

# WISCONSIN

## *Teacher Distribution Project Report*

### **Introduction and Background**

The Wisconsin Department of Public Instruction (DPI) was invited to participate in the Equal Access to Quality Teachers Project, sponsored by the Education Trust and funded by the Joyce Foundation. The study involved three mid-western states and one major urban district in each. The DPI agreed to participate. A state level advisory committee was convened (Appendix A) and Katie Schultz Stout was hired as program director.

The study states, “The latest research unequivocally demonstrates the profound impact of teachers on the education of their students. But just as the promise of effective teachers is a key element of any strategy for ensuring that low-income and minority students make academic gains, their lack of access to effective teachers is one of the key barriers holding them back.” Education Trust points to several studies that show the least experienced, least qualified, least effective teachers are far more likely to teach low-income and minority students. In light of this research the current project was designed to examine whether this condition exists in the states and districts invited to participate in the study. The project design included three stages:

- **Stage 1** – Understanding the Extent of the Problem
- **Stage 2** – Understanding the Causes of the Problem
- **Stage 3** – Creating an action Plan to Address the Problem

In pursuing this study the Wisconsin Advisory Committee agreed to the following project guidelines:

- Explorations of each of the multiple dimensions of teacher quality, including the use of multiple measures of teacher knowledge/skills and student learning.
- Analysis of student data by race/ethnicity, socio-economic status, academic performance level.
- Classroom-level analysis of teacher distribution within the urban partner district.
- School-level analysis of teacher distribution within the state.
- Consideration of all possible causes of and potential solutions for the maldistribution of teachers.
- Recommendations that include a process for identifying highly skilled teachers.
- Public reporting of all findings and recommendations.



The Advisory Committee identified key elements and data sources available to determine whether Wisconsin would show the same assignment that Education Trust cited in their project designed. As part of the deliberations the Committee took issue with the term “teacher quality” and contended that the measures indicated in the project proposal did not provide a comprehensive look at what teacher quality truly involves. Concerns were expressed regarding measurement of student progress. Specifically, it was noted that testing is only one measure of student achievement. Further, it must be acknowledged that a wide range of factors in the community, in families and in schools impact the success of poor and minority students.

The analysis of data proved to be a significant challenge since Wisconsin is a state with heavy emphasis on local control, resulting in limited state level data reporting. Further, various databases containing information pertinent to the study were not originally designed to interact with each other.

The Wisconsin analysis data included teacher certification files, school district and school data, student testing data, free and reduced price lunch program participant data, student racial identification and teacher assignment data. Following a review and initial consideration of findings, a workgroup undertook a more detailed examination of data. Tabulations included further breakdown of teacher certification data by experience bands, the examination of data with and without Milwaukee data included, and further analysis of poverty and minority status by deciles.

## Findings

This section of the report presents a summary of the findings. The full scope of data tables are provided in the Appendices. It is important to note that when the analysis began, data was available on teachers from 2003-04 and student data from 2004-05. The teacher data for 2004-05 was not yet available. It is equally important to note that when the 2004-05 teacher data was complete, it documented a significantly higher percentage of fully certified and appropriately licensed teachers in schools in the 10th decile or large city category. The 2004-05 data would change the results slightly, but not significantly.

## Project Premise...

*“Now that states have established academic standards and assessments, we have a clearer picture than ever before of which students are receiving the educational opportunities they need, and which are not. Unsurprisingly, many of our greatest challenges to providing these educational opportunities occur in schools with traditionally underserved low-income and minority students, many of whom reside in large urban areas.”*

*-Teacher Distribution Project funded by the Joyce Foundation*

Wisconsin has gathered a number of teacher, school, and student characteristics. The purpose has been to describe how teacher traits associate with student demographics and schools. While the data has not been unequivocal, several teacher characteristics are notable in the study.

From a study of 2,058 schools using 2004-05 school year data, key school data were arranged into deciles representing the lowest to highest minority percentage, the lowest to highest poverty percentage (using federal free and reduced lunch program participation as a proxy), and the highest to lowest performance on Reading and Mathematics on the 2004-05 Wisconsin Knowledge and Concepts Examination (WKCE). All of these characteristics are highly inter-related. Poverty and minority percentage at schools are positively correlated while both of these characteristics are negatively correlated with student achievement. All three of these characteristics are also concentrated in the city of Milwaukee – making it difficult to decouple poverty, ethnicity, and urbanicity. Milwaukee schools in this study average 77.4% poverty and 83.0% minority and consequently, the great majority of Milwaukee schools are in the bottom decile of poverty.

The data in this study seem to corroborate the existence of teacher disparity in Wisconsin and its association with poverty, race/ethnicity, and urbanicity. Characteristics that may link closely to successful instruction are at lower levels in the highest needs schools. Using these data, teacher experience is less in the at-risk deciles – the decile with the highest poverty, highest minority, and lowest reading and math performance. Lower experience levels are apparent in both total teacher experience and teacher experience within the current district

of employment. New teachers (teachers that have less than three years of total experience) are much more prevalent in the highest risk deciles. Other data, while interesting, were not as conclusive. Teacher education (attainment of Masters degree or higher) and emergency licensure exhibited no readily interpretable association with school characteristics. Though percentages of teachers with full, appropriate licensure for their current assignment exhibit disparities much like teacher experience, it was not as robust a measure as we would have liked. These data are relevant, but may require further investigation before drawing more specific inferences.

In making recommendations related to this data it is important to acknowledge the many programs and initiatives currently in place to assist minority and poor students, as well as their parents, teachers and administrators in striving to improve student learning. These efforts include:

- Wisconsin Quality Educator Initiative (PI 34)
  - State rules related to teacher preparation, licensure, and professional and career development are based on nationally recognized standards and performance-based criteria.
- A legislated Professional Standards Council for Teachers advises the State Superintendent of Public Instruction on matters related to teacher licensing.
- The Department of Public Instruction sponsors an annual conference, Wisconsin Schools of Promise, designed to support and recognize schools that achieve at higher than expected levels and promote best practice.
- The Quality Educator Interactive, developed by the University of Wisconsin System, WEAC, WASDA, and AWSA.
- The New Wisconsin Promise, outlines State Superintendent of Public Instruction, Elizabeth Burmaster's commitment to ensure the opportunity of a quality education for every child; and to closing the achievement gap between economically disadvantaged students, students of color and their peers.

Framing the work of this project in its larger context is not only important, but also consistent with Advisory Committee discussions. There was agreement among committee members of the importance of recruiting and retaining excellent teachers to work with students in schools with high levels of minority and poor students. Discrepancies in teacher experience and

certification exist at different levels throughout the state; and the state and local districts need to work collaboratively to address these variations.

At the same time we cannot pretend that addressing the teacher issue is sufficient. There is clear evidence that other important conditions have a great impact on student learning and they cannot be ignored. For example, poverty is correlated with low student achievement. In addition, there is also clear evidence that the mother's education level has a significant effect on learning. Community resources such as the availability of family sustaining wages, affordable housing, recreation and cultural resources are critical in providing the learning experiences that a child needs before and during the school year.

However, this study does indicate the existence of teacher disparity in Wisconsin. Data reveal that teachers with less experience are more likely to be teaching in high need schools. To that end, the following recommendations are advanced to ensure more equitable distribution of experienced, highly skilled teachers.

## Recommendations

Recommendations that follow are extensive and outline a wide range of action. The recommendations address the scope of factors that impact teacher quality and challenges for high need schools. It will take broad-based collaboration to achieve the desired results. As the Wisconsin Department of Public Instruction, in collaboration with other educational partners, summarize and distribute this report, recommendations will be advanced on how to recruit, retain and recognize well-prepared teachers in schools with high percentages of minority and poor students and low levels of achievement. Each recommendation is followed by a notation of lead entity.

### Recruitment:

- Adequately fund PI 34 Induction and Mentoring Programs (policy makers and districts).
- Hire teachers for high need schools in the spring of the year. In this way, high need schools will have early access to the most highly skilled teachers (districts).
- Examine contracts for items such as mentoring, professional development, preparation time, class sizes and assignments, and salary and benefits that will help recruit and retain teachers in high need schools.

- All organizations should work together to enact improvements in the Wisconsin school funding formula in an effort to provide adequate funding that will enable schools to offer programs that provide high quality programs to all of their students (policy makers and business leaders).
- Involve teachers in school level hiring decisions and policy making (districts and unions).
- Implement flexible residency requirements (policy makers).
- Survey recent teacher graduates to determine the factors that attract teachers to certain districts and schools (teacher unions, higher education, and DPI).
- Provide facilities and educational resources that are modern, spacious and conducive to good learning (districts).
- Develop community introductory tours and packets of materials designed to attract teachers to their schools with particular focus on high need schools (communities and districts with business leaders out front).
- Develop parent groups in high need schools that concentrate their efforts on providing high quality parenting programs and family experiences that extend beyond fundraising (PTA, parent groups and districts).
- Implement programs that are long term efforts designed to recruit, support and encourage local students interested in teaching careers. These efforts should include clubs at the elementary, middle, high school and college levels. Statewide conferences should also be offered that are developed and presented by accomplished classroom teachers. We need to “build our own” teachers for the future (all).
- Incorporate information about this study and the needs of poor and minority students in leadership training opportunities for principals and administrators. Emphasize the importance of good recruitment and retention of highly skilled teachers (DPI, AWSA, WASDA).
- Require field experiences in high needs schools for students seeking teacher certification (DPI and higher education).

