The Role of School Environment in Teacher Dissatisfaction Among U.S. Public School Teachers

Cara M. Moore

Abstract

This article discusses the relationship between the school environment and teacher dissatisfaction utilizing the 2007-2008 School and Staffing Survey. The school environment is defined through a social-ecological perspective which takes into account the hierarchical nature of schools. Teacher dissatisfaction was quantified through a composite of variables that asked teachers about their overall feelings regarding the profession. A logistic regression was performed with teacher dissatisfaction as the criterion variable, and school environment variables and teacher background variables as predictors. School environment played a statistically significant role in the dissatisfaction of teachers. Specifically, teacher autonomy and principal leadership decreased the odds of teacher dissatisfaction, while student and community problems increased the odds of teacher dissatisfaction. Once school environment was taken into account, the log odds of teacher race, middle school status, and rural school locale increased while remaining statistically significant.

Keywords

teacher satisfaction, school environment, teacher autonomy

Introduction

The current political attitude toward teachers is tenuous at best. As states look for ways to balance their budgets and increase accountability for student achievement, more emphasis has been placed on teachers and schools to carry the burden. Several states, including Wisconsin, Ohio, and Massachusetts, have passed or introduced bills limiting collective bargaining among teachers. States such as Tennessee, Florida, Colorado, and Nevada have recently passed legislation that reforms the teacher tenure process. What was once a stable and predictable career has become volatile and tentative because of high-stakes measures, changing legislative demands, and increased pressure to improve outcomes.

There is no doubt that teachers are enduring higher levels of stress because of increased demands and pressure. Occupational stress coupled with demands to improve students’ standardized test scores place teachers at risk for being dissatisfied with their jobs. Teacher satisfaction is important to study and consider for several reasons. Teaching has been reported to be one of the most stressful jobs in the United States (Dworkin, Haney, Dworkin, & Telschow, 1990; Johnson, Cooper, Cartwright, Donald et al., 2005). Teachers have a high rate of turnover, and new teachers are quitting at alarming rates. Estimates suggest that 12% of all teachers leave teaching every year, with only 25% of cases due to teacher retirement (Alliance for Excellent Education, 2008; Boe, Cook, & Sunderland, 2008; Ingersoll, 2002). In high-poverty schools, as many as 20% of teachers leave every year; some transfer to other schools while others leave the classroom permanently (Ingersoll, 2002). Ingersoll (2002) has called the high rate of teacher attrition among new teachers, approximately one third in the first 3 years, a “revolving door” and has linked this problem to teaching shortages that exist in the United States (p. 23). Such turnover costs money for districts and schools that already have constrained budgets. Moreover, the overall level of satisfaction and attitudes of teachers are related to school performance.

Schools with more satisfied teachers are more effective (Ostroff, 1992). In addition, teachers heavily influence the school community, morale among staff and students, and the overall school climate. Teachers who experience high levels of stress are more likely to miss days of work (Kyriacou, 1980), which could potentially lead to falling behind in the curriculum. Teachers who are dissatisfied could negatively affect the morale of their students and fellow teachers, which could result in decreased motivation of students and staff (Ostroff, 1992). Teachers who experience burnout, which comes from prolonged periods of stress, not only suffer

1University of Tennessee, Knoxville, USA

Corresponding Author:

Cara M. Moore, University of Tennessee–Child and Family Studies, 1215 W. Cumberland Ave., JHB 240, Knoxville, TN 37996, USA
Email: cmoore85@utk.edu
physiologically but also become detached from their responsibilities and roles (Maslach, Schaufeli, & Leiter, 2001). Low morale, burnout, and detachment are likely to counteract efforts to raise student achievement.

The purpose of this study is to determine how the school environment is related to teacher dissatisfaction. An ecological perspective was used to define the environment where teachers work (Bronfenbrenner, 1977). Schools are organized within a system with many layers. Each layer, such as the classroom, the school, the neighborhood and city where the school is located, the school system, the state, and the national government, contributes to the overall environment where teachers experience some degree of satisfaction or dissatisfaction.

Several features of school environments have been directly tied to teacher dissatisfaction. For example, negative school climate, poor administrative leadership, and the quality of the school building have each been associated with increased rates of teacher dissatisfaction (Buckley, Schneider, & Shang, 2005; Lee, Dedrick & Smith, 1991; Tye & O’Brien, 2002). In addition, the racial and economic composition of the student body has also been shown to play a role in the satisfaction of teachers (Litt & Turk, 1985; Zembylas & Papanastasiou, 2006). The factors that contribute to teacher discontent are important to understand due to increased emphasis on education, the increasing demands on teachers, and the current costs of replacing teachers.

The research question is as follows: To what degree do school environmental factors and teacher background characteristics explain teachers’ discontent? This question was answered through an empirical study which drew on data from the School and Staffing Survey (SASS). The U.S. Department of Education sponsors this surveys through the National Center for Education Statistics (NCES). This large scale survey regularly assess districts, principals, and teachers based on their perceptions of issues pertinent to education and consist of five types of questionnaires: district questionnaires, principal questionnaires, school questionnaires, teacher questionnaires, and school library media center questionnaires. Moreover, extensive background data on the districts, schools, and teachers are collected. The public school version of the SASS includes 38,240 public school teachers representing all 50 states. The most recent iteration of the teacher surveys measured teachers’ education and training, teaching assignment, certification, workload, professional development, perceptions about teaching, income, and many other factors related to teaching and schools. Both public and private schools are included in that national survey; only the public teacher portion of the survey was analyzed.

**School Environment**

The school environment was defined by using social-ecological theory as a guide. Social-ecological theory was described in its most popular form by Urie Bronfenbrenner (1977) and emphasizes the complex environmental system where people live and operate. In essence, social-ecological theory is a systems approach that carefully defines the multilayered environment in which individual actions occur. To emphasize the complex and dynamic nature of the environment where people live and work, Bronfenbrenner depicts the environment through four unique subsystems, each one nested within the other. This approach allows for interactions between the individual and each subsystem and for interactions between subsystems to be studied (Harney, 2007). Social-ecological theory is a useful tool for the study of schools because of the complex hierarchy in which schools exist.

Bronfenbrenner’s social-ecological theory has been applied to the study of teachers in previous research studies, specifically studies of special education teachers by Miller, Brownell, and Smith (1999). The adaptation used in this study is slightly different from that used by Miller et al. In adapting Bronfenbrenner’s theory to the study of teacher dissatisfaction, the unit of analysis is the teacher. The four subsystems are defined as follows: the microsystem is the immediate classroom where the teacher works and carries out the majority of his or her activities; the mesosystem is the school where the teacher works; the exosystem is the larger school district and community where the teacher operates, lives, and interacts with others; and the macrosystem includes the larger structure of schooling, the various laws and statutes that regulate schools, and aspects of American culture. All four subsystems combine to form the ecological school system. Each subsystem of the ecological school system allows for identification of factors that could affect teacher attrition and satisfaction.

This systems approach defines the different components that make up a school’s environment. To study teachers effectively, the complex environment in which they work must be taken into consideration and carefully analyzed. Moreover, because teacher dissatisfaction is a complex phenomena with a myriad of causes, each subsystem should be considered carefully for its particular influence, be it directly or indirectly through another source, such as teacher stress, burnout, or teacher efficacy.

The next section will provide a review of the literature as it relates to factors shown to cause teacher dissatisfaction. In addition, social-ecological theory will be discussed as a tool to describe the school environment, which will be examined as a contributor to teacher dissatisfaction.

