESPONSES BY SCHOOL TYPE OR LOCATION
USING CRUICKSHANK'S FIVE PROBLEM AREAS

Problem Areas	INNERCITY	SURBURBAN	RURAL	URBAN
TIME	3.00*	3.09	3.35*	3.22 (a)
CONTROL	2.83*	3.15	3.22	3.46*(b)
PARENT RELATIONSHIPS	2.84	2.61*	3.03*	3.00 (c)
STUDENT SUCCESS	2.52*	2.70	3.02*	2.98*(d)
AFFILIATION	1.78*	2.01	2.25*	2.41*(e)

a) $p < .05$ innercity teachers report problems concerning time to
   be less frequent than rural teachers
b) $p < .001$ innercity teachers report problems concerning control
   to be less frequent than urban teachers
c) $p < .05$ surburban teachers report problems concerning parent
   relationships to be less frequent than rural teachers
d) $p < .001$ innercity teachers report problems concerning student
   success to be less frequent than both rural & urban
   teachers
e) $p < .01$ innercity teachers report problems concerning
   affiliation to be less frequent than both rural and
   urban teachers

NOTE: There are no significant interactions between class type and
      school type on any of the above scales.

TABLE 24

MEAN FREQUENCIES BY CLASS TYPE USING CRUICKSHANK'S
5 TEACHER PROBLEM AREAS

Problem Areas	SMALL	REGULAR	REGULAR/AIDE
TIME	2.84	2.95	2.91
CONTROL	2.53	2.68	2.59
PARENT RELATIONSHIPS	2.42	2.53	2.56
STUDENT SUCCESS	2.52	2.62	2.54
AFFILIATION	1.87	1.79	1.83

(Note: no areas were significantly different by class)

TABLE 25

MEAN FREQUENCIES BY SCHOOL TYPE OR LOCATION USING
CRUICKSHANK'S 5 TEACHER PROBLEM AREAS

Problem Areas	INNERCITY	SURBURBAN	RURAL	URBAN
TIME	2.87	2.86	2.92	2.93
CONTROL	2.58	2.65	2.55	2.74
PARENT RELATION-SHIPS	2.67 *	2.30 *	2.50	2.54
STUDENT SUCCESS	2.45	2.51	2.61	2.61
AFFILIATION	1.74	1.83	1.86	1.89

* $p < .01$ inner city significantly different from surburban
teachers on reporting frequency of parent-
relationship problems

NOTE: There were NO significant 2 way interactions found for
class type by school type or location.

TABLE 26

MEAN FREQUENCIES BY CLASS SIZE USING MSU FACTOR SCORES BY CRUICKSHANK'S 5 TEACHER PROBLEM AREAS

Problem Areas	SMALL	REGULAR	REGULAR/AIDE
TIME	-.031	.013	-.086
CONTROL	-.156	.110	-.044
PARENT RELATIONSHIPS	-.187 *	.064	.139 *
STUDENT SUCCESS	-.085	.069	-.024
AFFILIATION	.101	-.128	-.114

* p < .05 small class teachers report problems with parent
    relationships to be significantly less frequent
    than do regular with aide teachers

TABLE 27

MEAN FREQUENCIES BY SCHOOL TYPE OR LOCATION USING MSU FACTOR
SCORES BY CRUICKSHANK'S 5 TEACHER PROBLEM AREAS

Problem Areas	INNERCITY	SURBURBAN	RURAL	URBAN	
TIME	.180	-.177	-.066	-.057	
CONTROL	.012	.155	-.188* -	.231*	(a)
PARENT RELATION-SHIPS	.234**	-.337**	-.012	.136	(b)
STUDENT SUCCESS	-.160	-.096	.0971	-.085	
AFFILIATION	-.222	.014	.005	.003	

a) p < .05 rural teachers significantly different from urban
    teachers on reporting frequency of control problem.

b) p < .01 inner city significantly different from surburban
    teachers on reporting frequency of p   -
    relationship problems

NOTE: There were NO significant 2 way interactions found for
    class type by school type or location.

TABLE 28

ROTATED VARIMAX FACTOR LOADINGS FOR THE FINAL
ANALYSIS OF TPC FREQUENCY ITEMS

	Factor 1: Student Success	
Item		Factor Loading
38	Getting students to enjoy learning for its own sake	.65
40	Getting every student to work up to his or her ability	.60
25	Promoting student self-evaluation	.54
42	Creating interest in the topic being taught	.54
37	Getting students to use their leisure time well	.54
36	Providing for individual learning differences	.53
23	Getting my students to achieve competence in basic skills such as expressing themselves effectively in both writing and speaking	.52
53	Knowing how to differentiate between student learning and psychological problems	.45
43	Holding worthwhile conferences with parents	.43
6	Getting my students to feel successful in school	.42
8	Gaining professional knowledge, skills, and attitudes and using them effectively	.42
2	Getting students to participate in class	.42
24	Completing the work I have planned	.40
14	Planning instruction in different ways and for different purposes	.38
58	Assisting parents having difficulty with their children	.38

	Factor 2: Affiliation	
Item		Factor Loading
46	Establishing and maintaining rapport with administrators and supervisors	.82
41	Being professional in my relationships with staff	.75
31	Establishing and maintaining rapport with students and staff	.72
26	Getting the understanding and sustenance of teachers and administrators so that I feel efficient and professional	.61
16	Developing and maintaining student rapport, affection, and respect	.54
1	Liking my students	.37

TABLE 28. cont...

                Factor 3: Parent Relationships
Item   Factor Loading

---

19. Im......conditions so that students
    can .....at home.   .69
 4 Impr.....life for my students by correcting
    conditions both inside & outside schools   .64
13 Keeping my students away from things and people
    which may be a bad influence   .59
12 Helping students who have personal problems   .45

                Factor 4: Control
Item   Factor Loading

---

 7 Getting students to behave appropriately   .74
 3 Maintaining order, quiet, and control   .72
52 Removing students who are sources of
    frustration   .33

                Factor 5: Time
Item   Factor Loading

---

 5 Having enough free time   .73
20 Having enough preparation time   .68
54 Teaching too many students or large classes   .37

Note: First, second, third, fourth, & fifth factors had
      eigenvalues of 8.41, 2.38, 1.76, 1.38, and 1.06.