### **Retention:**

- Establish funds for differentiated teacher compensation programs. Stipulate further that the districts receiving grants would base all or part of teacher salary increases on one of the

following factors: (a) an increase in teacher’s knowledge of teaching and the content in the subject he/she teaches, or an improvement in teaching skills; (b) assignment of additional leadership responsibilities, including mentoring other teachers; (c) assignment of teachers to a grade level or subject area in which there are shortages; and (d) the assignment of a teacher to a school that is difficult to staff or that has low achievement. To achieve this goal, there should be support for the Differentiated Teacher Compensation Project (Governor and policy makers).

- Negotiate contract language that gives incentives for teaching in schools with high rates of minority and poor students (teacher unions and districts).
- Provide additional state funding for mentoring in high need schools (policy makers).
- Offer low interest home loans for teachers who remain in high need schools (policy makers and business community).
- Create professional development schools, teacher centers and teacher academies that bring practicing teachers and higher education faculty together in an effort to provide high quality and professional development to teachers in high need schools (districts and higher education).
- Fully fund master degree programs for teachers in high need schools if they commit to stay there for a defined period of time (districts).
- Ensure that teachers have high quality working conditions, including small class sizes, adequate materials, high-quality professional development, defined time for collaborative planning with colleagues and strong administrative support (districts and teacher unions).
- Offer student loan forgiveness for teachers who remain in high need schools (policymakers and districts).

### **Data:**

- DPI should continue to develop its data-management system in a manner that will more easily allow the interface of data sets for research purposes (DPI).
- Organizations involved in this project should inform others about the types of data and their research capabilities in order to facilitate further research of this type (all).

## Professional Development:

- Provide additional professional development funding for Wisconsin's schools and target it to schools in need (policy makers, DPI and districts).
- Provide funding to make teacher and administrator leadership programs readily available for staff in high need schools (all).
- Encourage districts to use available self-assessment tools for school improvement in high need schools. Some of these tools are available from DPI and WEAC/NEA. Results can then be used to make improvements in school quality and student learning (districts and teacher unions).

## Recognition:

- Coordinate and enhance recognition programs for teachers when they achieve National Board for Professional Teaching Standards and/or Wisconsin Master Educator certification (all).
- Continue to conduct special recognition programs for teachers in Wisconsin's Schools of Promise (all).

## Policy Development and Implementation:

- Provide additional funding for Wisconsin's school and target funds to high need schools for the specific purpose of recruiting, retaining and providing professional development for teachers in these schools. (Policy makers)
- Increase state funding to support high quality implementation of PI 34 in high need schools (policy makers).
- Develop a system that will bring together faculty for K-12 schools and higher education on a regular basis to pursue promising efforts designed to prepare teachers for the opportunities available in high need schools (all).

## Conclusion

The results of this study provide initial data for use in looking at how to improve access to highly skilled, fully certified and licensed teachers for students in high need schools. The search for data was not easy and has reinforced the need for better systems that enable meaningful research.

The structure of schools and school districts; policy leadership in districts; quality of administrator and teacher leadership; availability of instructional resources; school climate and family support all contribute to the teacher's ability to teach and the student's ability to learn. All of these factors must be addressed if we are to meet the needs of the most needy of our school population. Stating these factors is not a reason to give up, but a reality that teachers and students can only achieve when the entire community takes responsibility. Hopefully the information in this report will help to show the challenge and generate some action.

**Note:** In addition to the data analyzed and reported in this document, sample maps are included (Appendix C) that were developed by David Brough of the University of Wisconsin System. In consultation with Jason Engle of DPI these examples are included to show how data representation of this type can be used to dig more deeply. Further study of data representations like this can be used to target areas of high need and to examine relationships among various data sources. This resource was brought to the committee's attention by Sharon Wilhelm from UW System. We hope that policy makers and educational organizations will work with the UW System in pursuing further research.

# APPENDIX A

## Teacher Distribution Advisory Committee

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# APPENDIX B

## Teacher Distribution Project Wisconsin Supporting Data and Analysis

### Introduction

“Now that states have established academic standards and assessments, we have a clearer picture than ever before of which students are receiving the educational opportunities they need, and which are not. Unsurprisingly, many of our greatest challenges to providing these educational opportunities occur in schools with traditionally underserved low-income and minority students, many of whom reside in large urban areas. The latest research unequivocally demonstrates the profound impact of teachers on the education of their students. But just as the promise of effective teachers is a key element of any strategy for ensuring that low-income and minority students make academic gains, the pervasive maldistribution of effective teachers to those students is one of the key barriers holding them back. Study after study shows that the least experienced, least qualified, least effective teachers are disproportionately assigned to teach low-income and minority students. Moreover, previously low-achieving students are often

far more likely to be assigned to ineffective teachers than to effective teachers. Although highly qualified and effective teachers can be identified in every community, the students who most need these teachers are the least likely to be served by them. In short, even as we know that we can help students with effective teachers, we also know that we’re failing to do so.”

- Teacher Distribution Project, funded by the Joyce Foundation

This project was dedicated to understanding the extent of the problem of teacher distribution in Wisconsin outlined by the Education Trust.

Stage 1 revealed a bias of teacher experience and licensure against the top few deciles of minority percentage, free/reduced lunch percentage, and reading and math achievement. Initial analysis of data conducted by Don McIsaac showed high positive correlation between Minority Percentage and Poverty Percentage at a school and moderate to high correlation between poverty, minority, and achievement indicators. (See Table 1).

**Table 1. Student Characteristics by School in Wisconsin**

	Percent Free/Reduced Lunch	Percent Minority	4th Grade Reading	4th Grade Math	8th Grade Reading	8th Grade Math	10th Grade Reading	10th Grade Math
Percent Free/Reduced Lunch		0.78	-0.63	-0.61	-0.79	-0.78	-0.27	-0.21
Percent Minority	0.78		-0.58	-0.58	-0.77	-0.75	-0.30	-0.32

## Data Source and Preparation

Following the direction of the advisory committee, McIsaac provisionally assembled an analysis database of Wisconsin schools that summarized student characteristics and teacher characteristics. The data available from the Wisconsin Department of Public Instruction, while extensive, is highly individualized between departments. Disparate sources also proved challenging, as well as the necessity to look at different years due to timing and data availability. Nonetheless, we were able to collect a wide of variety of quality information for the purposes of this investigation.

The tables of descriptive statistics in Data Appendix A include summaries of data used in this analysis. While some data are missing, not collected for certain schools, or suppressed for confidentiality reasons, more than 2,000 schools had adequate information to include in this analysis. Those with less than complete data - not included here – were mainly alternative schools, non-traditional schools, schools/learning centers with low enrollment, learning programs in the state penal system, and charter schools. School sizes of less than ten students were omitted and the interpretation of the results in this analysis should be limited to typical, traditional classroom arrangements.

Below is the list we examined in the initial stage of inquiry, the results of which are summarized in Data Appendix A (descriptive statistics of variables used in analysis) and Data Appendix B (teacher characteristics by deciles of poverty, minority percentage, and achievement).

## Initial Data Analysis

The purpose of the inquiry is not to label teachers, but identify objective teacher traits, characterize them, and describe how teacher traits associate with student demographics and schools. We have several traits of teachers at our disposal. Without judging the quality of any one teacher, we look at the distribution of these traits.

The teachers we desire in Wisconsin schools exhibit their quality through a number of avenues, many of which are difficult to impossible to measure. They are aware of how students learn, can assess student learning, collaborate with their colleagues, manage classrooms, engage students, parents, and community members, and are, themselves, seasoned learners. These traits, while strongly associated with experience and education examined in these studied, may not behave entirely consistently with the trait of “quality” that we are trying to examine.

Teacher Indicators	Student Indicators	School Indicators
<i>Experience</i>	<i>Minority Percentage</i>	<i>School Locale</i>
• Experience – Years in District	Economic Status	Elementary/Middle/High
• Total Years Experience	Academic Achievement	
• % New Teachers	• Reading (4th, 8th, and 10th Grade)	
• % Teachers with Out of District Experience	• Math (4th, 8th, and 10th Grade)	
Education - % Masters Degree or Higher		
Licensure for Current Assignment		
• % Licensed for Current Assignment		
• % with Emergency License		

Data elements from advisory discussion and follow-up meetings

For the purposes of this inquiry, we were primarily interested in variation between schools. Before examining teachers and the students they teach together, we took a bird’s eye view of the data for those unfamiliar with how variables associate in practice in Wisconsin.

The highest deciles of percentage of students in poverty (% free/reduced price lunch), minority students, and the lowest deciles of percent proficiency in Reading and Math exhibit similar behavior in terms of teacher experience. These three factors are highly interrelated as evidenced by Prof. Don McIsaac’s previous review of correlation exemplified by the following table.

These characteristics also appeared to cluster by locale – NCES defined “Large City” (Milwaukee) having the same overall characteristics as the top deciles of poverty and minority percentage and the bottom deciles of achievement.

Overall, from initial observation, the working group came away with concern for the apparent disparity in Wisconsin in the highest deciles of poverty and minority percentage and the lowest deciles of achievement.

The lowest decile in particular had the greatest disparity in teacher experience and licensure. Experience differences by decile showed not only an experience disparity, but suggested that the experience disparity was coupled with a disproportionate number of new teachers and teachers with very little experience outside of the district. While not conclusive, the differences merited further investigation. Education and Emergency Licensure did not show patterns consistent with the interpretation of disparity between districts that are at risk by our measures, or otherwise difficult to staff.