**Review of Literature**

Several different factors have been shown to influence teacher satisfaction. Liu and Ramsey (2008) examined the 2000/2001 version of the Teacher Follow-up Survey (TFS) to determine teachers’ satisfaction with different aspects of their jobs. It was found that race and years of teaching experience were related to job satisfaction among teachers.
Specifically, minority teachers were less satisfied with teaching, and teachers with more years of experience were more satisfied with teaching. Moreover, Liu and Ramsey found female teachers were more satisfied than male teachers. This gender difference has been confirmed by several other studies (Bogler, 2001; Chapman & Lowther, 1982; Menon, Papanastasiou, & Zembylas, 2008). This study will determine if Liu and Ramsey’s findings have been maintained over the past 8 to 9 years or whether they have changed post No Child Left Behind Act (NCLB).

Green-Reese, Johnson, and Campbell (1991) conducted a study with 229 physical education teachers in urban schools to determine how age, teaching experience, and school size were related to job satisfaction and stress. It was found that job satisfaction is severely affected by job stress. However, age and years of teaching were not significantly related to job satisfaction. This finding contradicts Liu and Ramsey’s (2008) study, which found the years of teaching experience was significantly related to job satisfaction. The authors noted the discrepancy between their results and those of previous studies and determined that subgroups of teachers should be examined in future studies rather than all teachers. This article will serve to clarify the role of gender in teacher job satisfaction and will also examine various subgroups of teachers.

The literature suggests that teachers’ perceptions about their schools and administrators are related to their satisfaction. Kreis and Brockopp (1986) conducted a study with 60 public school teachers in the state of New York to determine the relationship between three dimensions of job autonomy and job satisfaction. The three dimensions were (a) teachers’ perceived autonomy within the classroom, (b) autonomy outside the classroom but within the school, and (c) an overall sense of autonomy. Perception of autonomy within the classroom was significantly related to job satisfaction, but no other perceptions of autonomy were significantly associated. Thus, teachers’ ability to control their own classrooms was found to be important for teachers to be satisfied with their jobs.

Similarly, Pearson and Moomaw (2005) conducted a quantitative study with 171 Florida teachers to determine the relationship between teacher autonomy and four other constructs: job stress, work satisfaction, empowerment, and professionalism. Teacher autonomy was separated into two dimensions, curriculum autonomy and general teaching autonomy. Correlations revealed curriculum autonomy was significantly and negatively related to job stress; moreover, general teaching autonomy was significantly and positively associated with empowerment and professionalism. Quaglia, Marion, and McIntire (1991) conducted a study with 477 teachers from 20 rural Maine communities to determine differences between satisfied and dissatisfied teachers regarding their perceptions of school organization, empowerment, status, and attitude toward students. The researchers found that satisfied teachers experienced significantly more empowerment within their schools than dissatisfied teachers; the differences found in empowerment were greater than any other factors examined. This study expands on the studies cited above by examining the role of teacher autonomy with a national sample of teachers.

Rebora (2009) reviewed a series of Met Life surveys on the teaching profession to determine changes in teacher satisfaction over time. It was found that overall satisfaction with teaching has risen from 1984 to 2008. When asked about negative aspects of teaching, twice as many teachers said the number of Limited English Proficiency (LEP) students they teach hinders student learning (11% in 1984 to 22% in 2008) and 43% of teachers said students’ varied learning abilities challenge their ability to effectively teach. Furthermore, 50% of teachers reported poverty as a problem. Positive findings from the review include the following: two thirds of teachers said they were well prepared for the profession and more teachers report that resources are available to them. Moreover, the percentage of teachers who were satisfied with their salary increased from 40% in 1984 to 62% in 2008. This study will examine how classroom composition such as percentage of students with special needs, percentage of students who are learning English, and percentage of minority students affect teacher satisfaction.

Schoolwide factors and variables have also been shown to affect teacher dissatisfaction. Kearney (2008) found that among teachers sampled from a midwestern school district, less than half were satisfied with class size, support from parents, school learning environment, and availability of resources. These factors were also cited as causes of teacher attrition. Retention rates (3 years in the classroom) were between 74.77% and 89.1% for White teachers and between 76.5% and 94.1% for Black teachers during a 5-year time span.

Culver, Wolfe, and Cross (1990) surveyed public school teachers in Virginia and determined that school climate and commitment to teaching were significant factors in explaining job satisfaction. School climate included factors such as poverty status, race of students, and available resources. It was found that teaching experience and other teacher background factors such as race and sex had little effect. Culver et al.’s study also supports findings by Kearney (2008) that school resources and learning environment are significant factors for teachers in regards to job satisfaction.

Menon, Papanastasiou, & Zembylas (2008) conducted a study among schoolteachers in Cypress to determine the relationship between teacher variables, organizational variables, and job satisfaction. The researchers sampled more than 450 teachers in a quantitative study using surveys. The major findings were lower school levels (i.e., primary schools) were associated with increased job satisfaction; teachers in primary schools were more satisfied than teachers in secondary schools. Other findings suggested that increased job satisfaction is related to school climate and professional goal attainment. An examination of sources of satisfaction and dissatisfaction of teachers in Cypress by
Zembylas and Papanastasiou (2006) suggested primary sources of satisfaction for teachers were working with children, contributing to society, collaborative work with colleagues, professional growth, salary, and work schedule. In contrast, primary sources of dissatisfaction were social problems, student failure, lack of discipline, lack of respect and status in community, and lack of autonomy.

Rhodes, Nevill, and Allan (2004) examined 368 teachers in primary and secondary schools in the United Kingdom. The researchers aimed to identify factors that were dissatisfying for teachers in an effort to increase teacher retention. The findings suggested the most dissatisfying components of teaching were workload, balance between work and home, administrative tasks, society’s views of teachers, and pupil behavior issues. The most satisfying features of teaching were friendliness of staff, classroom atmosphere, climate of achievement, and recognition of efforts by leadership.

Crossman and Harris (2006) conducted a quantitative study on schoolteachers in Surry, England, to examine how the type of school affects the satisfaction of secondary school teachers. It was found that teacher satisfaction varied by type of school. Specifically, independent and privately managed schools had more satisfied teachers, whereas foundation schools and Anglican schools had less satisfied teachers. The authors noted that possible causes for the results were differences in resources available, differences in oversight, differences in academic control, and differences in community status.

The aforementioned studies examined the relationship between schoolwide factors and teacher dissatisfaction but showed very similar results. However, many of the samples were either from teachers outside of the United States or were limited to a single state. This study seeks to determine the role school climate plays in job satisfaction of public school teachers in the United States. Furthermore, in this study, school climate will be considered a part of the overall school environment. This study will add to the literature on job satisfaction by looking at schoolwide factors on a national basis. The United States is an important context because of unique national foci, such as federal laws and the increasing stakes of standardized testing.

Overall, the review of literature reveals that several constructs and variables should be included as potential predictors of teacher dissatisfaction. Specifically, constructs such as teacher efficacy, school climate, and teacher autonomy should be included. Other variables such as classroom management, principal support, highest degree earned, and certification status should also be considered as potential predictors as they have been shown to affect teacher satisfaction.