Item labels are those identified by Cruickshank (1980):

SS - student success   C - control   P - parent relationships
T - time   A - affiliation

TABLE 29

TPC ITEMS ELIMINATED FOR THE FINAL FACTOR ANALYSIS DUE TO THEIR COMPLEX LOADINGS ON TWO OR MORE FACTORS

Factor 1: Student Success

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10   U███████ ████ helping the atypical or special child
       █████

17   Ass███████ students' learning
21   Extending learning beyond the classroom
27   Helping students adjust socially or emotionally
29   Getting my students to value school marks and grades
32   Helping students to improve academically
44   Having students present and on time for all classes,
       rehearsals, games, etc.
47   Learning to use alternative methods of instruction
51   Guiding my students to do the things which will help them
       succeed in school
55   Visualizing my students' interests in learning and
       improving their achievement
57   Overcoming a student's feelings of upset or frustration
       with himself
59   Overcoming student apathy or outright dislike

Factor 2: Affiliation

---

11   Getting cooperation and support from the administration
56   Developing confidence in my colleagues

Factor 3: Parent Relationships

---

28   Establishing good relationships with parents and
       understanding home conditions
34   Encouraging parental interest in school matters
49   Understanding the conditions of the homes and community in
       which my students live

Factor 4: Control

---

15   Responding appropriately to improper behavior such as
       obscenities
18   Soliciting appropriate student behavior
22   Controlling aggressive student behavior
30   Enforcing considerate treatment of property
33   Enforcing social mores and folkways such as honesty and
       respect for teachers
45   Maintaining student attention
48   Eliminating inappropriate student behavior
60   Teaching self-discipline

Factor 5: Time

---

9   Controlling and using my professional time in the most
       functional efficient way
35   Having enough time to teach and also to diagnose and
       evaluate learning
39   Avoiding duties inappropriate to my professional role
50   Using time wisely to get both professional and personal
       things accomplished

TABLE 30

MEANS, STANDARD DEVIATIONS AND CORRELATIONS FOR VARIABLES IN THE MULTIPLE REGRESSION RUNS REGRESSING EACH OF THE 5 TEACH... AREAS ON TEACHER AND CLASS CONTEXT VARIABLES

Variable	1	2	3	4	5	6
1 Teacher race	1.00					
2 Tot. teaching experience	.13	1.00				
3 Experience at grade	.23		1.00			
4 Ave. First Reading Ach.	-.29		.10	1.00		
5 Class % SES (free lunch)					1.00	
6 School enrollment						1.00
7 Class size	-.05		.02	-.21		
8 Ave class self-concept	.26		.16	-.07		
9 Ave class days absent	.02		-.06	-.13		
10 Ave class whole class inst.	.01		.12	.01		
11 Ave class % repeaters of	-.09		-.04	.04		
12 Ave class % promoted	-.03		.16	.48		
13 Ave class % white (race)	-.52		-.02	.61		
14 TPC Time	-.11		.11	-.05		
15 TPC Control	-.04		-.11	-.24		
16 TPC parent relationships	-.07		-.13	-.19		
17 TPC student success	-.09		-.04	-.02		
18 TPC affiliation	-.11		.05	.19		

Variables	7	8	9	10	11	12
1 Teacher race	-.05	.26	.02	.01	-.09	-.03
2 Tot. teaching experience	.13					
3 Experience at grade	.23		.03	.12	.07	.16
4 Ave. First Reading Ach.	-.21	-.07	-.13	.01	.04	.48
5 Class % SES (free lunch)						
6 School enrollment						
7 Class size	1.00	-.15	.04	-.10	.10	-.22
8 Ave class self-concept						
9 Ave class days absent	.02		-.06	-.13		
10 Ave class whole class inst.	.01		.12	.01		
11 Ave class % repeaters of	-.09		-.04	.04		
12 Ave class % promoted	-.03		.16	.48		
13 Ave class % white (race)	-.52		-.02	.61		
14 TPC Time	-.11		.11	-.05		
15 TPC Control	-.04		-.11	-.24		
16 TPC parent relationships	-.07		-.13	-.19		
17 TPC student success	-.09		-.04	-.02		
18 TPC affiliation	-.11		.05	.19		

TABLE 30

ENTIRE SAMPLE — CORRELATIONS. MEANS. AND STANDARD DEVIATIONS
USED IN THE REGRESSION ANALYSES

	COUNT	TRACE	EXTOT	EXGRD	AVGREADK	PCTCSES	ENROLL	AVGSELF
COUNT	1.000	-.054	-.056	.014	-.289	.068	.025	-.027
TRACE	-.054	1.000	.216	.229	-.180	.460	.155	.038
EXTOT	-.056	.216	1.000	.826	.065	.045	.072	-.136
EXGRD	.014	.229	.826	1.000	.050	-.029	.081	-.024
AVGREADK	-.289	-.180	.065	.050	1.000	-.195	.031	.054
PCTCSES	.068	.460	.045	-.029	-.195	1.000	.152	.014
ENROLL	.025	.155	.072	.081	.031	.152	1.000	-.024
AVGSELF	-.027	.038	-.136	-.024	.054	.014	-.024	1.000
AVGSEFF	-.106	.281	.013	.007	.038	.333	.117	.414
AVGFAVO	.081	-.150	-.102	-.008	.064	.015	.090	.260
AVDABS	.049	.013	.025	.019	-.117	.092	.136	-.087
WHLPCT	-.102	.006	.139	.127	-.027	.050	.098	-.102
SMLPCT	.033	.053	.040	.027	-.019	.096	.027	.032
PCTRET86	.099	-.085	.011	.068	-.029	-.114	-.043	-.020
PCTPROM	-.221	-.034	.148	.150	.278	-.301	.108	-.005
PCTWHT	-.040	-.526	-.056	-.023	.174	-.716	-.343	.007
STUSUCC	.042	-.079	-.024	-.041	.046	-.005	-.011	-.105
AFFIL	-.114	-.110	.081	.050	.160	-.161	.054	.030
PARENT	.160	-.066	-.091	-.125	-.154	.065	.002	-.006
CONTROL	.129	-.037	-.116	-.103	-.040	.205	.079	.068
TIME	.069	-.106	.079	.100	.075	.049	.101	-.013