When experience is examined in more depth, the deciles consistent with “at risk” schools (loosely defined as schools with highest poverty, minority populations, and/or lowest achievement) include many more teachers with two years of experience or fewer. Additionally many fewer teachers who service at-risk populations have significant experience outside the district (>3 years). These factors, at least circumstantially, suggest that recruitment is much more difficult at these schools than typical throughout Wisconsin.

	<i>Percent Free/Reduced Lunch</i>	<i>Percent Minority</i>	<i>4th Grade Reading</i>	<i>4th Grade Math</i>	<i>8th Grade Reading</i>	<i>8th Grade Math</i>	<i>10th Grade Reading</i>	<i>10th Grade Math</i>
<i>Percent Free/Reduced Lunch</i>		0.78	-0.63	-0.61	-0.79	-0.78	-0.27	-0.21
<i>Percent Minority</i>	0.78		-0.58	-0.58	-0.77	-0.75	-0.30	-0.32

## Follow-Up Analysis

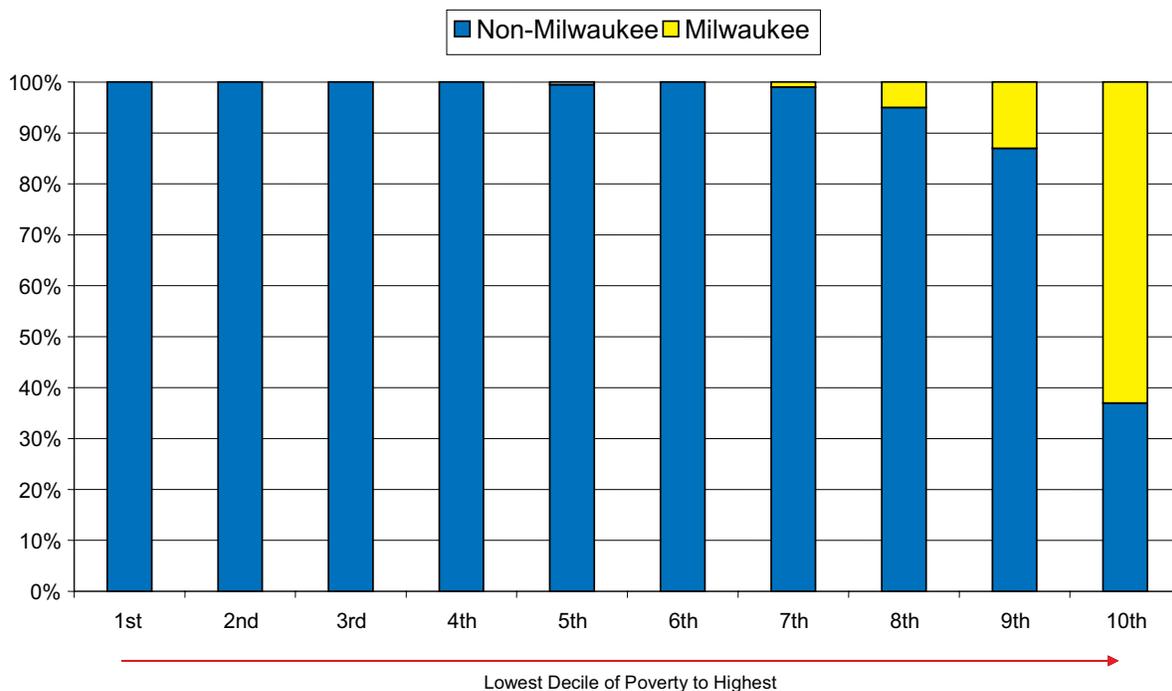
The second round of analysis took a look into areas that the Advisory Committee found most pertinent to the investigation. To facilitate this, these included

- (A) Creation of more targeted experience bands (0-2 Years/3-5 Years/6-7 Years/8+ Years),
- (B) Combining experience bands and educational attainment of teachers, and
- (C) Analysis of Milwaukee separate from the rest of Wisconsin (Outstate).

**Data Appendix C** shows the additional numbers for experience bands, combination education and experience measures, and separate analyses based on Milwaukee and non-Milwaukee (Outstate) data.

Illustrated in the following chart, Milwaukee schools are heavily concentrated in the bottom deciles. For example, over half of the highest decile of poverty is comprised of Milwaukee schools. Minority percentage and achievement follow similar patterns.

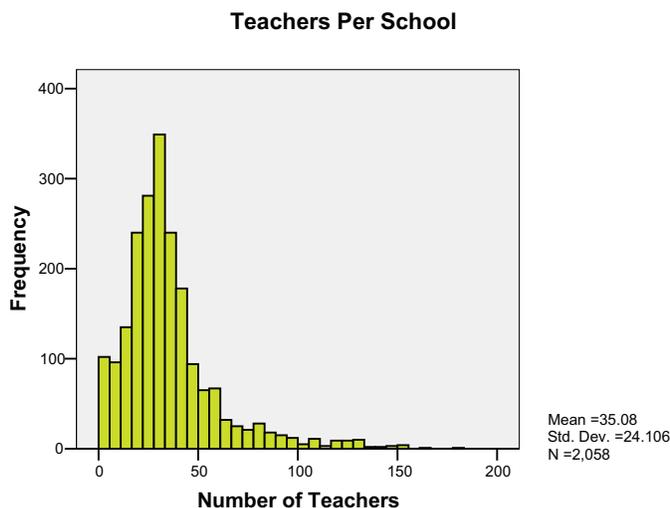
**Milwaukee Schools  
Poverty Deciles in Wisconsin (Lowest to Highest)**



# DATA APPENDIX A

## School Characteristics – Size and Level Elementary/Middle/High

Figure A-1. Teachers Per School



Before examining teachers and the students they teach together, we will look briefly at the characteristics of the unit of analysis that ties them in our analysis of 2,058 schools.

Figure A-1 shows a distribution of teachers in Wisconsin schools. While the typical (median) school has 30 teachers assigned to it, it is also notable that less than 10% of schools have 12 teachers or less – and likewise 10% have 62 or more teachers.

Figure A-2. Students Per School

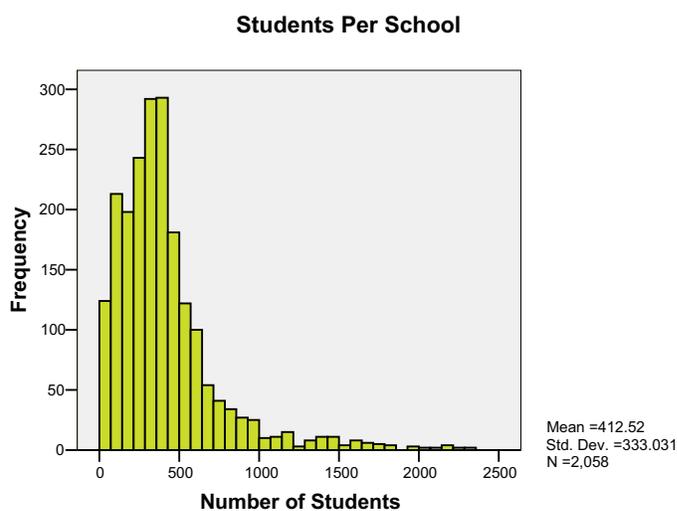


Figure A-2 shows the distribution of the number of students in Wisconsin schools. The typical number of students in the school is 349, while, as before, 80% of schools have between 102 and 769.2 students.

We know that elementary, intermediate (Middle and Junior High Schools), and high schools often follow a “feeder” pattern by building matriculation. As students develop and grow, their schools likewise grow and become more variable in size. The breakdowns of school size show a predictable increase in the number of teachers and students per school and greater variation in size. This report separates and displays these results separately.

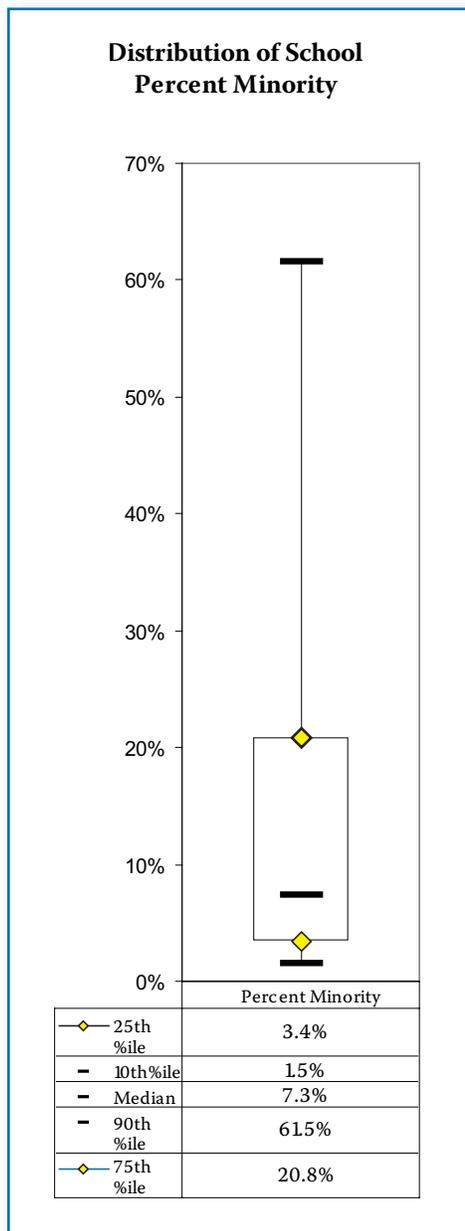
Source: DPI Administrative Data.