**Method**

The data were drawn from a survey conducted on a national scope by the NCES and the SASS. The SASS was developed in the mid-1980s after a review was completed on several surveys that were administered to teachers separately. The SASS was created to combine the data collected from teachers and school personnel on those surveys with additional information on teacher demand, school conditions, and perceptions of school climate and problems in schools. There are four different components to the SASS: the School Questionnaire, the Teacher Questionnaire, the Principal Questionnaire, and the School District Questionnaire. This study used data from the public school version of the Teacher Questionnaire (NCES, 2010). This version was selected because it included teachers in public and charter schools from kindergarten through 12th grade. Moreover, the data from the survey include information about the schools in which the teachers work, which is also of importance to the researcher.

The SASS is a powerful data set not only because of its breadth and large sample size but also because it allows researchers to conduct a wide variety of analyses. Researchers can compare data across sectors, such as private, public, and charter schools; analyze data at the state level; compare subgroups of respondents; analyze change over time; and link to other data sources (NCES, 2010). For these reasons, this data set is particularly suitable for the current study. The teacher version of the SASS provides data on both the teachers and the schools in which the teachers work. Both levels of data are important because they correspond to the two subsystems that are central to the study—the microsystem and mesosystem. Although different versions of the survey, such as the district version, provide data at higher levels, those surveys will not be used for this study. Additional information about the SASS is available online at http://nces.ed.gov/surveys/sass/

**The Sample**

One of the positive aspects of the SASS is its large scope and sample size. It is the largest teacher survey conducted in the United States (National Center for Educational Statistics, 2010). Table 1 shows the unweighted sample sizes for districts, teachers, and schools that completed the SASS.

According to the table, more than 38,000 teachers were sampled from about 6,800 schools in more than 3,900 school districts. It is important to note that not all of these teachers are regular, full-time teachers. Thus, the researcher removed any teachers who were not classified as full-time or regular teachers from the sample prior to data analysis leaving 34,870 teachers in the sample. The sampling strategy by the NCES was such that districts were identified first, then schools, and then teachers within schools.

There are some challenges to using a large secondary data set. With this particular data set, one challenge is the nested structure of the data, specifically teachers within schools, within districts. There is the possibility that schools within districts are similar to each other because of commonalities in governance, central administration, and procedures.
Moreover, teachers within schools can be similar to each other because of the common administration, procedures, and norms within each school. This potential for error was addressed by calculating the intraclass correlation (ICC) and then using that value to calculate the design effect. The normalized sample weight was then divided by the design effect to reduce the sample size. (For more information on design effects see Johnson & Elliott, 1998.) Other limitations include potential errors with data entry and the inability to compare the actual surveys with the codebook. Nevertheless, the benefits of using the SASS outweigh the limitations for the purpose of this study.

Variables in the Study

The first phase involved an analysis of the survey items by the researcher to determine which items corresponded to constructs relevant to the research question. Items were construed using the concept model based on Bronfenbrenner’s theory of ecological systems. Survey items that related to the school environment were identified by careful analysis of the survey and cross-referencing survey items to the literature. The survey items were then factor analyzed to build constructs, such as teacher control, job satisfaction, student problems, and community problems. The second phase involved using the constructs identified in Phase 1 to statistically determine which ones predicted teacher job dissatisfaction.

Using the review of literature, the researcher reviewed the survey items and cross-referenced them to previously reported causes of discontent among teachers. Variables that might be relevant to dissatisfaction but were not previously researched in the literature, such as highly qualified teacher status and union membership, were also included.

Appendix A lists the continuous variables identified for use in this study. The sample sizes, means, and standard deviations for each variable are provided. Teacher characteristics include age, years of teaching experience, and salary. According to the data, the mean age for teachers in the sample is 42.77 years and the mean number of teaching years is 13.82. Some variables were used to limit the sample, such as main assignment and full-time status, while the remaining variables were used to explore teacher dissatisfaction.

School context variables include student/teacher ratio, the percentages of minority teachers and students, the percentage of students taught with Individual Educational Programs (IEPs), and the percentage of students taught with LEP. Similar to the teacher perception and background variables, school context variables were explored as possible predictors of attrition and teacher dissatisfaction. Many of the variables considered as important for the study were categorical in nature.

Appendix B provides unweighted descriptives for continuous variables in the study. Some expected and unexpected findings were revealed. First, the frequencies reveal 68.9% of the teachers in the sample are female whereas 31.1% of the teachers are male. Moreover, 90.1% of the teachers are White whereas 6.1% are Black and 1.6% are Asian. These findings are consistent with previously reported statistics regarding the teacher workforce (Ingersoll, 2002). The table also reveals 91.2% of the teachers in the sample are full-time, regular teachers. This finding is important as the study will exclude teachers who are not full-time regular teachers. Interesting to note is that 17.9% of the teachers in the sample have 3 years or less of total teaching experience, 87.6% of sampled teachers are highly qualified as defined by the state where they work, and 88.1% of teachers have standard or advanced certificates.

Teacher Dissatisfaction Composite Variable

A series of ordinary least squares (OLS) linear regressions were planned to determine predictors of dissatisfaction among teachers. An analysis of the skewness and kurtosis of the dissatisfaction composite variable revealed that it was not normally distributed (skew/SE skew = 57.03). Typically values greater than 1.96 are considered problematic for OLS. In lieu of an OLS regression, a logistic regression was performed because it does not require normality of criterion variables and is more robust.

To conduct a logistic regression, the dissatisfaction composite variable needed to be dichotomized, that is, changed from a range of numbers to two values that correspond to “yes” and “no.” First, the variable was recoded as a categorical variable with five categories. A frequency was run to determine the range of values for the variable. Then the values were recoded so that all values between 0 and 1 were coded as 0, values between 1 and 2 were coded as 1, values between 2 and 3 were coded as 2, values between 3 and 4 were coded as 3, and values of 4 or greater were coded as 4. A value of 0 corresponded to low dissatisfaction (being highly satisfied) and a value of 4 corresponded to being highly dissatisfied. A second frequency was run on the categorized variable to check for accuracy. Unweighted and normalized weighted frequency data for categorized teacher dissatisfaction are listed in Table 2.

Because of the potential for overestimation of teacher dissatisfaction, only the most extreme cases of dissatisfaction were considered for the dichotomous variable, values 3 and 4.

Table 1. Unweighted Sample Size for 2007-2008 SASS

| Group                   | n   |
|-------------------------|-----|
| Public school districts | 3,950|
| Public schools          | 6,800|
| Public school teachers  | 38,240|

Source: National Center for Education Statistics, 2007
Note: SASS = School and Staffing Survey.
Thus, the categorical variable was dichotomized with values 0, 1, and 2 recoded to 0 (not dissatisfied) and values 3 and 4 recoded to 1 (dissatisfied) see Table 3. The dichotomized variable, therefore, is a conservative measure of teacher dissatisfaction; moderately dissatisfied teachers were not included to address potential error.

Combining the unweighted percentages of the cases with values 3 and 4 gives a total of 15.5% of cases that are moderately or very dissatisfied with their jobs. It is sufficient to run a logistic regression with 15.5% of the sample as the criterion variable without additional problems. Moreover, because logistic regressions do not rely on normality of variables, the nonnormality of the predictor variables becomes a nonissue.

The procedures used to analyze the data included the identification of relevant survey items and statistical procedures to group them into constructs that corresponded to different school environment variables. The school environment was defined using teacher perceptions of their students, classrooms, schools, and principals as measured by the survey. Only items that described the teaching environment were included; teacher background and school background variables were omitted from the factor analysis. The results are listed in Appendix C.

The exploratory factor analysis revealed potential composite variables to be examined for the study. The categories were identified by looking at similarities between the items that loaded at .400 or higher. This value coefficient cutoff is modest and is frequently used to eliminate variables in exploratory factor analyses. Variables with value coefficients greater than .400 in more than one category were categorized by factor score; the variable was placed in the category with the greater value coefficient.