	AVGSEFF	AVGFAVO	AVDABS	WHLPCT	SMLPCT	PCTRET86	PCTPROM	PCTWHT
COUNT	-.106	.081	.049	-.102	.033	.099	-.221	-.040
TRACE	.281	-.150	.013	.006	.053	-.085	-.034	-.526
EXTOT	.013	-.102	.025	.139	.040	.011	.148	-.056
EXGRD	.007	-.008	.019	.127	.027	.068	.150	-.023
AVGREADK	.038	.064	-.117	-.027	-.019	-.029	.278	.174
PCTCSES	.333	.015	.092	.050	.096	-.114	-.301	-.716
ENROLL	.117	.090	.136	.098	.027	-.043	.108	-.343
AVGSELF	.414	.260	-.087	-.102	.032	-.020	-.005	.007
AVGSEFF	1.000	-.022	-.023	.070	.087	-.126	-.039	-.380
AVGFAVO	-.022	1.000	.041	.006	-.012	-.003	-.067	.021
AVDABS	-.023	.041	1.000	-.062	.066	-.089	-.140	.002
WHLPCT	.070	.006	-.062	1.000	-.502	-.101	.019	-.149
SMLPCT	.087	-.012	.066	-.502	1.000	-.061	-.051	.007
PCTRET86	-.126	-.003	-.089	-.101	-.061	1.000	-.002	.082
PCTPROM	-.039	-.067	-.140	.019	-.051	-.002	1.000	.227
PCTWHT	-.380	.021	.002	-.149	.007	.082	.227	1.000
STUSUCC	-.104	-.068	.055	-.146	.031	-.017	-.033	.056
AFFIL	-.052	.102	-.006	-.035	-.010	.065	.168	.126
PARENT	-.011	-.098	-.090	.001	.037	-.067	-.156	-.136
CONTROL	.046	.187	-.011	-.005	.012	-.054	-.220	-.184
TIME	-.098	-.097	.005	-.082	.115	.079	-.060	-.060

TABLE 30 — ENTIRE SAMPLE CONT.....

	STUSUCC	AFFIL	PARENT	CONTROL	TIME
COUNT	.042	-.114	.160	.129	.069
TRACE	-.079	-.110	-.066	-.037	-.106
EXTOT	-.024	.081	-.091	-.116	.079
EXGRD	-.041	.050	-.125	-.103	.100
AVGREADK	.046	.160	-.154	-.040	.075
PCTCSES	-.005	-.161	.065	.205	.049
ENROLL	-.011	.054	.002	.079	.101
AVGSELF	-.105	.030	-.006	.068	-.013
AVGSEFF	-.104	-.052	-.011	.046	-.098
AVGFAVO	-.068	.102	-.098	.187	-.097
AVDABS	.055	-.006	-.090	-.011	.005
WHLPCT	-.146	-.035	.001	-.005	-.082
SMLPCT	.031	-.010	.037	.012	.115
PCTRET86	-.017	.065	-.067	-.054	.079
PCTPROM	-.033	.168	-.156	-.220	-.060
PCTWHT	.056	.126	-.136	-.184	-.060
STUSUCC	1.000	.102	.101	.126	.098
AFFIL	.102	1.000	-.062	.075	.040
PARENT	.101	-.062	1.000	.013	.095
CONTROL	.126	.075	.013	1.000	.008
TIME	.098	.040	.095	.008	1.000

VARIABLE	MEAN	STD DEV	LABEL
COUNT	19.554	4.098	CLASS SIZE
TRACE	.136	.344	TEACHERS RACE
EXTOT	11.645	8.462	TOTAL YRS TEACHING EXPERIENCE
EXGRD	7.909	7.867	TEACHERS EXPERIENCE AT GRADE 1
AVGREADK	251.132	108.451	AVERAGE K-READING ACHIEVEMENT
PCTCSES	48.102	28.443	PERCENT OF CLASS ON FREE LUNCH
ENROLL	614.826	169.703	SCHOOL ENROLLMENT
AVGSELF	.006	.235	AVERAGE SELF-CONCEPT FACTOR SCORE
AVGSEFF	.011	.294	AVERAGE SELF-EFFICACY FACTOR SCORE
AVGFAVO	.003	.292	AVERAGE FAILURE-AVOIDANCE FACTOR SCORE
AVDABS	7.649	2.164	AVERAGE DAYS ABSENT
WHLPCT	.334	.109	PERCENT WHOLE GROUP INSTRUCTION PER DAY
SMLPCT	.270	.103	PERCENT SMALL GROUP INSTRUCTION PER DAY
PCTRET96	.513	2.403	PERCENT RETAINED IN 86 (REPEATING FIRST GRADE)
PCTPROM	90.946	9.604	PERCENT PROMOTED IN 87 (PROMOTED TO SECOND GRADE)
PCTWHT	70.007	37.815	PERCENT WHITE
STUSUCC	.012	.875	STUDENT SUCCESS PROBLEMS FACTOR SCORE
AFFIL	-.030	.860	AFFILIATION PROBLEMS FACTOR SCORE
PARENT	-.022	.855	PARENT PROBLEMS FACTOR SCORE
CONTROL	-.011	.863	CONTROL PROBLEMS FACTOR SCORE
TIME	-.039	.849	TIME RELATED PROBLEMS FACTOR SCORE