### Elementary, Middle and High School

This distinction is made by examining the bulk of student enrollment primarily and is primarily a “matriculation level,” such that junior high and middle schools are together, K-8 schools are considered “elementary” presumably by virtue of population and size of school is more comparable to elementary than middle schools.

## School Minority Percentage

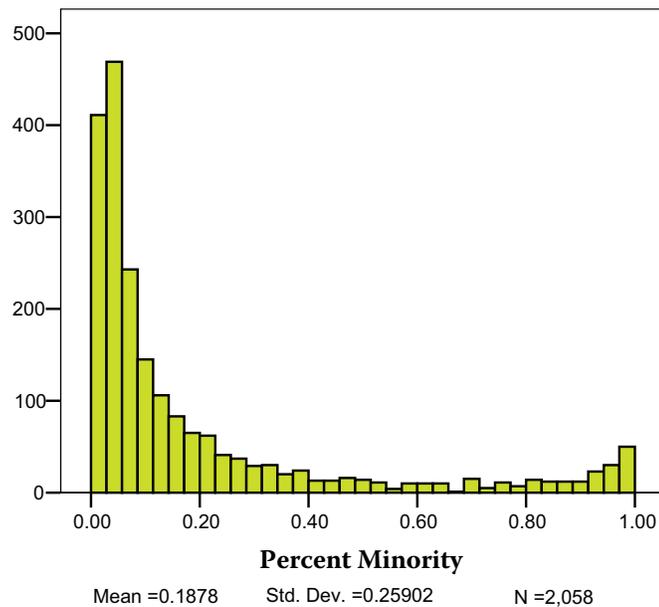
Figure A-3. School Percent Minority Boxplot and Histogram



### Ethnicity 2004

Minority Codes in Wisconsin include designations for Native American Students, African American Students, Students of Hispanic Origin, Asian Students, and White Students. Minority includes all Non-White Students. While Asian students are often not included in minority populations in many states for purposes of defining groups who are at risk, they are counted here due to the large Wisconsin Hmong community. Official Enrollment Count is third Friday of September, 2003.

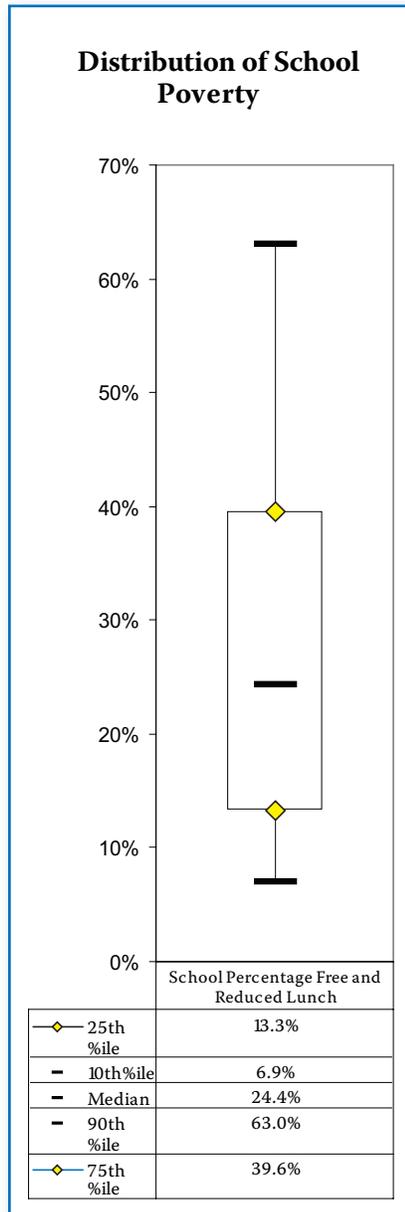
### Wisconsin School Minority Population



Source: DPI Administrative Data. Public School Enrollment by Grade, Gender, and Ethnicity

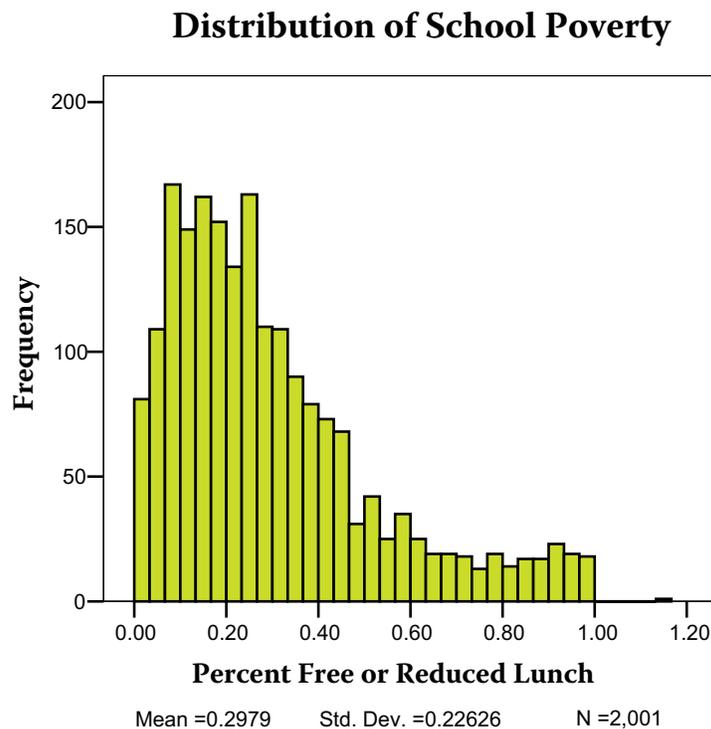
## School Poverty

Figure A-4. School Percent Free and Reduced Lunch Boxplot and Histogram



### Poverty 2004

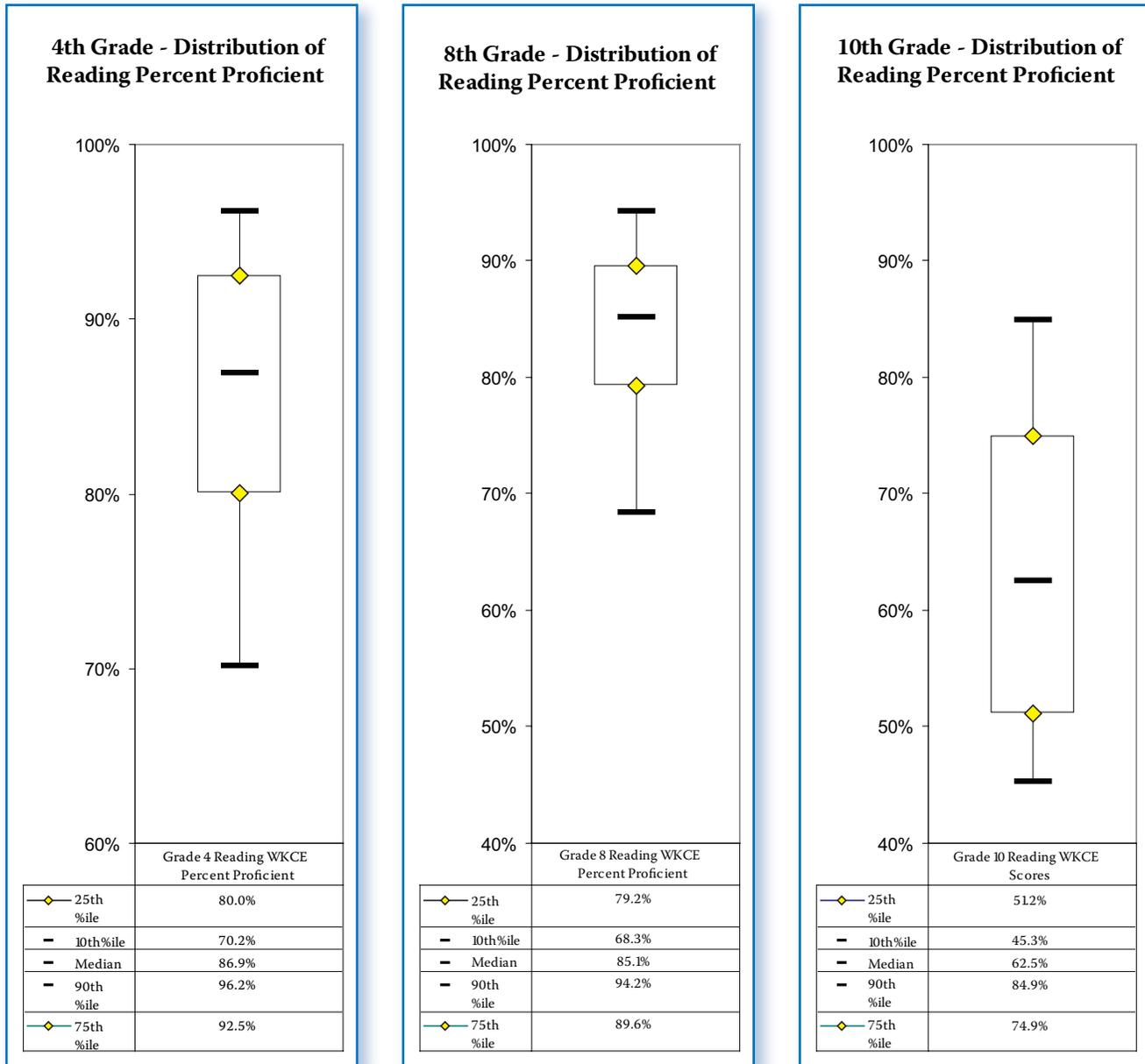
Free/Reduced Lunch is the most robust poverty indicator in the state extending program membership to students in households at 185% of poverty or lower. Official Enrollment Count is third Friday of September, 2003.