All categories were then analyzed for reliability using Cronbach’s alpha to ensure accuracy of the variable placement and the consistency of the overall constructs. Cronbach’s alpha was computed for each category, and variables that greatly lowered the overall reliability were eliminated. Reliability data are reported in Table 4.

**Variable Construction Using Exploratory Factor Analysis**

The five variables which were constructed from this analysis and modeled as covariates in the multivariate analysis were: (a) teacher perceptions of administrative and colleague support, (b) teacher perceptions of school problems, (c) teacher perceptions of community problems (includes parents), (d) teacher dissatisfaction, and (e) teacher control in the classroom. These items respond to the school environment as defined in the study. Many of the items that were used to construct the composite variables were reverse coded or recoded to allow for interpretation of the analysis. This procedure is similar to that used by Renzulli, Macpherson-Parrott, and Beattie (2011).

The teacher dissatisfaction composite variable required recoding of item categories so that the composite measured dissatisfaction rather than satisfaction. Five variables were reverse coded so that “strongly agree” was changed from a

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**Table 2. Frequency Distribution for Teacher Dissatisfaction Categorized**

| Score | Unweighted % | Normalized weighted % | n   |
|-------|--------------|------------------------|-----|
| 0     | 10.2         | 11.5                   | 3,570|
| 1     | 49.0         | 49.8                   | 17,090|
| 2     | 22.3         | 24.1                   | 8,820|
| 3     | 12.1         | 13.0                   | 4,790|
| 4     | 1.5          | 1.6                    | 600  |
| Total | 100          | 100                    | 34,870|

**Table 3. Frequency Distribution for Teacher Dissatisfaction Dichotomized**

| Score | Unweighted % | Normalized weighted % | n   |
|-------|--------------|------------------------|-----|
| 0     | 84.5         | 85.4                   | 29,480|
| 1     | 15.5         | 14.6                   | 5,390|
| Total | 100          | 100                    | 34,870|

Note: 0 = satisfied (formerly 0-2); 1 = unsatisfied (formerly 3-4).

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Thus, the categorical variable was dichotomized with values 0, 1, and 2 recoded to 0 (not dissatisfied) and values 3 and 4 recoded to 1 (dissatisfied) see Table 3. The dichotomized variable, therefore, is a conservative measure of teacher dissatisfaction; moderately dissatisfied teachers were not included to address potential error.

The SASS sample was limited to full-time, regular teachers reducing the sample size from 38,240 to 34,870. All other teachers, including part-time and substitute teachers, were excluded from the sample. The revised sample included teachers from kindergarten through 12th grade from all subject areas. Special education teachers and specialists, such as art, physical education, and music teachers, were also included.

The first analysis was a principal components factor analysis with varimax rotation; it was completed to reveal factors that would be used to construct school environment variables. The school environment was defined using teacher perceptions of their students, classrooms, schools, and principals as measured by the survey. Only items that described the teaching environment were included; teacher background and school background variables were omitted from the factor analysis. The results are listed in Appendix C.

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**Results**

Phase 1 of the study involved a factor analysis to assist in the construction of teacher dissatisfaction along with school environment variables that would be used to predict teacher dissatisfaction. The public teacher version of the SASS was used to obtain data used for the analysis. This survey is developed by the NCES and administered by the U.S. Census Bureau.

The SASS sample was limited to full-time, regular teachers reducing the sample size from 38,240 to 34,870. All other teachers, including part-time and substitute teachers, were excluded from the sample. The revised sample included teachers from kindergarten through 12th grade from all subject areas. Special education teachers and specialists, such as art, physical education, and music teachers, were also included.

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Table 4. Reliability Analysis for Constructed Variables From Factor Analysis

| Construct                                      | Cronbach’s α (n) | M    | SD   | N    |
|------------------------------------------------|------------------|------|------|------|
| Administration/colleague support               | .895 (10)        | 3.17 | .579 | 34,870|
| Supportive administration                      |                  |      |      |      |
| Principal enforces rules                       |                  |      |      |      |
| Teachers enforce rules                         |                  |      |      |      |
| Staff share beliefs/values                     |                  |      |      |      |
| Principal communication                        |                  |      |      |      |
| Satisfied with salary                          | .858 (7)         | 2.13 | .669 | 34,870|
| Staff cooperation                              |                  |      |      |      |
| Staff recognized                               |                  |      |      |      |
| Generally satisfied                            |                  |      |      |      |
| School is well run                             | .871 (4)         | 2.51 | .743 | 34,870|
| Problems within school                         |                  |      |      |      |
| Student tardiness                              | .858 (7)         | 2.13 | .669 | 34,870|
| Problem with tardiness                         |                  |      |      |      |
| Students absent                                |                  |      |      |      |
| Class cutting                                  |                  |      |      |      |
| Teachers absent                                |                  |      |      |      |
| Student dropouts                               |                  |      |      |      |
| Student apathy                                 |                  |      |      |      |
| Community problems                             | .871 (4)         | 2.51 | .743 | 34,870|
| Parent involvement                             |                  |      |      |      |
| Poverty                                        |                  |      |      |      |
| Unprepared students                            |                  |      |      |      |
| Student health                                 |                  |      |      |      |
| Dissatisfaction                                | .786 (7)         | 2.06 | .852 | 34,870|
| Teaching not worth it                          |                  |      |      |      |
| Would leave for better pay                     |                  |      |      |      |
| Would transfer                                 |                  |      |      |      |
| Less enthusiasm                                |                  |      |      |      |
| Too tired for school                           |                  |      |      |      |
| Would be a teacher again                       |                  |      |      |      |
| Remaining in teaching                          |                  |      |      |      |
| Teacher control                                | .693 (4)         | 3.63 | .444 | 34,870|
| Control over teaching                          |                  |      |      |      |
| Control over grading                           |                  |      |      |      |
| Control over discipline                        |                  |      |      |      |
| Control over homework                          |                  |      |      |      |

* n = number of items in construct.

A logistic regression with teacher dissatisfaction as the criterion variable was run in a series of models to control for teacher background and school context variables. The dichotomized form of the variable was used. A design effect adjusted weight was applied to the sample to correct the sample size for the interclass correlation, which was .023. Interclass correlation was a potential source of error in this analysis because teachers were sampled based on the schools in which they worked. Sampled members of the same group (in this case school) present the potential that the group members will answer survey questions similarly. The
interclass correlation measures the association of the responses given by members of the same group for a particular variable. High correlations are problematic and need to be addressed. The design effect reduced the sample size for this analysis from 34,870 to an effective size of 32,310 teachers. Results of the logistic regression are provided in Table 5.

The results of logistic regressions are provided as a log odds ratio (β) of the event occurring. They are typically converted to exp(β) by raising e to the power of the log odds. Exp(β) values give the change in odds for a one unit change in the predictor variable. For dichotomous variables, a one-unit change corresponds to group membership. The formula \[\exp(β) - 1\] × 100% is used to change the exp(β) values to percentages that are easier to interpret. Moreover, probability can be calculated from \[\exp(β)\] with the following formula: probability = odds / (1 + odds). For example, the log odds ratio of female teachers being dissatisfied is 0.072. Raising e to the power of 0.072 gives an odds ratio of 1.074. Thus, the odds of female teachers being dissatisfied are 1.074 times greater than male teachers. The percentage of increase in the odds can be calculated by (1.074 − 1) × 100% = 7.4%. Thus, the odds of female teachers being dissatisfied are 7.4% greater than male teachers. (See DeMaris, 1995, for additional information about logistic regression.) All results discussed are based on the third model of the regression unless otherwise noted.