N OF CASES = 242

TABLE 31

SMALL CLASSES - CORRELATIONS, MEANS, AND STANDARD DEVIATIONS USED IN THE REGRESSION ANALYSES

	COUNT	TRACE	EXTOT	EXGRD	AVGREADK	PCTCSES	ENROLL	AVGSELF
COUNT	1.000	-.134	.071	.115	.005	-.134	-.033	-.134
TRACE	-.134	1.000	.197	.144	.033	.632	.290	.059
EXTOT	.071	.197	1.000	.778	-.009	.068	.109	-.252
EXGRD	.115	.144	.778	1.000	-.096	-.087	.144	-.133
AVGREADK	.005	.033	-.009	-.096	1.000	.048	.299	-.054
PCTCSES	-.134	.632	.068	-.087	.048	1.000	.083	.023
ENROLL	-.033	.290	.109	.144	.299	.083	1.000	-.140
AVGSELF	-.134	.059	-.252	-.133	-.054	.023	-.140	1.000
AVGSEFF	-.090	.298	-.128	-.131	.070	.408	.065	.386
AVGFAVO	-.043	-.073	-.037	.052	.165	.013	.062	.398
AVDABS	.176	.122	.130	.141	-.219	.034	.045	-.061
WHLPCT	-.152	.040	.040	.134	-.013	.004	.165	.020
SMLPCT	.156	-.034	.012	.047	-.069	.034	-.040	-.085
PCTRET86	.102	-.075	-.075	.008	-.011	-.048	.157	-.029
PCTPROM	-.125	-.059	-.095	-.093	.123	-.296	.168	-.029
PCTWHT	.090	-.661	-.187	-.033	-.015	-.735	-.253	-.003
STUSUCC	-.015	.094	.065	.027	.089	.160	.104	-.153
AFFIL	-.060	.051	.049	.116	.110	-.087	.136	.030
PARENT	-.082	-.133	.100	.045	-.086	-.112	-.010	.050
CONTROL	-.007	.100	-.127	-.122	.234	.068	.136	.079
TIME	.095	-.022	.212	.245	.081	-.031	.150	.088

	AVGSEFF	AVGFAVO	AVDABS	WHLPCT	SMLPCT	PCTRET86	PCTPROM	PCTWHT
COUNT	-.090	-.043	.176	-.152	.156	.102	-.125	.090
TRACE	.298	-.073	.122	.040	-.034	-.075	-.059	-.661
EXTOT	-.128	-.037	.130	.040	.012	-.075	-.095	-.187
EXGRD	-.131	.052	.141	.134	.047	.008	-.093	-.033
AVGREADK	.070	.165	-.219	-.013	-.069	-.011	.123	-.015
PCTCSES	.408	.013	.034	.004	.034	-.048	-.296	-.735
ENROLL	.065	.062	.045	.165	-.040	.157	.168	-.253
AVGSELF	.386	.398	-.061	.020	-.085	-.029	-.029	-.003
AVGSEFF	1.000	.027	-.145	.088	.017	-.112	-.097	-.383
AVGFAVO	.027	1.000	-.007	.121	-.125	.049	-.063	-.013
AVDABS	-.145	-.007	1.000	.003	.086	-.217	-.224	.070
WHLPCT	.088	.121	.003	1.000	-.469	.106	.015	-.072
SMLPCT	.017	-.125	.086	-.469	1.000	-.028	-.061	.061
PCTRET86	-.112	.049	-.217	.106	-.028	1.000	-.043	-.042
PCTPROM	-.097	.063	-.224	.015	-.061	-.043	1.000	.120
PCTWHT	-.383	.013	.070	-.072	.061	-.042	.120	1.000
STUSUCC	-.052	-.110	.018	-.222	.239	-.136	-.057	.002
AFFIL	-.139	.027	-.105	-.097	.139	.136	.213	-.003
PARENT	.024	-.152	-.073	.021	-.141	-.123	.080	.015
CONTROL	.227	.047	-.109	.028	-.119	.083	-.025	-.158
TIME	.000	-.130	-.128	-.009	.112	.019	.007	-.031

TABLE 32

REGULAR CLASSES – CORRELATIONS, MEANS, AND STANDARD DEVIATIONS
USED IN THE REGRESSION ANALYSES

	COUNT	TRACE	EXTOT	EXGRD	AVGREADK	PCTCSES	ENROLL	AVGSELF
COUNT	1.000	-.263	-.196	-.184	-.014	-.012	-.029	-.001
TRACE	-.263	1.000	.042	.089	-.395	.215	.045	.094
EXTOT	-.196	.042	1.000	.844	.156	-.061	-.058	-.049
EXGRD	-.184	.089	.844	1.000	.179	-.114	-.043	-.002
AVGREADK	-.014	-.395	.156	.179	1.000	-.280	-.159	.091
PCTCSES	-.012	.215	-.061	-.114	-.280	1.000	.147	-.020
ENROLL	-.029	.045	-.058	-.043	-.159	.147	1.000	.003
AVGSELF	-.001	.093	-.049	-.002	.091	-.020	.003	1.000
AVGSEFF	-.228	.373	.185	.150	-.073	.289	.046	.425
AVGFAVO	.193	-.342	-.141	-.055	.176	-.136	.184	.240
AVDABS	.043	-.160	-.076	-.041	-.069	.086	.175	-.102
WHLPCT	-.014	.006	.160	.064	-.096	.171	.039	-.237
SMLPCT	.011	-.074	.137	.107	.004	.080	.099	.092
PCTRET86	.162	-.109	.005	.015	.031	-.112	-.174	-.056
PCTPROM	-.145	-.075	.249	.236	.269	-.337	.189	.102
PCTWHT	-.010	-.405	.146	.125	.316	-.724	-.276	-.013
STUSUCC	.159	-.154	.047	.149	.161	.073	.122	-.014
AFFIL	.038	-.156	.167	.071	.176	-.245	.003	-.023
PARENT	.246	-.022	-.206	-.209	-.244	.133	.042	-.040
CONTROL	.082	-.064	-.051	.006	-.149	.333	.041	-.025
TIME	.414	-.170	.021	.026	.008	.100	-.067	-.047