Source: DPI Administrative Data.

## Achievement - Reading

Figure A-5. Student Performance on Standardized Test Data – Reading Boxplots



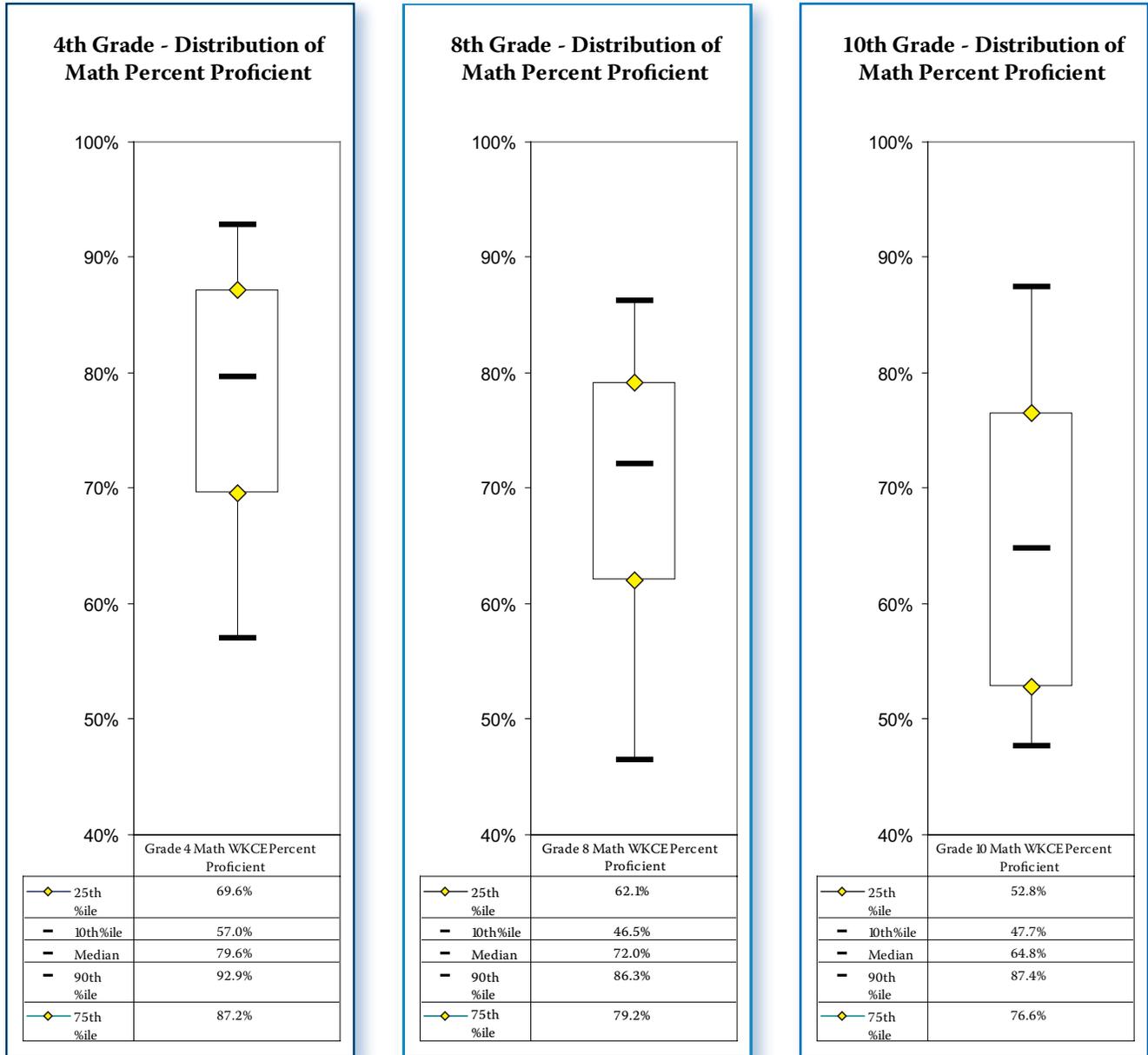
Source: DPI Administrative Data. WKCE Knowledge and Concepts Examination (WKCE) results.

### Achievement 2004

Percent meeting proficiency standards used to compare against Annual Measurable Objectives for NCLB. The WKCE in 2003-04 was administered in November, 2003.

## Achievement - Math

Figure A-6. Student Performance on Standardized Test Data – Math Boxplots



Source: DPI Administrative Data. WKCE Knowledge and Concepts Examination (WKCE) results.

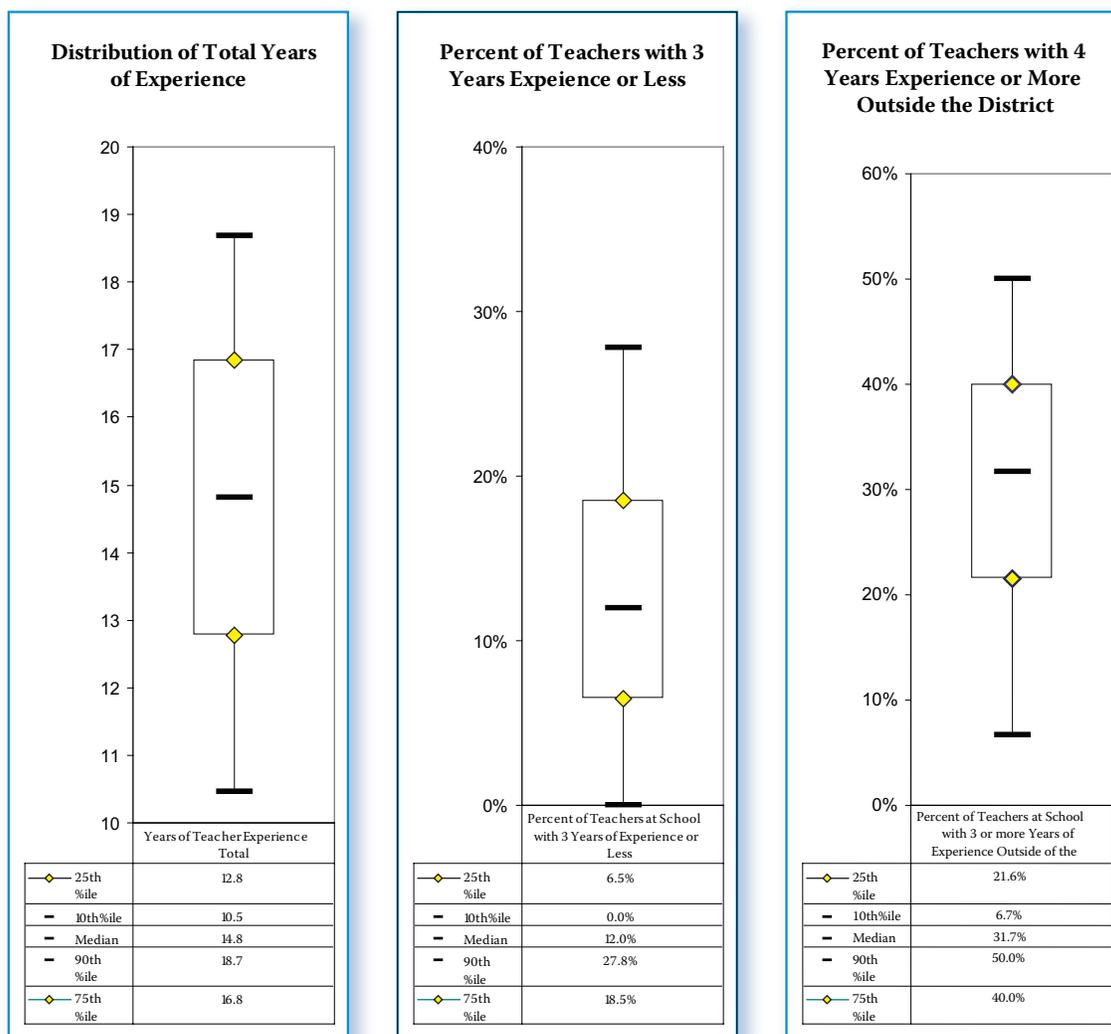
### Achievement 2004

Percent meeting proficiency standards used to compare against Annual Measurable Objectives for NCLB. The WKCE in 2003-04 was administered in November, 2003.

## Teacher Experience

Figure A-7. Experience Boxplots and Histograms

- Years of Total Experience
- Percent of Teachers with 3 Years or Less Experience
- Teacher with 3 Years or More Experience Out Of District



Source: DPI Administrative Data. Teacher Assignment/Licensing.

### Experience Years 2004

Average years of experience locally (in district) and years of experience as of the 2004 school year

### New Teachers

Defined as the average percentage of teachers in the school with 3 years or less of experience.