The results of the logistic regression indicate that teacher background, school context, and school environment significantly change the odds of dissatisfaction among teachers. Among teacher background predictors, being Black significantly increased the odds of being dissatisfied, \[\exp(β) = 1.286, \ p < .001.\] Additional calculations reveal Black teachers have a 28% increase in the odds of being dissatisfied compared with non-Black teachers; the probability of a Black teacher being dissatisfied is 56.2%.

Other teacher background variables significantly decreased the odds of being dissatisfied. Total years of teaching experience, union membership, new teacher status, higher salary, and highly qualified teacher status all significantly decreased the odds of teacher dissatisfaction. New teacher status had a very large effect on dissatisfaction odds; being a new teacher (first 3 years of teaching) decreased the odds of teacher dissatisfaction by 34.6%, \[\exp(β) = 0.654, \ p < .001.\] Union membership decreased the odds of a teacher being dissatisfied by 27.3%, \[\exp(β) = 0.727, \ p < .001,\] and highly qualified teacher status decreased the odds of teacher dissatisfaction by 12.8%, \[\exp(β) = 0.872, \ p < .05.\] Total years of teaching experience had a modest, yet significant effect on dissatisfaction with each additional year of teaching experience lowering the odds of dissatisfaction by 2%, \[\exp(β) = 0.980, \ p < .001.\] An increase in school salary by US$1,000 resulted in a decrease in the odds of dissatisfaction by 1.6%, \[\exp(β) = 0.984, \ p < .001.\]

School context variables also significantly contributed to teacher dissatisfaction. Most significant predictors relevant to school background increased the odds of teacher dissatisfaction. Teaching in a middle school significantly increased the odds of teacher dissatisfaction by 31.8%, \[\exp(β) = 1.318, \ p < .001.\] In addition, teaching in a rural school increased the odds of dissatisfaction by 12%, \[\exp(β) = 1.120, \ p < .05.\] Larger student–teacher ratios, larger percentages of minority teachers in a school, and larger percentages of LEP students each increased the odds of teacher dissatisfaction although the changes in odds were small. A unit increase in student/teacher ratio, that is the addition of one student in a classroom, increased the odds of dissatisfaction by 1.9%. A single-point increase in the percentage of minority teachers and a percentage increase in number of LEP students both increased the odds of dissatisfaction by 0.3%, \[\exp(β) = 1.003, \ p < .001; \exp(β) = 1.003, \ p < .01.\] The percentage of students enrolled in the National School Lunch Program (NSLP) was the only school background predictor that significantly decreased the odds of teacher dissatisfaction, although the effect was small. A single-point increase in the percentage of students enrolled in NSLP resulted in a 0.3% decrease in the odds of teacher dissatisfaction, \[\exp(β) = 0.997, \ p < .01.\]

School environment predictors also played a significant role in the dissatisfaction of teachers. Both teacher perceptions of school problems and community problems significantly increased dissatisfaction among teachers; an increase in the perception of school problems (e.g., from no problems to minor problems) predicted a 17.1% increase in dissatisfaction, \[\exp(β) = 1.171, \ p < .001,\] and an increase in the perception of community problems predicted a 19.8% increase in dissatisfaction, \[\exp(β) = 1.198, \ p < .001.\] Teacher control in the classroom and administrative and colleague support significantly decreased the odds of teacher dissatisfaction. An increase in teacher perceptions of support from administrators and colleagues (e.g. from strongly disagree to somewhat disagree) corresponded to a 65.4% decrease in the odds of being dissatisfied, \[\exp(β) = .346, \ p < .001,\] and an increase in teacher control (e.g. from no control to minor control) of the classroom decreased the odds of dissatisfaction by 30.9%, \[\exp(β) = .691, \ p < .001.\]

Based on the above data, a model can be constructed to describe the relationship between teacher background, school context, and school environment. The model can be represented as a formula using the constant and the regression coefficients. Putting data for a particular teacher into the formula will yield the logit of the probability of that teacher being dissatisfied. The logit of the probability is equivalent to the natural log of the odds of the event occurring. The standard logistic regression formula takes the form:

\[
\text{Logit}(p) = b_0 + b_1X_1 + b_2X_2 + b_3X_3 + \ldots + b_kX_k,
\]

where \(p\) is the probability of the event in question, \(b\) is the regression coefficient, and \(X\) refers to the predictor variables. The equation for predicting the probability of teacher
Table 5. Summary of Logistic Regression Analysis for Variables Predicting Dissatisfaction

| Predictor                        | Model 1 |          |          |          | Model 2 |          |          |          | Model 3 |          |          |          |          |          |
|----------------------------------|---------|----------|----------|----------|---------|----------|----------|----------|---------|----------|----------|----------|----------|----------|
|                                  | B       | SE B     | e^B      |          | B       | SE B     | e^B      |          | B       | SE B     | e^B      |          | B       | SE B     | e^B      |
| Teacher background               |         |          |          |          |         |          |          |          |         |          |          |          |          |          |
| Female                           | -.003   | .041     | -1.00    |          | -.006   | .041     | 1.006    |          | .072    | .044     | 1.074    |          |          |          |          |
| Total years experience           | -.025   | .002     | -0.98    |          | -.022   | .002     | 0.981    |          | -.021   | .003     | 0.980    |          |          |          |          |
| Black                            | .361    | .060     | 1.43     |          | .064    | .066     | 1.066    |          | .251    | .070     | 1.286    |          |          |          |          |
| Hispanic                         | .317    | .061     | 1.37     |          | -0.040  | .070     | 0.961    |          | .035    | .073     | 1.036    |          |          |          |          |
| Union member                     | -.210   | .040     | 0.81     |          | -.185   | .041     | 0.831    |          | -.319   | .043     | 0.727    |          |          |          |          |
| New teacher                      | -.497   | .055     | 0.61     |          | -.517   | .055     | 0.596    |          | -.424   | .058     | 0.654    |          |          |          |          |
| Highly qualified teacher         | -.145   | .058     | 0.87     |          | -.145   | .059     | 0.865    |          | -.138   | .062     | 0.872    |          |          |          |          |
| Total school earnings (thousands)| -.016   | .002     | 0.98     |          | -.016   | .002     | 0.984    |          | -.016   | .002     | 0.984    |          |          |          |          |
| Highest degree master's          | -.017   | .038     | 0.98     |          | .029    | .038     | 1.030    |          | .001    | .040     | 1.001    |          |          |          |          |
| Regular certification            | .033    | .059     | 1.03     |          | .058    | .060     | 1.060    |          | .033    | .063     | 1.034    |          |          |          |          |
| School background                |         |          |          |          |         |          |          |          |         |          |          |          |          |          |          |
| Urban school                     |         | .154     | 1.17     |          | .091    | .047     | 1.096    |          |          |          |          |          |          |          |
| Rural school                     |         | .152     | 1.16     |          | .114    | .049     | 1.120    |          |          |          |          |          |          |          |
| School size                      | .024    | .009     | 1.03     |          | -.020   | .010     | 0.981    |          |          |          |          |          |          |          |
| Middle school                    | .232    | .043     | 1.27     |          | .276    | .045     | 1.31     |          |          |          |          |          |          |          |
| Percentage of students in National School Lunch Program | .001 | .001 | 1.00 |          | .003 | .001 | 0.997 |          |          |          |          |          |          |          |
| Student/teacher ratio            | .010    | .004     | 1.01     |          | .019    | .005     | 1.019    |          |          |          |          |          |          |          |
| Percentage of minority enrollment| .004    | .001     | 1.00     |          | .001    | .001     | 1.001    |          |          |          |          |          |          |          |
| Percentage of minority teachers  | .005    | .001     | 1.00     |          | .003    | .001     | 1.003    |          |          |          |          |          |          |          |
| Percentage of IEP students       | -.001   | .001     | 0.99     |          | -.001   | .001     | 0.999    |          |          |          |          |          |          |          |
| Percentage of LEP students       | .002    | .001     | 1.00     |          | .003    | .001     | 1.003    |          |          |          |          |          |          |          |
| School environment               |         |          |          |          |         |          |          |          |         |          |          |          |          |          |          |
| Perceptions of positive environment |       |          |          |          |         |          |          |          |         |          |          |          |          |          |          |
| Perceptions of student problems  |         | .158     | 1.17     |          | .181    | .034     | 1.19     |          |          |          |          |          |          |          |          |
| Perceptions of community problems|         |          |          |          |         |          |          |          |         |          |          |          |          |          |          |
| Teacher control                  | -.369   | .037     | 0.69     |          |          |          |          |          |          |          |          |          |          |          |
| Constant                         | -.565   | .104     | 0.57     |          | -.155   | .141     | 0.31      |          | 3.182   | .230     | 24.09     |          |          |          |
| \( \chi^2 \) model               | 483.137 |          |          |          | 222.882 |          |          |          | 2,017.945 |          |          |          |          |          |          |
| \( \chi^2 \) regression           | 438.137 |          |          |          | 661.020 |          |          |          | 2,677.964 |          |          |          |          |          |          |
| df model                         | 10      |          |          |          | 10      |          |          |          | 4       |          |          |          |          |          |          |
| df regression                    | 10      |          |          |          | 20      |          |          |          | 24      |          |          |          |          |          |          |