	AVGSEFF	AVGFAVO	AVDABS	WHLPCT	SMLPCT	PCTRET86	PCTPROM	PCTWHT
COUNT	-.228	.193	.043	-.014	.011	.162	-.145	-.010
TRACE	.373	-.342	-.160	.006	.074	-.109	-.075	-.405
EXTOT	.185	-.141	-.076	.160	.137	.005	.249	.146
EXGRD	.150	-.055	-.041	.064	.107	.015	.236	.125
AVGREADK	-.073	.176	-.069	-.096	.004	.031	.269	.316
PCTCSES	.289	-.136	.086	.171	.080	-.112	-.337	-.724
ENROLL	.046	.184	.179	.038	.099	-.174	.189	-.276
AVGSELF	.425	.240	-.102	-.237	.092	-.056	.102	-.013
AVGSEFF	1.000	-.117	-.025	.113	.032	-.145	-.003	-.378
AVGFAVO	-.117	1.000	.013	-.136	.087	-.001	.092	.137
AVDABS	-.025	.013	1.000	-.130	.079	-.042	-.030	.093
WHLPCT	.113	-.136	-.130	1.000	-.492	-.111	-.176	-.259
SMLPCT	.032	.087	.079	-.492	1.000	-.139	.048	.075
PCTRET86	-.145	-.001	-.042	-.111	-.139	1.000	-.063	.160
PCTPROM	-.003	.092	-.030	-.176	.048	-.063	1.000	.351
PCTWHT	-.378	.137	.093	-.259	.075	.160	.351	1.000
STUSUCC	-.024	.029	.123	-.142	-.013	.022	.072	-.064
AFFIL	-.??	.269	.100	.007	-.154	.079	.105	.240
PARENT		-.037	-.129	.045	.137	-.105	-.151	-.287
CONTROL	-.??	.244	-.010	.078	.038	.008	-.296	-.282
TIME	-.201	-.034	.071	-.084	.247	.106	-.116	-.040

TABLE II – REGULAR CLASSES CONT.....

	STUSUCC	AFFIL	PARENT	CONTROL	TIME
COUNT	.159	.038	.246	.082	.414
TRACE	-.154	-.156	-.022	-.064	-.170
EXTOT	.047	.167	-.236	-.051	.021
EXGRD	.149	.071	-.209	.006	.026
AVGREADK	.161	.176	-.244	-.149	.008
PCTCSES	.073	-.245	.133	.333	.100
ENROLL	.122	.003	.042	.041	-.067
AVGSELF	-.014	-.023	-.040	-.025	-.047
AVGSEFF	-.024	-.000	-.052	.028	-.201
AVGFAVO	.029	.269	-.037	.244	-.034
AVDABS	.123	.100	-.129	-.010	.071
WHLPCT	-.142	.007	.045	.078	-.084
SMLPCT	-.013	-.154	.137	.038	.247
PCTRET86	.022	.079	-.105	.008	.106
PCTPROM	.072	.105	-.151	-.296	-.116
PCTWHT	-.064	.240	-.287	-.282	-.040
STUSUCC	1.000	-.010	.038	.233	.204
AFFIL	-.010	1.000	-.267	-.068	-.019
PARENT	.038	-.267	1.000	.023	.245
CONTROL	.233	-.068	.023	1.000	.068
TIME	.204	-.019	.245	.068	1.000

VARIABLE	MEAN	STD DEV	LABEL
COUNT	21.962	2.114	CLASS SIZE
TRACE	.125	.333	TEACHERS RACE
EXTOT	9.862	8.589	TOTAL YRS TEACHING EXPERIENCE
EXGRD	6.662	7.461	TEACHERS EXPERIENCE AT GRADE 1
AVGREADK	223.484	101.999	AVERAGE K-READING ACHIEVEMENT
PCTCSES	50.840	27.261	PERCENT OF CLASS ON FREE LUNCH
ENROLL	624.250	173.991	SCHOOL ENROLLMENT
AVGSELF	.017	.221	AVERAGE SELF-CONCEPT FACTOR SCORE
AVGSEFF	.018	.297	AVERAGE SELF-EFFICACY FACTOR SCORE
AVGFAVO	.012	.333	AVERAGE FAILURE-AVOIDANCE FACTOR SCORE
AVDABS	7.606	2.173	AVERAGE DAYS ABSENT
WHLPCT	.32.	.118	PERCENT WHOLE GROUP INSTRUCTION PER DAY
SMLPCT	.270	.102	PERCENT SMALL GROUP INSTRUCTION PER DAY
PCTRET86	.791	2.759	PERCENT RETAINED IN 86 (REPEATING FIRST GRADE)
PCTPROM	88.302	9.413	PERCENT PROMOTED IN 87 (PROMOTED TO SECOND GRADE)
PCTWHT	64.586	40.000	PERCENT WHITE
STUSUCC	.110	.893	STUDENT SUCCESS PROBLEMS FACTOR SCORE
AFFIL	-.131	.825	AFFILIATION PROBLEMS FACTOR SCORE
PARENT	.123	.881	PARENT PROBLEMS FACTOR SCORE
CONTROL	.028	.923	CONTROL PROBLEMS FACTOR SCORE
TIME	.071	.860	TIME RELATED PROBLEMS FACTOR SCORE

N OF CASES = 80

TABLE 33

REGULAR WITH AIDE CLASSES - CORRELATIONS. MEANS, AND STANDARD DEVIATIONS USED IN THE REGRESSION ANALYSES

	COUNT	TRACE	EXTOT	EXGRD	AVGREADK	FCTCSES	ENROLL	AVGSELF
COUNT	1.000	.173	.018	.028	-.180	.070	-.048	-.019
TRACE	.173	1.000	.388	.390	-.253	.517	.113	-.087
EXTOT	.018	.388	1.000	.861	.020	.096	.195	-.091
EXGRD	.028	.390	.861	1.000	.146	.030	.114	.068
AVGREADK	-.180	-.253	.020	.146	1.000	-.287	.017	.301
FCTCSES	.070	.517	.096	.030	-.287	1.000	.208	-.072
ENROLL	-.048	.113	.195	.114	.017	.208	1.000	.059
AVGSELF	-.019	-.087	-.091	.068	.301	-.072	.059	1.000
AVGSEFF	.004	.198	.018	.042	.113	.281	.286	.417
AVGFAVO	.130	.002	-.133	-.040	-.155	.232	-.070	.027
AVDABS	-.117	.084	-.021	-.070	-.038	.212	.226	-.104
WHLPCT	-.076	-.062	.241	.187	-.051	.043	.094	-.100
SMLPCT	.205	.262	-.030	-.048	-.063	.208	.039	.166
PCTRET86	-.036	-.073	.128	.196	-.042	-.205	-.046	.007
PCTPROM	-.242	.016	.254	.293	.347	-.266	-.016	-.036
PCTWHT	-.063	-.550	-.179	-.143	.207	-.729	-.450	.107
STUSUCC	-.064	-.141	-.123	-.231	-.079	-.182	-.244	-.177
AFFIL	.058	-.284	.008	-.051	.112	-.129	.009	.072
PARENT	.095	-.017	-.103	-.176	-.057	.149	-.017	.043
CONTROL	-.009	-.154	-.217	-.244	-.055	.182	.049	.145
TIME	-.099	-.124	.002	.067	.153	.076	.227	-.114

