

# CAN SMALL CLASS SIZES HELP RETAIN TEACHERS TO THE PROFESSION?\*

William Price  
Ernest Terry, Jr.

This work is produced by OpenStax-CNX and licensed under the Creative Commons Attribution License 2.0<sup>†</sup>

## Abstract

School districts across the nation annually experience frequent teacher turnover and loss of teachers to the profession. The primary cause contributing to this condition is low teacher job satisfaction. This study examined the relationship between small class size in early elementary grades and teacher job satisfaction in a single school district using 20 elementary schools involving 135 teachers. Results of the study indicated that higher levels of teacher satisfaction were associated with fewer children assigned to a class. Specifically, statistically significant correlations were found for the relationship between small class sizes and the use of enriched activities in the classroom, ability to reconfigure classrooms for learning, and increased ability to respond to student needs, all factors enhanced through smaller class sizes and related to teacher job satisfaction.



NOTE: This module has been peer-reviewed, accepted, and sanctioned by the National Council of Professors of Educational Administration (NCPEA) as a scholarly contribution to the knowledge base in educational administration.

## Teacher Attrition and Job Satisfaction

The problem of teacher attrition is not a new phenomenon. In a Phi Delta Kappan article entitled, “Why are Experienced Teachers Leaving the Profession?”, Tye and O’Brien (2002) noted that a November 16, 1962 Life Magazine issue included an article entitled “How We Drive Teachers to Quit” written by Richard Meryman. Meryman’s findings from interviews from ex-teachers across the country were remarkably similar to findings from more recent studies that focus on teacher job satisfaction - or lack of it. Doune Macdonald’s (1999) review of international literature on teacher attrition yielded several strategies to improve working conditions and thereby improve teacher job satisfaction. Macdonald’s list of reasonable strategies include increasing teacher responsibility for educational decisions; increasing parent and community support for schools and teachers; fostering collegial relationships among teachers and administrators, repairing and

---

\*Version 1.2: Jul 29, 2008 9:28 am -0500

<sup>†</sup><http://creativecommons.org/licenses/by/2.0/>

upgrading school buildings and teachers' accommodations; and reducing class sizes. Macdonald's findings also suggest that where such favorable conditions exist, teachers feel better about their work and are less likely to leave the profession.

#### Small Class Size and Teacher Job Satisfaction

While the effects of small class size on student achievement has now been fairly well documented through research over several decades (Glass and Smith 1978, Achilles 1996, Finn and Achilles 1999, et al), what is less well known is the effect that class size has on teachers job satisfaction. As Maeroff (1991) noted, "Even if adding students to a class does not affect student achievement, is it advantageous to tolerate large classes if doing so is apt to demoralize teachers and perhaps drive them from the profession?" (p. 52). In a survey conducted using 8,500 educators in the Clark County School District, Nevada, Hirsh & Emerick (2006) gathered data with which to determine local working conditions and subsequently to determine reform strategies. From the data gathered, two of the premises that were formed were: 1) Teacher working conditions are students learning conditions and, 2) Teaching and learning conditions affect teacher retention. On the survey only 27 percent of teachers agreed that they had reasonable class sizes, the vast majority did not. Would teachers feel higher levels of job satisfaction when class sizes are reduced? If the answer to that question is yes, then a cost benefit analysis might well conclude that the additional costs of reducing class sizes might be more than off-set by any costs associated with teacher attrition.

#### Purpose of This Study

Presumably, one of the best ways to strengthen the teaching profession and help retain quality teachers is to improve job satisfaction and make teaching a more satisfying career. If indeed, small class size is related to increased levels of teacher job satisfaction, then one strategy for addressing the issue of teacher attrition might be to invest in small class sizes. To further pursue the question of the relationship between class size and teacher job satisfaction, the authors conducted a limited study using first through third grade elementary school teachers in a single Michigan suburban school district.

#### The Study

The research hypothesis for this study is that teachers with smaller class sizes will have higher levels of job satisfaction. Class size, according to Finn and Achilles (1999) is, "the number of students regularly in a teacher's room for whom the teacher is responsible each day of the school year" (p.104). Class size describes the immediate teaching/learning situation. They continue to say, "the size of a class is related directly to the amount of time teachers spend on instruction and to pupils' engagement in learning" (p.105). A mixed methodology approach using an ex post-facto research design that employed questionnaires and focus groups was the basis for collecting data to test this hypothesis. A single large suburban school district located in southeastern Michigan participated in this study. Classroom teachers employed in 20 elementary schools comprised the population. This population included 166 general education teachers assigned to first, (n=57), second (n=57), and third (n=52) grades. Teachers were divided into three groups for class size comparisons; those teachers with fewer than 19 students, those with 19 to 24 students and teachers with over 24 students.