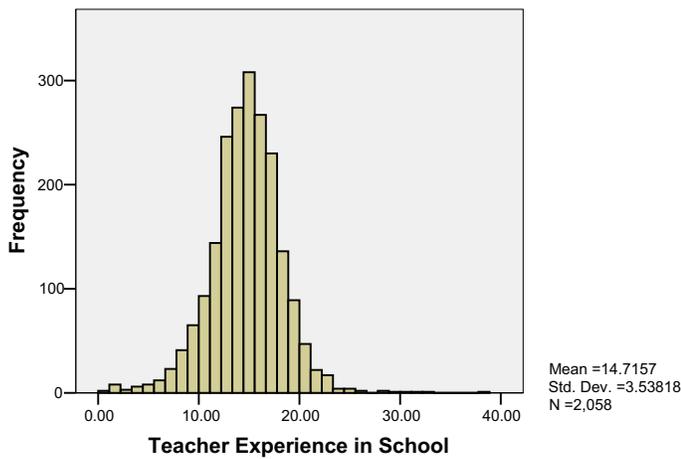
### District Hired Seasoned Teachers

Defined as the average percentage of teachers in the school with 3 or more years of experience in another district.

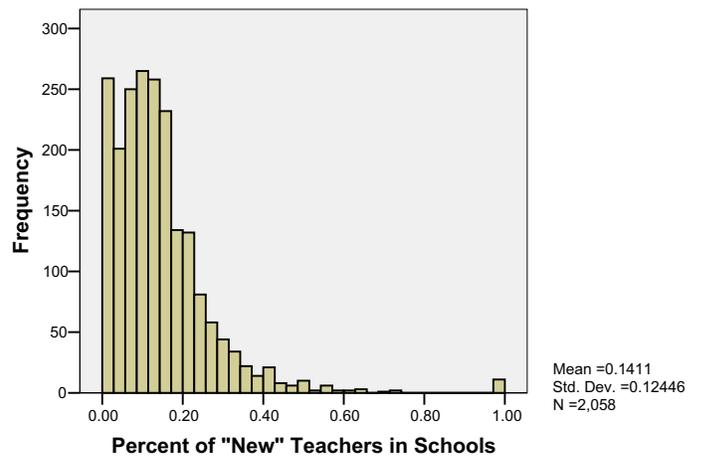
# Teacher Experience

Figure A-8. Experience Boxplots and Histograms

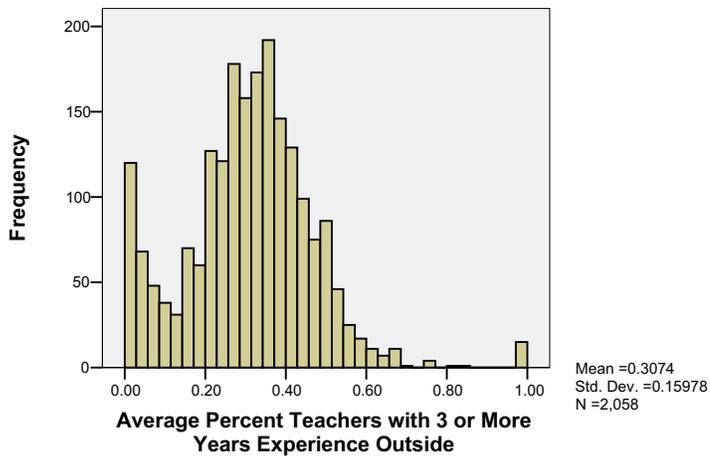
Average Teacher Experience Per School



Average Percentage of "New" Teachers



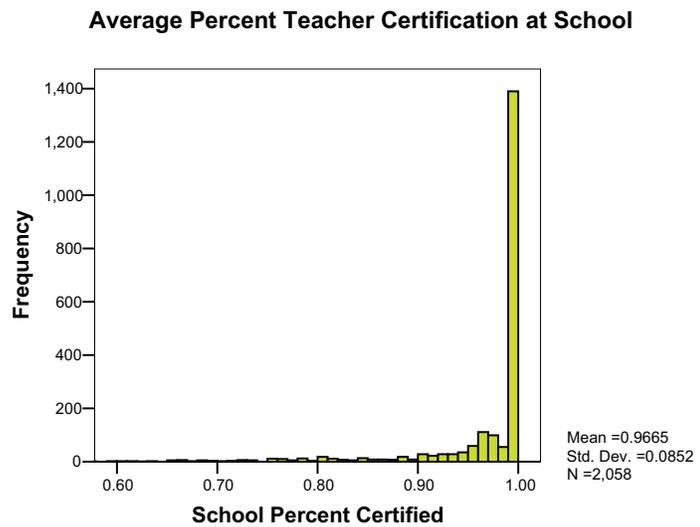
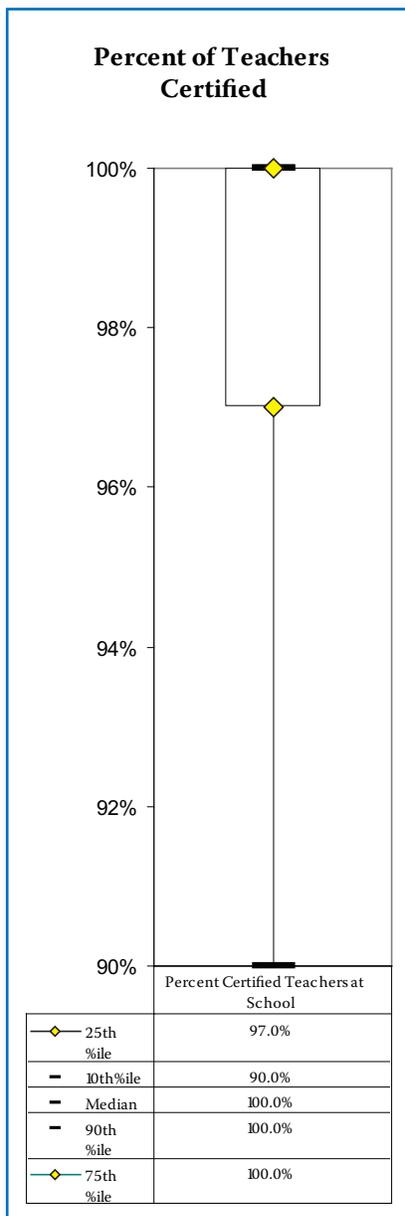
Average Percent Teachers with 3 or More Years Experience Outside the District



## Teacher Experience

Figure A-9. Teacher License for Current Assignment Boxplots and Histograms

- Teacher Current Licensure Percent (2004)
- Emergency Licenses Percent



### Percent Licensed for Current Assignment

Average percent of Licensed Teachers at schools in 2004, designated as “OK” licensed or “EX” exempt from licensure

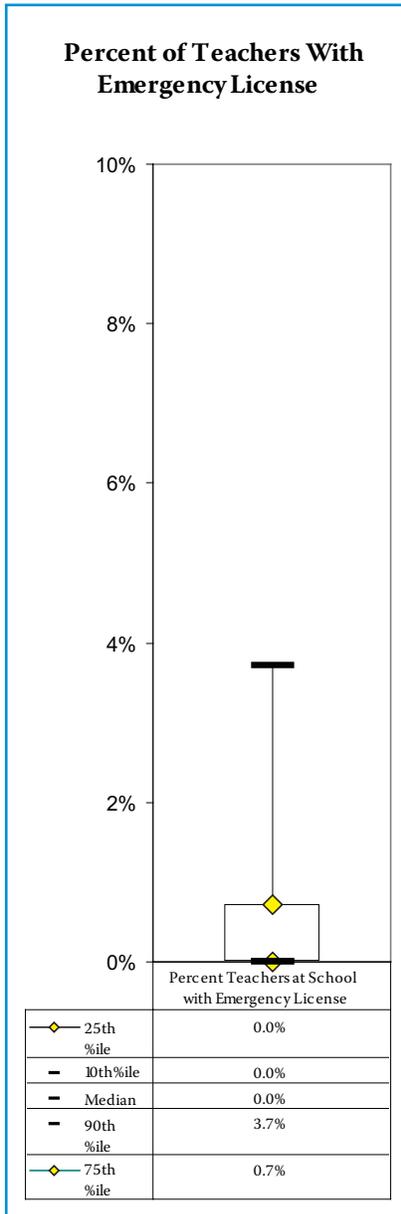
### Emergency License Percent

Average percent of teachers holding an emergency license type

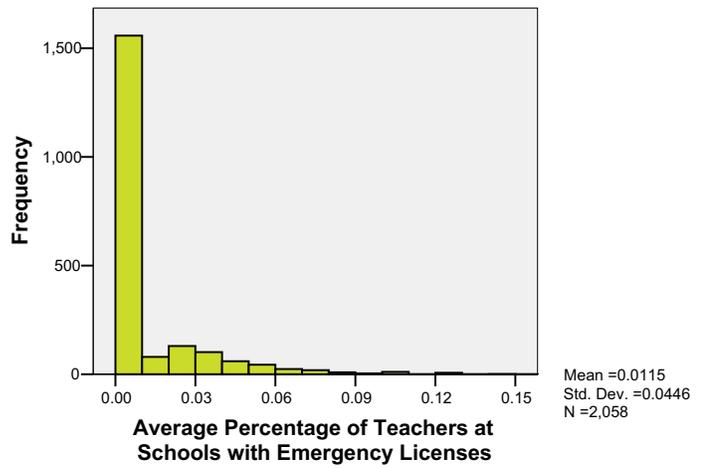
Source: DPI Administrative Data. Teacher Assignment/Licensing and Audit Results 2003-04.