	AVGSEFF	AVGFAVO	AVDABS	WHLPCT	SMLPCT	PCTRET86	PCTPROM	PCTWHT
COUNT	.004	.130	-.117	-.076	.205	-.036	-.242	-.063
TRACE	.198	.002	.084	-.062	.262	-.073	.016	-.550
EXTOT	.018	-.133	-.021	.241	-.030	.128	.254	-.179
EXGRD	.042	-.040	-.070	.187	-.048	.196	.293	-.143
AVGREADK	.113	-.155	-.038	-.051	-.063	-.042	.347	.207
FCTCSES	.281	.232	.212	.043	.208	-.205	-.266	-.729
ENROLL	.286	-.070	.226	.094	.039	-.046	-.016	-.450
AVGSELF	.417	.027	-.104	-.100	.166	.007	-.036	.107
AVGSEFF	1.000	.056	.230	.054	.273	-.144	.002	-.346
AVGFAVO	.056	1.000	.139	.056	.031	-.070	-.282	-.100
AVDABS	.230	.139	1.000	-.117	.102	-.057	-.204	-.238
WHLPCT	.054	.056	-.117	1.000	-.569	-.236	.155	-.139
SMLPCT	.273	.031	.102	-.569	1.000	-.003	-.138	-.146
PCTRET86	-.144	-.070	-.057	-.236	-.003	1.000	.153	.113
PCTPROM	.002	-.282	-.204	.155	-.138	.153	1.000	.209
PCTWHT	-.346	-.100	-.238	-.139	-.1-	.113	.209	1.000
STUSUCC	-.330	-.225	.009	-.042	-.134	-.008	-.009	.218
AFFIL	-.018	-.053	-.045	-.080	-.007	.020	.119	.163
PARENT	.012	-.088	-.016	.015	.066	-.023	-.331	-.085
CONTROL	-.134	.248	.044	-.107	.148	-.265	-.286	-.115
TIME	-.120	-.147	.059	-.110	-.027	.089	-.047	-.085

TABLE 33

REGULAR WITH AIDE CLASSES – CORRELATIONS. MEANS. AND STANDARD DEVIATIONS USED IN THE REGRESSION ANALYSES

	COUNT	TRACE	EXTOT	EXGRD	AVGREADK	PCTCSES	ENROLL	AVGSELF
COUNT	1.000	.173	.018	.028	-.180	.070	-.048	-.019
TRACE	.173	1.000	.388	.390	-.253	.517	.113	-.087
EXTOT	.018	.388	1.000	.861	.020	.096	.195	-.091
EXGRD	.028	.390	.861	1.000	.146	.030	.114	.068
AVGREADK	-.180	-.253	.020	.146	1.000	-.287	.017	.301
PCTCSES	.070	.517	.096	.030	-.287	1.000	.208	-.072
ENROLL	-.048	.113	.195	.114	.017	.208	1.000	.059
AVGSELF	-.019	-.087	-.091	.068	.301	-.072	.059	1.000
AVGSEFF	.004	.198	.018	.042	.113	.281	.286	.417
AVGFAVO	.130	.002	-.133	-.040	-.155	.232	-.070	.027
AVDABS	-.117	.084	-.021	-.070	-.038	.212	.226	-.104
WHLPCT	-.076	-.062	.241	.187	-.051	.043	.094	-.100
SMLPCT	.205	.262	-.030	-.048	-.063	.208	.039	.166
PCTRET86	-.036	-.073	.128	.196	-.042	-.205	-.046	.007
PCTPROM	-.242	.016	.254	.293	.347	-.266	-.016	-.036
PCTWHT	-.063	-.550	-.179	-.143	.207	-.729	-.450	.107
STUSUCC	-.064	-.141	-.123	-.231	-.079	-.182	-.244	-.177
AFFIL	.058	-.284	.008	-.051	.112	-.129	.009	.072
PARENT	.095	-.017	-.103	-.176	-.057	.149	-.017	.043
CONTROL	-.009	-.154	-.217	-.244	-.055	.182	.049	.145
TIME	-.099	-.124	.002	.067	.153	.076	.227	-.114

	AVGSEFF	AVGFAVO	AVDABS	WHLPCT	SMLPCT	PCTRET86	PCTPROM	PCTWHT
COUNT	.004	.130	-.117	-.076	.205	-.036	-.242	-.063
TRACE	.198	.002	.084	-.062	.262	-.073	.016	-.550
EXTOT	.018	-.133	-.021	.241	-.030	.128	.254	-.179
EXGRD	.042	-.040	-.070	.187	-.048	.196	.293	-.143
AVGREADK	.113	-.155	-.038	-.051	-.063	-.042	.347	.207
PCTCSES	.281	.232	.212	.043	.208	-.205	-.266	-.729
ENROLL	.286	-.070	.226	.094	.039	-.046	-.016	-.450
AVGSELF	.417	.027	-.104	-.100	.166	.007	-.036	.107
AVGSEFF	1.000	.056	.230	.054	.273	-.144	.002	-.346
AVGFAVO	.056	1.000	.139	.056	.031	-.070	-.282	-.100
AVDABS	.230	.139	1.000	-.117	.102	-.057	-.204	-.238
WHLPCT	.054	.056	-.117	1.000	-.569	-.236	.155	-.139
SMLPCT	.273	.031	.102	-.569	1.000	-.003	-.138	-.146
PCTRET86	-.144	-.070	-.057	-.236	-.003	1.000	.153	.113
PCTPROM	.002	-.282	-.204	.155	-.138	.153	1.000	.209
PCTWHT	-.346	-.100	-.238	-.139	-.146	.113	.209	1.000
STUSUCC	-.330	-.225	.009	-.042	-.134	-.008	-.09	.218
AFFIL	-.018	-.053	-.045	-.080	-.007	.020	.419	.163
PARENT	.012	-.088	-.016	.015	.066	-.023	-.331	-.085
CONTROL	-.134	.248	.044	-.107	.148	-.265	-.286	-.115
TIME	-.120	-.147	.059	-.110	-.027	.089	-.047	-.085

TABLE 33 - REGULAR WITH AIDE CLASSES CONT.....