Three instruments were used for this study: Quality of Teacher Work Life (Harrington and Pelsma, 1985), Teaching Satisfaction Inventory, and a short demographic questionnaire. The Quality of Work Life (QTWL) measures job satisfaction and teacher stress using 36 items as single constructs. To test the QTWL for validity and reliability, a total of 227 certified staff members for a school district in the Midwest area of the United States were included in the study by Pelsma et al. (1989). Internal consistency reliability estimates using Cronbach alpha coefficients was .89 for Satisfaction. Test-retest reliabilities were obtained for the subscales, with satisfaction having a reliability of .65 over a one-year period. In a study of 251 teachers, Harrington, Burry, and Pelsma (1985) reported reliability coefficients of .87 for the Satisfied scale. For use in this study teachers rated only their levels of job satisfaction. A five-point Likert type scale, ranging from 1 for very satisfied to 5 for very dissatisfied was used. A single score using all items was obtained to measure job satisfaction. The measure could range from 1 to 5 with lower scores reflecting greater job satisfaction.

The Teacher Satisfaction Inventory (TSI) was developed by the researchers to measure teacher's perception of job satisfaction based upon their current school year and compared to the number of students in their room. Forty items on this scale were rated by teachers, with a 1 indicating strongly agree and 4 indicating strongly disagree. Lower scores on this scale indicated higher levels of satisfaction.

A cluster analysis of the survey data was used. The clusters that emerged from the analysis were examined to determine if they had been logically derived and measured different areas of classroom teaching and class size that could lead to teaching satisfaction. A principal components factor analysis with a varimax rotation was used to determine if the subscales that emerged would validate findings of the cluster analysis and measure the latent variable, job satisfaction with regard to class size. Eleven factors – effective relationships, working effectively with all ability levels, student engagement, time management, student discipline and classroom management, positive aspects of teaching ( i.e., time to work with mainstreamed students, individualized support, hands on activities, etc.) use of enrichment activities, (i.e., supplement and expand district curriculum, field trips, etc.) working collaboratively, classroom communications, classroom configuration, (space in my classroom is large enough to accommodate students, desks, and allow for use of projects, learning centers, etc.), and responding to students, emerged from the study. The 11 factors that emerged from the factor analysis were significant (size values greater than 1.00) and were used as subscales for the study and subsequent analysis.

The primary analyses used to test the research hypothesis correlated the 11 subscales measuring teacher satisfaction and the QTWL with teachers' current class size. Pearson product moment correlations were used for this purpose and are shown in Table 1.

Table 1  
Pearson Product Moment Correlations  
Satisfaction with Teaching by Class Size

Satisfaction with Teaching	Number	r Value	Sig of r
Job Satisfaction (Quality of Teacher Work Life)	134	-.14	.103
Effective relationships	135	-.10	.270
Work effectively with all ability levels	135	-.11	.188
Student engagement	135	-.01	.959
Time management	135	-.06	.464
Student discipline and classroom management	135	-.11	.191
Positive aspects of teaching	135	-.01	.905
Use of enrichment activities	135	-.24*	.006
Working collaboratively	135	-.07	.443
Classroom communications	135	-.16	.062
Classroom configuration	135	-.30*	<.001
Responding to students	135	-.25*	.004

Table 1

\* $p \leq .05$

(Note: Negative signs have been inserted in the correlations to indicate that higher levels of job satisfaction are associated with fewer children in the participating classrooms of the teachers.)

Three statistically significant correlations were obtained during this analysis. The relationship between the use of enrichment activities and class size produced an r value of -.24, which was statistically significant, indicating that teachers who perceived they were able to use enrichment activities had smaller numbers of students in their classes. Enrichment activities meant being able to supplement and expand upon the district's curriculum, as well as taking students on field trips several times a year. The obtained r value of -.30 for the correlation between class size and classroom configuration was also statistically significant indicating that teachers with fewer students were more positive about their ability to reconfigure their classroom. This

indicated teachers felt there was adequate space in their classrooms to accommodate students and desks, with sufficient additional space for special projects, i.e., enough space to incorporate learning centers. Teachers with small class sizes were also more likely to have positive perceptions regarding responding to students as evidenced by a statistically significant  $r$  value of  $-.25$ . Teachers felt there was sufficient time to answer questions from all of their students. All remaining correlations, while in a negative direction, were not statistically significant. To determine if the probability of 3 significant results out of 12 possible outcomes was statistically significant, binomial analysis was used. The resultant probability level of  $.02$ , obtained from the binomial probability distribution table in Mansfield (1987), was under  $.05$ , indicating that this finding was statistically significant suggesting a relationship between small class size and higher levels of teacher job satisfaction.