Note: IEP = Individual Educational Program; LEP = Limited English Proficiency. Years experience, salary, student teacher ratio, administration/colleague support, school problems, community problems, and teacher control were centered at their means.

\*p < .05, \*\*p < .01, \*\*\*p < .001.

dissatisfaction includes 16 predictor variables and the constant. The value of each predictor variable is multiplied by the regression coefficient. In the event the value is zero, that variable is effectively omitted from the equation because the coefficient is multiplied by zero. The equation based on the logistic regression results is as follows:

\[
\text{Logit}(p_{\text{dissatisfaction}}) = -1.536 + \cdot0.021(\text{years experience}) + 0.251(\text{Black}) + 0.319(\text{union member}) + 0.424(\text{new teacher}) + 0.138(\text{highly qualified teachers}) + 0.016(\text{salary in thousands}) + 0.114(\text{rural school}) + 0.276(\text{middle school}) + 0.003(\text{NSLP}) + 0.019(\text{student teacher ratio}) + 0.003(\text{minority teachers}) + 0.003(\text{LEP students}) + 0.061(\text{administrative/colleague support}) + 0.158(\text{school problems}) + 0.181(\text{community problems}) + 0.369(\text{class control}).
\]

**Discussion**

It is important to note most teachers surveyed were satisfied to a high or moderate degree. About 15.5% of teachers in the sample were moderately or very dissatisfied. This finding supports the studies that suggest that most teachers are satisfied with their jobs (Kyriacou & Sutcliffe, 1979; Quaglia et al., 1991; Rebora, 2009). This finding is important because many studies that examine teacher dissatisfaction fail to mention the overall satisfaction and dissatisfaction rates of teachers. Moreover, this finding suggests that the positive aspects of teaching, such as helping students and community involvement, outweigh the negative aspects of the job. Nevertheless, there are aspects of teaching that can increase...
dissatisfaction. Discussion of the salient factors that negatively affect teacher job satisfaction are discussed below.

**School Environment**

In consideration of the factors that contribute to dissatisfaction, the results suggest that school environment plays a crucial role in the experience of dissatisfaction among public school teachers. When school environment is considered, the study suggests that positive environment and teacher control decrease teacher dissatisfaction; thus teachers who perceive a more positive environment and have more control over their classrooms are more satisfied with their jobs. The study further suggests that teachers’ perceptions of student problems and teachers’ perceptions of community problems increase teacher dissatisfaction.

A reexamination of the composition of the school environment variables clarifies the findings further. A positive school environment comprised the following components: a supportive administration, enforcement of rules by the principal and other teachers, shared beliefs and values, communication among the principal and staff, cooperation among staff, recognition of achievement and hard work by the principal, general overall satisfaction, general satisfaction with salary, and the belief that the school is well run. Based on the composition of the positive school environment variable, having a positive school environment is heavily dependent on the administration and other staff members. Having a school leader who communicates with staff members and sets the tone for cooperation, and a shared sense of purpose is critical to teachers’ perception of a positive school environment and being satisfied with their jobs (Bogler, 2001).

Teacher control is another aspect of the school environment that affects teacher dissatisfaction. The teacher control variable in this study comprised control over teaching practices, control over grading, control over discipline, and control over homework. These four components typically occur within a teachers’ classroom and correspond with the microsystem of the teachers’ school environment. Thus, control and autonomy over classroom decisions are very important for teachers to be satisfied with their jobs. Again, the administration determines how much autonomy and control teachers have over the affairs of their classroom. This study suggests that more control helps teachers to be satisfied with their jobs.

Teachers’ perceptions of the problems students have within their school and classroom affect teacher dissatisfaction; the more problems that are perceived by teachers, the more dissatisfied they are with their jobs. The perceptions of student problems variable includes student tardiness, students who are absent frequently, class cutting, student dropouts, and student apathy. It is important to note that the teachers’ thoughts about these issues were important for dissatisfaction; the actual numerical rates of students’ drop-out, absence, tardiness, and so on were not. Thus, if teachers’ perceptions of student problems were to improve, then their job satisfaction could also improve. This finding is very important because teachers’ perceptions may be easier to change than students’ actual behaviors, which are oftentimes out of their control and affected by extraneous circumstances.

Teachers’ perceptions of community problems also affected their job satisfaction. When teachers perceived more problems with the community in which they worked, they were more likely to be dissatisfied. The variable included teachers’ perceptions about parental involvement, poverty, student preparation, and student health. As teachers perceive lower levels of parental involvement, student preparation, and student health and higher levels of poverty, they are more likely to be dissatisfied with teaching. Parental involvement and poverty have been widely studied as factors that are important for teachers, students, and schools, especially in terms of student achievement (Hoover-Dempsey & Sandler, 1995; White, 1982). Student health and student preparation have been studied mostly in terms of student achievement but have not been widely studied as factors that affect teachers. It is very possible that these factors cause decreases in teacher satisfaction due to their roles in student achievement. Teachers are increasingly assessed in regard to how well their students perform (see, for example, McCaffrey, Lockwood, Koretz & Hamilton, 2004). Nevertheless, this conjecture is outside of the scope of the research conducted in this project and requires further study.

One of the strengths of Brofenbrenner’s theory is that the system levels are not self-contained; rather there is interaction between system levels. This research study makes it clear that the different system levels do interact with each other; specifically, school environment serves to mediate the effects of variables in other levels of the system. Recall that three out of the four school environment variables are located within the mesosystem. One school environment variable, teacher control, is located within the microsystem.