	STUSUCC	AFFIL	PARENT	CONTROL	TIME
COUNT	-.064	.058	.095	-.009	-.077
TRACE	-.141	-.284	-.017	-.154	-.124
EXTOT	-.123	.008	-.103	-.217	.002
EXGRD	-.231	-.051	-.176	-.244	.067
AVGREADK	-.079	.112	-.057	-.055	.153
PCTCSES	-.182	-.129	.149	.182	.076
ENROLL	-.244	.009	-.017	.049	.227
AVGSELF	-.177	.072	.043	.145	-.114
AVGSEFF	-.330	-.018	.012	-.13	-.120
AVGFAVO	-.225	-.053	-.088	.248	-.147
AVDABS	.009	-.045	-.016	.044	.059
WHLPCT	-.042	-.080	.015	-.107	-.110
SMLPCT	-.134	-.007	.066	.148	-.027
PCTRET86	-.008	.020	-.023	-.265	.089
PCTPROM	-.005	.119	-.331	-.286	-.147
PCTWHT	.218	.163	-.085	-.115	-.085
STUSUCC	1.000	.144	.060	.006	-.206
AFFIL	.144	1.000	.054	.130	-.004
PARENT	.060	.054	1.000	-.001	-.168
CONTROL	.006	.130	-.001	1.000	-.025
TIME	-.206	-.004	-.168	-.025	1.000

VARIABLE	MEAN	STD DEV	LABEL
COUNT	22.403	1.947	CLASS SIZE
TRACE	.149	.359	TEACHERS RACE
EXTOT	12.97	8.220	TOTAL YRS TEACHING EXPERIENCE
EXGRD	9.493	8.452	TEACHERS EXPERIENCE AT GRADE 1
AVGREADK	222.688	101.946	AVERA K-READING ACHIEVEMENT
PCTCSES	50.072	30.689	PERCENT CLASS ON FREE LUNCH
ENROLL	623.552	181.984	SCHOOL ENROLLMENT
AVGSELF	-.001	.219	AVERAGE SELF-CONCEPT FACTOR SCORE
AVGSEFF	-.015	.265	AVERAGE SELF-EFFICACY FACTOR SCORE
AVGFAVO	.022	.248	AVERAGE FAILURE-AVOIDANCE FACTOR SCORE
AVDABS	7.793	2.145	AVERAGE DAYS ABSENT
WHLPCT	.335	.106	PERCENT WHOLE GROUP INSTRUCTION PER DAY
SMLPCT	.267	.117	PERCENT SMALL GROUP INSTRUCTION PER DAY
PCTRET86	.485	2.804	PERCENT RETAINED IN 86 (REPEATING FIRST GRADE)
PCTPROM	91.032	10.266	PERCENT PROMOTED IN 87 (PROMOTED TO SECOND GRADE)
PCTWHT	70.901	37.459	PERCENT WHITE
STUSUCC	-.011	.874	STUDENT SUCCESS PROBLEMS FACTOR SCORE
AFFIL	-.094	.792	AFFILIATION PROBLEMS FACTOR SCORE
PARENT	.022	.899	PARENT PROBLEMS FACTOR SCORE
CONTROL	.173	.879	CONTROL PROBLEMS FACTOR SCORE
TIME	-.156	.851	TIME RELATED PROBLEMS FACTOR SCORE

N OF CASES = 67

TABLE 34 — CANONICAL CORRELATION RESULTS — ENTIRE SAMPLE

Eigenvalues and Canonical Correlations

Root No.	Eigenvalue	Pct.	Cum. Pct.	Canon. Cor.	Squared Cor.
1	.348	53.444	53.444	.508	.258
2	.136	20.937	74.381	.346	.120
3	.077	11.776	86.157	.267	.071
4	.053	8.097	94.254	.224	.050
5	.037	5.746	1C0.000	.190	.036

Dimension Reduction Analysis

Roots	Wilks Lambda	F	Hypoth. DF	Error DF	Sig. of F
1 TO 5	.55562	1.70248	80.00	1048.95	.000
2 TO 5	.74870	1.09435	60.00	853.19	.295
3 TO 5	.85063	.86799	42.00	650.42	.708
4 TO 5	.91577	.76117	26.00	440.00	.797
5 TO 5	.96398	.68813	12.00	221.00	.762

Standardized canonical coefficients for DEPENDENT variables
Function No.

Variable	1	2	3	4	5
STUSUCC	-.040	-.276	-.487	.801	.297
AFFIL	-.414	-.255	.533	-.165	-.689
PARENT	.573	.019	-.314	-.492	-.594
CONTROL	.624	.327	.630	.360	-.004
TIME	.299	-.849	.214	-.105	.388

Correlations between DEPENDENT and canonical variables
Function No.

Variable	1	2	3	4	5
STUSUCC	.083	-.334	-.356	.778	-.388
AFFIL	-.396	.298	.560	-.028	-.663
PARENT	.634	-.063	-.364	-.412	-.540
CONTROL	.600	.261	.600	.448	-.101
TIME	.338	-.880	.171	-.081	.274

Standardized canonical coefficients for COVARIATES
Can. Var.