Finally, as a further means of exploring class size and its effects on teacher's job satisfaction, teachers at three elementary schools were randomly selected to participate in focus group meetings. A set of structured questions were used as the basis for discussion to expand upon findings of the Quality of Work Life Survey and the Teacher Satisfaction Inventory. After a general discussion of those items that increase or decrease job satisfaction, class size was cited by all three focus groups as a major factor in increasing or decreasing job satisfaction. Some major themes identified through focus groups included:

1. Class size impacts the ability of teachers to individualize instruction.
2. Class size impacts the ability of the teacher to know the student and to be aware of progress or lack thereof.
3. Classroom management and student behavior is related to class size.
4. Physical space for classroom activities is limited by large sizes.
5. Inclusion of special needs students is more feasible with small class sizes.
6. Teachers with small class sizes reported more efficient use of time with students.

### Summary of the Study

This study sought to examine the relationship that class size might have with teacher's job satisfaction. The analysis conducted found that job satisfaction could be predicted from effective relationships, time management, and classroom configurations. The correlational analysis also provided evidence of statistically significant correlations with these three variables and class size, providing further support that class size has a strong influence on teacher satisfaction. Effective relationships between teacher, parents, and students can be enhanced with fewer students. Teachers with fewer students can spend more time with parents at parent-teacher conferences and communicate with them on a regular basis. Time management skills can assist teachers in implementing district curriculum requirements, optimize instructional time, and leave school not feeling overwhelmed at the end of the day. As the number of children in a classroom decreases, the space available for each child increases, allowing teachers to provide innovative learning centers for special projects. These factors can increase job satisfaction for teachers making them less likely to depart the profession. Viewed from this perspective, investments in small class-sizes may well be cost effective when compared to the annual costs of recruiting and training new teachers and the loss of sustained learning for students.

### References

Achilles, C.M. (1996). Summary of recent class-size research with an emphasis on Tennessee's Project SAR and its derivative Research Studies. Center of Excellence for Research and Policy on Basic Skills. Tennessee State University. Nashville, TN.

Finn, J. D., & Achilles, C. M. (1999). Tennessee's class size study: Findings, Implications, Misconceptions. *Educational Evaluation and Policy Analysis*, 21(2), 97-109.

Glass, G.V., & Smith, M.L. (1978). Meta-analysis of research on the relationship of class size and achievement, the Class Size and Instruction Project. San Francisco: Far West Laboratory for Educational Research and Development. (ERIC Document Reproduction Service ND. ED 168 129)

Harrington, R. G., Burry, J. A., & Pelsma, D. (1985). Factors contributing to teacher stress. In T. W. Miller (Ed.), *Stress life events*, 677-696. Madison, CT: International Universities Press.

Hirsch, E. & Emerick, S., (2006). Teaching and Learning Conditions are Critical to the success of students and the retention of teachers. Final report to the 2006 teaching and learning conditions survey to the Clark County School District and Clark County Education Association. Center for Teaching Quality. (ERIC Education Resources Information Center ED499286)

Ingersoll, Richard (2003). Is there really a teacher shortage? Seattle Center for the Study of Teaching and Policy.

Macdonald, Doune (1999). Teacher attrition: A review of the literature. *Teaching and Teacher Education*, 15, 835-48.

Maeroff, G. I. (1991). Voices from the classroom: Exceptional teachers speak. ERIC # ED 331787, 1-35.

Mansfield, E. (1987). *Statistics for business and economics: Methods and applications* (3rd ed). New York. W. W. Norton & Co.

Pelsma, D. M., Richard, G.V., Harrington, R. G., & Burry, J. M. (1989). The quality of teacher work life survey: a measure of teacher stress and job satisfaction. *Measurement & Evaluation in Counseling and Development*, 21(4), 165-176.

Tye, B. & Obrien, L. (2002). Why we experienced teachers leaving the profession: *Phi Delta Kappan*, 84(1), 24-32.