# Teacher Experience

Figure A-10. Teacher License for Current Assignment Boxplots and Histograms



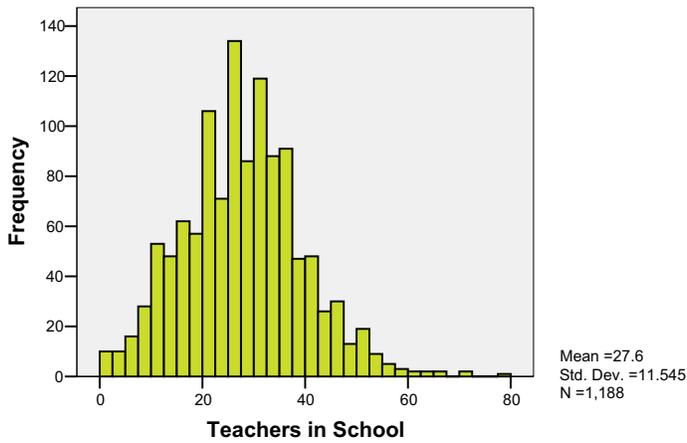
**Average Percentage of Teachers at Schools with Emergency Licenses**



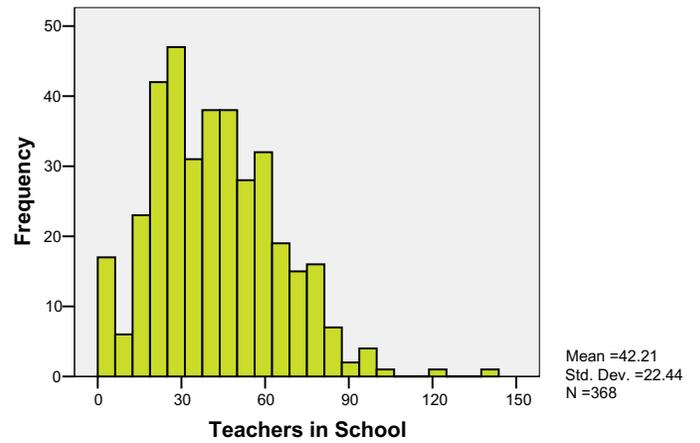
## Teacher Experience

Figure A-11. Teachers and Students Per School by Grade Span

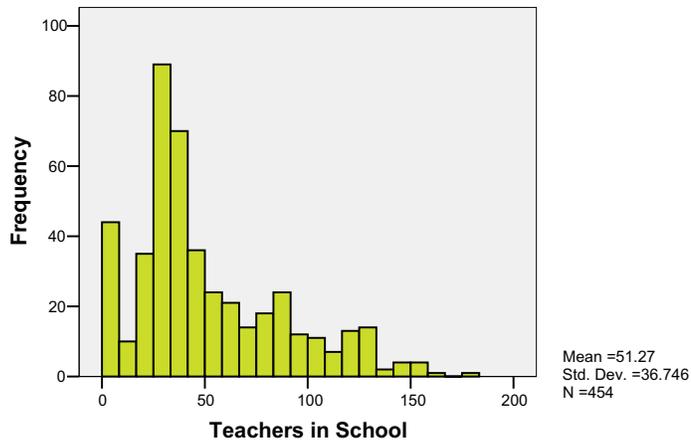
Elementary School Teachers



Middle School Teachers



High School Teachers



# DATA APPENDIX B

## *Teacher Distribution Inquiry by Decile*

### **Teacher Distribution by Student and School Characteristics**

#### **Experience**

- Average Years Total Experience
- Average Years Local (District) Experience
- Percent of Teachers with 3 Years or Less Experience
- Percent of Teachers with 3 Years or More Experience Outside the District

#### **Educational Attainment**

- Masters Degree Attained or Higher

#### **Teacher licensure for Current Assignment**

- Percent of Teachers who Passed Licensure Audit for Current Assignment
- Percent of Teachers Granted Emergency License

Further, how these traits are distributed in:

- Urban schools, Suburban, and Rural Schools
- Schools with higher concentrations of minority students
- Schools with higher concentrations of students who receive free or reduced price lunch
- Schools with low attainment based on Reading and Math Criterion Referenced Tests

## Teachers by School Locale and Grade Span

*Table B-1. Teacher Characteristics by Locale*

<i>All Levels</i>							
	Average Experience in District	Average Total Experience	% “New” Teachers (< 3 Years Experience)	% Teachers with 3 or more Years Experience Outside District	% with Masters Degree or Better	Percent Licensed for Current Assignment	Percent with Emergency License
<b>Large City</b>	10.5	10.9	27.6%	4.6%	45.3%	79.8%	1.0%
<b>Mid-Size City</b>	11.7	14.1	16.3%	29.5%	47.2%	97.3%	0.9%
<b>Urban Fringe of Large City</b>	12.2	15.1	13.1%	34.4%	49.6%	99.1%	0.5%
<b>Urban Fringe of Mid-Size City</b>	11.8	14.6	12.4%	35.1%	42.1%	99.4%	1.0%
<b>Large Town</b>	11.2	13.7	14.3%	27.9%	30.0%	99.5%	0.4%
<b>Small Town</b>	12.8	15.8	10.5%	35.9%	44.9%	98.6%	1.1%
<b>Rural outside MSA</b>	12.8	15.7	11.4%	32.3%	35.1%	98.4%	1.7%
<b>Rural inside MSA</b>	12.7	15.5	11.5%	34.4%	37.8%	98.5%	0.8%

<i>Elementary</i>							
	Average Experience in District	Average Total Experience	% “New” Teachers (< 3 Years Experience)	% Teachers with 3 or more Years Experience Outside District	% with Masters Degree or Better	Percent Licensed for Current Assignment	Percent with Emergency License
<b>Large City</b>	9.9	10.3	29.3%	4.3%	43.6%	78.4%	0.5%
<b>Mid-Size City</b>	11.8	14.3	15.2%	30.7%	46.1%	97.8%	0.7%
<b>Urban Fringe of Large City</b>	12.4	15.2	12.6%	33.6%	48.9%	99.1%	0.4%
<b>Urban Fringe of Mid-Size City</b>	11.8	14.6	11.9%	35.6%	40.2%	99.5%	0.9%
<b>Large Town</b>	11.6	14.1	12.4%	27.6%	29.8%	99.8%	0.2%
<b>Small Town</b>	13.3	16.1	9.3%	34.8%	46.3%	98.7%	1.0%
<b>Rural outside MSA</b>	13.1	15.9	9.8%	32.5%	36.6%	98.7%	1.5%
<b>Rural inside MSA</b>	12.7	15.4	11.4%	33.2%	39.1%	98.7%	0.6%

## Teachers by School Locale and Grade Span

Table B-1. Teacher Characteristics by Locale (continued)

<i>Middle</i>							
	Average Experience in District	Average Total Experience	% "New" Teachers (< 3 Years Experience)	% Teachers with 3 or more Years Experience Outside District	% with Masters Degree or Better	Percent Licensed for Current Assignment	Percent with Emergency License
Large City	8.6	8.9	30.7%	3.0%	43.6%	80.7%	0.6%
Mid-Size City	11.4	13.3	18.7%	25.5%	47.3%	95.8%	1.0%
Urban Fringe of Large City	12.2	15.2	11.6%	35.2%	50.9%	99.2%	0.4%
Urban Fringe of Mid-Size City	11.8	14.4	12.8%	34.1%	43.5%	99.4%	1.2%
Large Town	10.1	12.5	19.3%	25.8%	29.2%	98.4%	0.7%
Small Town	12.4	15.3	11.1%	35.5%	42.6%	98.2%	1.3%
Rural outside MSA	12.3	15.1	13.0%	32.5%	33.0%	97.9%	1.0%
Rural inside MSA	12.4	15.1	12.6%	34.5%	35.8%	98.5%	0.9%

<i>High</i>							
	Average Experience in District	Average Total Experience	% "New" Teachers (< 3 Years Experience)	% Teachers with 3 or more Years Experience Outside District	% with Masters Degree or Better	Percent Licensed for Current Assignment	Percent with Emergency License
Large City	12.7	13.2	23.8%	5.4%	45.5%	87.0%	4.1%
Mid-Size City	11.5	14.0	17.5%	31.3%	50.7%	97.5%	1.5%
Urban Fringe of Large City	12.1	15.1	15.1%	35.6%	51.3%	99.2%	0.9%
Urban Fringe of Mid-Size City	11.8	14.8	13.3%	34.8%	45.9%	99.2%	1.0%
Large Town	10.9	14.0	16.9%	35.6%	33.9%	99.7%	0.9%
Small Town	12.1	15.6	12.8%	38.7%	43.7%	98.6%	1.3%
Rural outside MSA	12.6	15.5	13.5%	31.7%	33.5%	98.1%	1.7%
Rural inside MSA	12.8	15.9	11.0%	37.2%	36.4%	98.5%	1.0%

## Teachers by School Minority Percentage and Grade Span

*Table B-2. Teacher Characteristics by School Minority Percentage*

<i>All Levels</i>							
	Average Experience in District	Average Total Experience	% "New" Teachers (< 3 Years)	% Teachers with 3 or more Years Experience Outside District	% with Masters Degree or Better	Percent Licensed for Current Assignment	Percent with Emergency License
1st (Lowest Minority Percentage)	12.6	15.6	11.3%	33.5%	35.5%	98.6%	1.2%
2nd	13.1	15.9	10.2%	33.4%	38.7%	98.2%	1.2%
3rd	12.8	15.6	11.7%	33.5%	40.3%	98.8%	1.1%
4th	12.6	15.4	11.9%	35.1%	40.2%	98.7%	1.2%
5th	12.5	15.4	13.0%	34.0%	41.8%	98.5%	1.0%
6th	12.2	15.1	11.6%	34.8%	42.6%	99.0%	0.9%
7th	12.0	14.9	13.0%	35.0%	46.4%	98.5%	1.9%
8th	12.0	14.7	12.6%	33.1%	45.9%	98.4%	0.7%
9th	11.4	13.5	18.1%	25.3%	46.6%	95.6%	0.9%
10th (Highest Minority Percentage)	10.1	11.0	27.8%	9.6%	43.3%	82.2%	1.4%