**Teacher Background**

In examination of teachers’ personal characteristics, ethnicity played a role in the dissatisfaction of teachers. Before school environment was added to the model, Hispanic teachers were more likely to be dissatisfied. However, once school environment was added to the model, the effect ceased to exist. This result suggests that the issues that cause Hispanic teachers to experience dissatisfaction with their jobs have more to do with the school environment than common experiences based on their ethnicity. Again, positive school environment and classroom control increased teachers’ levels of satisfaction; both of these variables relied
changes in areas where unions are being challenged. Because many states are making changes to the functions of these three variables raised the odds of teacher satisfaction, even if their environments are perceived as ideal. Each of these three variables raised the odds of teacher satisfaction, even in schools where teachers perceived negative student behaviors and negative community factors, such as poverty. Because many states are making changes to the functions of unions, it is important to monitor how teacher satisfaction changes in areas where unions are being challenged.

**Microsystem**

Recall that the microsystem is defined as the teachers’ classroom. Examination of the microsystem in light of the school environment reveals that the student–teacher ratio remains an important component of teacher dissatisfaction, even when the school environment is taken into account. In fact, the importance of the student–teacher ratio actually increased once school environment was added to the model. As school budgets decrease and the numbers of students increase, it is critical that school districts continue to invest in efforts that will keep class sizes from becoming too large. Perhaps smaller class sizes allow teachers to work with students who show problematic behaviors or students with community challenges such as poverty and underpreparedness more effectively; this idea will need to be explored through further study. Nevertheless, smaller class sizes help teachers to be more satisfied with their jobs and smaller class sizes have also been shown to positively affect student achievement (Stecher, Bohrnstedt, Kirst, McR Robbie, & Williams, 2001).

Another interesting interaction between the school environment and the microsystem is the effect of the percentage of minority students on teacher dissatisfaction. When the model included only teacher background and school background, the percentage of minority students slightly increased teacher dissatisfaction. However, once school environment was added to the model, the percentage of minority students became nonsignificant to the satisfaction of teachers. This indicates that the actual race of the students taught is not as important as teachers’ perceptions about the students they teach. All school environment variables were based on teachers’ perceptions. Although the effects were small, this finding indicates that helping teachers to perceive minority students differently could increase their satisfaction with teaching large numbers of minority students.

Conversely, the percentage of LEP students taught became more important once school environment was factored into the model. Although the effect is small, the finding is interesting and worthy of additional study. A communication barrier between linguistically diverse students and teachers could be related to this finding. Moreover, teachers may not have the resources or training to effectively teach LEP students. The School environment did not capture the resources that a school had or training that the teacher might have received. In addition, the data did not include the types of programs that were offered in schools to support LEP students and teachers of these students, such as dual-language programs. It is possible that more training, more resources, or specific types of bilingual programs could help teachers to work more effectively with these students. Thus, more research is needed to examine the interactions between linguistically diverse students and general education teachers.

**Mesosystem**

The mesosystem was defined as the school and immediate community where teachers work. Within the mesosystem, urban school locale decreased in importance and became nonsignificant once school environment was added to the model. Conversely, middle school designation and rural school locale increased in importance when school environment was added to the model. When considering urban and rural schools, the results of the study suggest that differences in teachers’ perceptions of school environment better explain why urban schools cause dissatisfaction among teachers. Urban schools typically have challenges such as student poverty, funding concerns, and large percentages of minority students. This study suggests that teachers’ perceptions about such challenges are more important than the actual school being designated as “urban.” This difference is important to note because many studies include urban school location as a
variable when studying teacher dissatisfaction and other constructs such as teacher stress. Future studies should carefully examine teachers’ attitudes about their school environment as well as locale to ensure accurate results.

Rural schools, however, do have a quality that contributes to teacher dissatisfaction that cannot be attributed to the school environment. This finding indicates that more study is needed to determine what factors cause rural teachers to be more dissatisfied with their jobs. Similarly, middle school designation also increased in importance once school environment was added to the model. This finding suggests that there are other aspects about middle schools that were not captured by teachers’ perceptions about the school environment that cause teachers dissatisfaction. It is important to note that student challenges such as tardiness, absences, class cutting, and apathy were included in school environment and, thus, do not account for teacher dissatisfaction in the model.

Implications

The implications of this study are numerous because of the large number of variables examined. The most significant implications will be noted. First, the results of this study suggest that the school environment plays a major role in the dissatisfaction of teachers. Efforts to understand teacher satisfaction should include measures of the school environment to fully understand the phenomenon. In regards to specific findings, Black teachers need to be examined in more detail to better understand their unique experiences and insights that may cause increased dissatisfaction among them as a group. Qualitative studies may be particularly helpful at identifying the concerns and challenges of being a Black teacher. Along the same lines, rural schools and middle schools should be examined in more detail to determine why these schools in particular cause higher rates of dissatisfaction among teachers. Moreover, because teacher unions are being threatened in the current political climate, future studies might want to examine how teacher satisfaction is affected by the weakening and loss of unions.

Limitations

Some findings could have sociopolitical ramifications if taken out of context. All findings need further study to uncover new data that will illuminate the nuances. The Likert-type questions that were used to construct variables were written in such a manner that a large majority of the teachers fell to one extreme. Skewed variables violate the assumptions of multiple regression and can be a source of error. Because of the skewness of several variables, an OLS regression could not be completed for dissatisfaction; rather, a logistic regression was performed. Transforming the criterion variable to make it dichotomous resulted in the loss of variability within the data which might have affected the final results.

Appendix A

Unweighted Descriptives for Continuous SASS Variables in the Study

| Variable                                      | n    | M    | SD   |
|-----------------------------------------------|------|------|------|
| Teacher’s age                                 | 38,240 | 42.77 | 11.67 |
| Total school-related yearly earnings          | 38,240 | 47,464.86 | 14,570.39 |
| Teacher’s years of experience                 | 38,240 | 13.92 | 10.46 |
| Number of FTE teachers in school              | 38,240 | 53.21 | 38.23 |
| Total K-12 and ungraded enrollment            | 38,240 | 815.41 | 662.79 |
| Number of classes taught                      | 25,650 | 5.39 | 2.97 |
| Percentage of students who are LEP            | 32,640 | 5.40 | 14.41 |
| Percentage of students with an IEP            | 32,640 | 15.93 | 22.08 |
| Percentage of students enrolled in NSLP        | 37,180 | 41.33 | 26.07 |
| Student/teacher ratio                         | 38,240 | 14.75 | 5.00 |
| Percentage of teachers who are racial/ethnic minority | 38,240 | 12.91 | 21.23 |
| Percentage of students who are racial ethnic minority | 38,240 | 37.27 | 34.27 |

Note: SASS = School and Staffing Survey; LEP = Limited English Proficiency; IEP = Individual Educational Program; NSLP = National School Lunch Program; FTE = Full Time Educator.
### Appendix B