Covariate	1	2	3	4	5
COUNT	.285	.089	-.233	-.067	-.177
TRACE	-.442	.651	-.319	-.053	.335
EXTOT	-.186	-.172	.097	-.309	-.868
EXGRD	.087	-.358	.099	.298	1.132
AVGREAD1	-.353	-.188	.261	.102	.141
PCTCSES	.089	-.173	.160	.839	.578
ENROLL	.094	-.315	.268	.150	-.084
AVGSELF	.167	-.206	.270	-.455	.013
AVGSEFF	-.198	.443	-.058	.034	.015
AVGFAVD	-.202	.522	.688	.300	-.202
AVDABS	-.239	-.044	-.040	.219	.145
WHLPCT	.062	.319	.040	-.717	.318
SMLPCT	.180	-.130	.072	-.497	.246
PCTRET86	-.181	-.178	.226	-.155	.257
PCTFROM	-.321	.017	-.046	-.183	-.177
PCTWHT	-.421	.242	-.365	.672	.221

TABLE 35 - CANONICAL CORRELATION RESULTS · REGULAR CLASSES

Eigenvalues and Canonical Correlations

Root No.	Eigenvalue	Pct.	Cum. Pct.	Canon. Cor.	Squared Cor.
1	.899	44.258	44.258	.688	.473
2	.451	22.195	66.453	.557	.311
3	.322	15.843	82.296	.493	.244
4	.202	9.955	92.250	.410	.168
5	.157	7.750	100.000	.369	.136

Dimension Reduction Analysis

Roots	Wilks Lambda	F	Hypoth. DF	Error DF	Sig. of F
1 TO 5	.19727	1.42122	80.00	283.53	.020
2 TO 5	.37466	1.10825	60.00	232.53	.292
3 TO 5	.54362	.97080	42.00	178.75	.528
4 TO 5	.71861	.84298	26.00	122.00	.684
5 TO 5	.86396	.81357	12.00	62.00	.636

Standardized canonical coefficients for DEPENDENT variables
Function No.

Variable	1	2	3	4	5
STUSUCC	.155	-.192	.586	.535	-.530
AFFIL	.221	.695	.437	-.578	-.197
PARENT	-.499	.170	-.177	-.568	-.344
CONTROL	-.506	.749	-.100	.387	.298
TIME	-.495	-.378	.464	-.564	.622

Correlations between DEPENDENT and canonical variables
Function No.

Variable	1	2	3	4	5
STUSUCC	-.085	-.093	.746	.542	-.364
AFFIL	.399	.590	.484	-.508	.016
PARENT	-.690	-.090	-.156	-.271	-.646
CONTROL	-.533	.628	.058	.521	.217
TIME	-.628	-.316	.549	-.316	.323

Standardized canonical coefficients for COVARIATES
Can. Var.

Covariate	1	2	3	4	5
COUNT	-.300	-.229	.558	-.335	-.102
TRACE	.154	.009	-.428	-.275	.413
EXTOT	.290	.512	.351	-.998	.217
EXGRD	-.215	-.407	.303	1.213	.107
AVGREAD1	.577	-.561	.022	.222	.331
PCTCSES	.055	-.091	.064	.826	.704
ENROLL	.169	.009	.139	.233	-.230
AVGSELF	-.067	-.349	-.108	-.010	.274
AVGSEFF	.278	.357	.046	.097	-.353
AVGFAVO	.073	.896	-.004	-.086	.243
AVDABS	.167	-.041	.252	-.124	.190
WHLPCT	-.263	-.045	-.599	-.372	.400
SMLPCT	-.564	-.378	-.417	-.370	.384
PCTRET86	-.050	-.027	.027	-.045	.388
PCTPROM	-.019	-.198	.039	-.145	-.411
PCTWHT	.303	.306	-.087	.032	.596

TABLE 35 - CANONICAL CORRELATION RESULTS - REGULAR CLASSES

Eigenvalues and Canonical Correlations

Root No.	Eigenvalue	Pct.	Cum. Pct.	Canon. Cor.	Squared Cor.
1	.899	44.258	44.258	.688	.473
2	.451	22.195	66.453	.557	.311
3	.322	15.843	82.296	.493	.244
4	.202	9.955	92.250	.410	.168
5	.157	7.750	100.000	.369	.136

Dimension Reduction Analysis

Root	Wilks Lambda	F	Hypoth. DF	Error DF	Sig. of F
1 TO 5	.19727	1.42122	80.00	283.53	.020
2 TO 5	.37466	1.10825	60.00	232.53	.292
3 TO 5	.54362	.97080	42.00	178.75	.528
4 TO 5	.71861	.84298	26.00	122.00	.684
5 TO 5	.86396	.81357	12.00	62.00	.636

Standardized canonical coefficients for DEPENDENT variables

Function No.

Variable	1	2	3	4	5
STUSUCC	.155	-.192	.662	.575	-.550
AFFIL	.221	.675	.457	-.578	-.197
PARENT	-.499	.190	-.177	-.568	-.344
CONTROL	-.506	.749	-.100	.387	.073
TIME	-.495	-.278	.464	-.584	.622

Correlations between DEPENDENT and canonical variables

Function No.

Variable	1	2	3	4	5
STUSUCC	-.085	-.093	.746	.542	-.364
AFFIL	.399	.590	.484	-.508	.016
PARENT	-.690	-.090	-.156	-.271	-.646
CONTROL	-.533	.628	.058	.521	.217
TIME	-.628	-.316	.549	-.316	.323

Standardized canonical coefficients for COVARIATES

Can. Var.

Covariate	1	2	3	4	5
COUNT	-.300	-.229	.558	-.335	-.102
TRACE	.154	.009	-.428	-.275	.413
EXTOT	.290	.512	.351	-.998	.217
EXGRD	-.215	-.407	.303	1.213	.107
AVGREAD1	.577	-.561	.022	.222	.331
PCTCSES	.055	-.091	.064	.826	.704
ENROLL	.169	.009	.139	.233	-.230
AVGSELF	-.067	-.349	-.108	-.010	.274
AVGSEFF	.278	.357	.046	.097	-.353
AVGFAVO	.073	.896	-.004	-.086	.243
AVDABS	.167	-.041	.252	-.124	.198
WHLPCT	-.263	-.045	-.599	-.372	.400
SMLPCT	-.564	-.378	-.417	-.370	.384
PCTRET86	-.030	-.027	.027	-.045	.388
PCTPROM	-.019	-.198	.039	-.145	-.411
PCTWHT	.303	.306	-.087	.032	.596