**Unweighted Descriptives for Categorical SASS Variables in Study**

| Variable                                | Category                                      | Frequency | %   |
|-----------------------------------------|-----------------------------------------------|-----------|-----|
| Main assignment                         | Regular full-time teacher                     | 34,870    | 91.2|
|                                         | Regular part-time teacher                     | 1,440     | 3.8 |
|                                         | Other                                         | 1,930     | 5.0 |
|                                         | Total                                         | 38,240    | 100.0|
| Taught 3 or fewer years                 | Taught 3 years or less                        | 6,830     | 17.9|
|                                         | Taught more than 3 years                      | 31,400    | 82.1|
|                                         | Total                                         | 38,240    | 100.0|
| Highest degree earned                   | Associate’s/no degree                         | 520       | 1.4 |
|                                         | Bachelor’s degree                             | 18,870    | 49.4|
|                                         | Master’s degree                               | 16,250    | 42.5|
|                                         | Education specialist                          | 2,230     | 5.8 |
|                                         | Doctorate/Professional degree                 | 380       | 1.0 |
|                                         | Total                                         | 38,240    | 100.0|
| School level                            | Primary                                       | 10,290    | 26.9|
|                                         | Middle                                        | 4,970     | 13.0|
|                                         | High                                          | 18,240    | 47.7|
|                                         | Combined                                      | 4,750     | 12.4|
|                                         | Total                                         | 38,240    | 100.0|
| Gender                                  | Male                                          | 11,890    | 31.1|
|                                         | Female                                        | 26,360    | 68.9|
|                                         | Total                                         | 38,240    | 100.0|
| Race                                    | Black                                         | 2,320     | 6.1 |
|                                         | White                                         | 34,830    | 90.1|
|                                         | Asian                                         | 610       | 1.6 |
|                                         | Other                                         | 480       | 1.3 |
|                                         | Total                                         | 38,240    | 100.0|
| Ethnicity                               | Hispanic                                      | 1,550     | 4.1 |
|                                         | Not Hispanic                                  | 36,690    | 95.9|
|                                         | Total                                         | 38,240    | 100.0|
| Union member                            | Yes                                           | 27,290    | 71.4|
|                                         | No                                            | 10,950    | 28.6|
|                                         | Total                                         | 38,240    | 100.0|
| School locale                           | Rural                                         | 13,220    | 34.6|
|                                         | Town                                          | 7,330     | 19.2|
|                                         | City                                          | 8,560     | 22.4|
|                                         | Suburban                                      | 9,130     | 21.8|
|                                         | Total                                         | 38,240    | 100.0|
| Highly qualified                        | Yes                                           | 33,510    | 87.6|
|                                         | No                                            | 4,730     | 12.4|
|                                         | Total                                         | 38,240    | 100.0|
| Teacher state certification             | Regular/standard/advanced                     | 33,700    | 88.1|
|                                         | Certificate issued after probationary period  | 1,350     | 3.5 |
|                                         | Certificate that requires additional coursework| 1,570     | 4.1 |
|                                         | Certificate that requires a certification program| 940     | 2.5 |
|                                         | None in this state                            | 650       | 1.7 |
|                                         | Total                                         | 38,240    | 100.0|
| Supportive administration               | Strongly agree                                | 21,030    | 55.0|
|                                         | Somewhat agree                                | 12,470    | 32.6|
|                                         | Somewhat disagree                             | 3,080     | 8.1 |
|                                         | Strongly disagree                             | 1,660     | 4.3 |
|                                         | Total                                         | 38,240    | 100.0|

(continued)
## Appendix B (continued)

### Variable Category Frequency %

| Generally satisfied | Strongly agree | 22,100 | 57.8 |
|----------------------|----------------|--------|------|
|                      | Somewhat agree | 13,410 | 35.1 |
|                      | Somewhat disagree | 2,000 | 5.2 |
|                      | Strongly disagree | 730  | 1.9 |
|                      | Total           | 38,240 | 100.0 |
| Problem—Poverty      | Serious problem | 8,320  | 21.8 |
|                      | Moderate problem | 11,940 | 31.2 |
|                      | Minor problem   | 13,120 | 34.3 |
|                      | Not a problem   | 4,860  | 12.7 |
|                      | Total           | 38,240 | 100.0 |
| Remaining in teaching| As long as I am able | 17,200 | 45.0 |
|                      | Until eligible for retirement | 10,410 | 27.2 |
|                      | Until eligible for Social Security | 1,080  | 2.8 |
|                      | Until life specific event occurs | 1,150  | 3.0 |
|                      | Until more desirable job comes | 1,830  | 4.8 |
|                      | Definitely plan to leave soon | 590   | 1.5 |
|                      | Total           | 38,240 | 100.0 |
| Would be a teacher again | Certainly would be a teacher | 16,070 | 42.0 |
|                      | Probably would be a teacher | 9,890  | 25.9 |
|                      | Chances about even | 6,600  | 17.2 |
|                      | Probably would not | 4,250  | 11.1 |
|                      | Certainly would not | 1,440  | 3.8 |

Note: SASS = School and Staffing Survey.

## Appendix C

**Summary of Exploratory Factor Analysis Results of School Environment**

| Item                        | Factor 1 | Factor 2 | Factor 3 | Factor 4 | Factor 5 |
|-----------------------------|----------|----------|----------|----------|----------|
| Supportive administration   | .761     |          |          |          |          |
| Principal enforces rules    | .744     |          |          |          |          |
| Teachers enforce rules      | .533     |          |          |          |          |
| Staff share beliefs/values  | .483     |          |          |          |          |
| Principal communication     | .758     |          |          |          |          |
| Staff cooperation           | .622     |          |          |          |          |
| Staff recognized            | .716     |          |          |          |          |
| General satisfaction        | .712     |          |          |          |          |
| Satisfied with salary       | .631     |          |          |          |          |
| School is well run          | .772     |          |          |          |          |
| Student tardiness           |          | .631     |          |          |          |
| Problem with tardiness      |          | .788     |          |          |          |
| Students absent             |          | .765     |          |          |          |
| Class cutting               |          | .818     |          |          |          |
| Teachers absent             |          | .441     |          |          |          |
| Student dropouts            |          | .660     |          |          |          |
| Student apathy              |          | .533     |          |          |          |
| Lack of parent involvement  |          |          |          |          | .740     |

(continued)
Appendix C (continued)

| Item                                      | Factor 1 | Factor 2 | Factor 3 | Factor 4 | Factor 5 |
|-------------------------------------------|----------|----------|----------|----------|----------|
| Poverty                                   | .815     |          |          |          |          |
| Unprepared students                       | .709     |          |          |          |          |
| Student health                            | .687     |          |          |          |          |
| Teaching not worth it                     |          | .580     |          |          |          |
| Would leave for better pay                |          | .737     |          |          |          |
| Would transfer to different school        |          | .444     |          |          |          |
| Less enthusiasm for teaching              |          |          | .668     |          |          |
| Too tired for school                      |          | .545     |          |          |          |
| Would be a teacher again                  |          | −.714    |          |          |          |
| Remaining in teaching                     |          | −.546    |          |          |          |
| Control over teaching                     |          |          | .664     |          |          |
| Control over grading                      |          |          | .730     |          |          |
| Control over discipline                   |          |          | .607     |          |          |
| Control over homework                     |          |          |          | .773     |          |

Factor 1 = administration/colleague support; Factor 2 = problems in school; Factor 3 = parent/community problems; Factor 4 = teacher dissatisfaction; Factor 5 = classroom control.

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Notes

1. All results are based on the third model of the logistic regression unless otherwise noted.
2. The term LEP (Limited English Proficiency) is used in this article because it was the term used in the survey. This term may be deemed antiquated by some readers.

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**Bio**

**Cara M. Moore** is an assistant professor at the University of Tennessee in the Department of Child and Family Studies. Her research interests include teacher well-being, culturally responsive teaching in early childhood education, and teachers’ experiences in urban settings. She can be contacted at cmoore85@utk.edu