<i>Elementary</i>							
	Average Experience in District	Average Total Experience	% "New" Teachers (< 3 Years)	% Teachers with 3 or more Years Experience Outside District	% with Masters Degree or Better	Percent Licensed for Current Assignment	Percent with Emergency License
1st (Lowest Minority Percentage)	13.5	16.4	8.3%	33.3%	36.3%	98.8%	1.5%
2nd	13.6	16.3	8.3%	32.7%	40.3%	98.7%	0.9%
3rd	12.8	15.5	11.3%	32.9%	39.8%	98.5%	1.0%
4th	12.7	15.5	11.4%	33.9%	40.4%	98.7%	1.0%
5th	12.5	15.3	12.4%	33.9%	41.1%	98.5%	1.0%
6th	12.5	15.3	10.5%	34.4%	44.2%	99.3%	0.7%
7th	12.4	15.2	12.9%	34.9%	45.9%	98.7%	1.0%
8th	12.1	14.9	11.9%	33.3%	45.0%	98.3%	0.5%
9th	11.3	13.4	17.1%	25.4%	45.3%	95.8%	0.7%
10th (Highest Minority Percentage)	9.6	10.4	29.5%	9.1%	42.0%	81.2%	0.7%

## Teachers by School Minority Percentage and Grade Span

*Table B-2. Teacher Characteristics by School Minority Percentage (continued)*

<i>Middle</i>							
	Average Experience in District	Average Total Experience	% "New" Teachers (< 3 Years Experience)	% Teachers with 3 or more Years Experience Outside District	% with Masters Degree or Better	Percent Licensed for Current Assignment	Percent with Emergency License
1st (Lowest Minority Percentage)	12.9	15.6	12.9%	31.5%	32.2%	97.9%	0.9%
2nd	12.4	15.3	11.0%	34.9%	38.1%	96.7%	1.4%
3rd	12.4	15.4	11.5%	34.1%	40.7%	99.1%	0.8%
4th	12.2	14.9	12.5%	35.8%	39.5%	98.9%	1.3%
5th	12.3	15.1	13.4%	32.8%	42.5%	98.3%	0.9%
6th	11.2	13.7	15.5%	31.3%	39.1%	99.3%	1.1%
7th	11.6	14.3	13.5%	34.7%	46.3%	98.0%	0.6%
8th	12.3	14.8	13.3%	30.7%	45.3%	98.7%	1.0%
9th	11.2	13.2	20.7%	24.5%	48.6%	94.9%	0.8%
10th (Highest Minority Percentage)	8.3	9.0	29.5%	5.7%	41.7%	81.5%	0.9%

<i>High</i>							
	Average Experience in District	Average Total Experience	% "New" Teachers (< 3 Years Experience)	% Teachers with 3 or more Years Experience Outside District	% with Masters Degree or Better	Percent Licensed for Current Assignment	Percent with Emergency License
1st (Lowest Minority Percentage)	11.5	14.7	14.6%	35.0%	37.0%	98.8%	0.9%
2nd	12.8	15.6	12.5%	33.7%	36.9%	98.2%	1.6%
3rd	13.1	16.1	12.5%	34.4%	41.5%	99.1%	1.6%
4th	13.0	15.9	12.8%	34.1%	39.7%	98.4%	1.5%
5th	12.6	16.1	14.4%	36.2%	43.7%	98.4%	1.3%
6th	12.1	15.4	12.6%	39.1%	39.9%	97.4%	1.2%
7th	11.4	14.4	13.6%	35.4%	48.2%	98.1%	1.0%
8th	11.1	14.1	13.7%	37.0%	47.8%	99.0%	1.4%
9th	11.8	13.8	22.0%	21.9%	43.5%	94.3%	1.1%
10th (Highest Minority Percentage)	11.7	12.5	27.8%	8.8%	40.0%	87.5%	5.2%

## Teachers by School Free/Reduced Lunch and Grade Span

*Table B-3. Teacher Characteristics by School Poverty Percentage*

<i>All Levels</i>							
	Average Experience in District	Average Total Experience	% “New” Teachers (< 3 Years Experience)	% Teachers with 3 or more Years Experience Outside District	% with Masters Degree or Better	Percent Licensed for Current Assignment	Percent with Emergency License
<b>1st (Lowest Poverty)</b>	11.8	14.9	11.7%	36.9%	43.8%	98.7%	0.7%
<b>2nd</b>	11.9	14.9	13.2%	35.5%	42.7%	98.7%	0.8%
<b>3rd</b>	12.1	15.1	12.9%	35.1%	41.8%	98.4%	1.7%
<b>4th</b>	12.4	15.2	12.5%	33.6%	42.7%	99.0%	1.3%
<b>5th</b>	13.0	15.8	11.8%	33.7%	41.2%	98.3%	1.0%
<b>6th</b>	13.0	15.8	11.7%	32.6%	42.4%	98.1%	0.8%
<b>7th</b>	12.5	15.2	12.5%	31.7%	43.0%	98.2%	1.2%
<b>8th</b>	12.6	15.0	12.4%	28.7%	40.3%	97.9%	1.3%
<b>9th</b>	12.0	14.3	14.2%	27.8%	41.2%	95.2%	1.1%
<b>10th (Highest Poverty)</b>	10.1	11.2	26.2%	13.1%	40.8%	85.5%	1.5%

<i>Elementary</i>							
	Average Experience in District	Average Total Experience	% “New” Teachers (< 3 Years Experience)	% Teachers with 3 or more Years Experience Outside District	% with Masters Degree or Better	Percent Licensed for Current Assignment	Percent with Emergency License
<b>1st (Lowest Poverty)</b>	11.9	15.0	10.8%	38.1%	43.0%	98.9%	0.4%
<b>2nd</b>	11.9	14.8	12.5%	34.9%	43.3%	98.5%	0.4%
<b>3rd</b>	11.9	14.7	12.3%	33.5%	41.3%	98.1%	1.1%
<b>4th</b>	12.8	15.6	11.3%	33.7%	42.9%	99.0%	1.1%
<b>5th</b>	13.2	16.1	11.0%	34.4%	42.9%	98.6%	0.8%
<b>6th</b>	13.3	16.2	10.4%	33.1%	44.1%	98.8%	0.5%
<b>7th</b>	12.8	15.5	11.1%	32.3%	46.5%	98.6%	1.0%
<b>8th</b>	12.8	15.2	11.3%	29.2%	38.5%	98.1%	1.3%
<b>9th</b>	12.0	14.3	13.7%	28.6%	42.0%	95.4%	0.8%
<b>10th (Highest Poverty)</b>	10.2	11.3	26.2%	13.0%	40.5%	85.9%	1.0%

## Teachers by School Free/Reduced Lunch and Grade Span

*Table B-3. Teacher Characteristics by School Poverty Percentage (continued)*

<i>Middle</i>							
	Average Experience in District	Average Total Experience	% “New” Teachers (< 3 Years Experience)	% Teachers with 3 or more Years Experience Outside District	% with Masters Degree or Better	Percent Licensed for Current Assignment	Percent with Emergency License
<b>1st (Lowest Poverty)</b>	12.2	14.7	11.5%	30.4%	41.1%	99.2%	0.4%
<b>2nd</b>	11.0	14.1	14.5%	37.6%	39.9%	98.9%	0.8%
<b>3rd</b>	12.5	15.6	13.2%	35.6%	40.5%	98.7%	1.0%
<b>4th</b>	11.6	14.4	14.5%	33.5%	44.4%	99.0%	1.0%
<b>5th</b>	13.3	15.8	11.8%	32.9%	41.5%	97.9%	1.1%
<b>6th</b>	12.2	14.5	15.4%	29.5%	40.3%	95.1%	1.4%
<b>7th</b>	12.2	14.8	13.7%	31.7%	40.2%	98.0%	0.6%
<b>8th</b>	11.2	13.4	16.1%	27.0%	45.2%	97.5%	1.1%
<b>9th</b>	11.6	13.8	14.0%	28.5%	37.1%	96.4%	1.2%
<b>10th (Highest Poverty)</b>	8.6	9.2	28.9%	5.9%	37.6%	83.0%	1.2%

<i>High</i>							
	Average Experience in District	Average Total Experience	% “New” Teachers (< 3 Years Experience)	% Teachers with 3 or more Years Experience Outside District	% with Masters Degree or Better	Percent Licensed for Current Assignment	Percent with Emergency License
<b>1st (Lowest Poverty)</b>	11.5	14.9	13.7%	36.8%	46.0%	98.2%	1.2%
<b>2nd</b>	12.4	15.4	13.8%	35.7%	42.6%	98.9%	1.2%
<b>3rd</b>	12.4	15.3	13.3%	36.6%	42.1%	98.9%	1.3%
<b>4th</b>	12.5	15.3	12.9%	34.7%	42.3%	98.8%	1.9%
<b>5th</b>	12.5	15.3	12.7%	33.6%	36.7%	98.1%	1.0%
<b>6th</b>	12.6	15.7	12.8%	32.8%	39.2%	98.4%	1.2%
<b>7th</b>	11.9	14.5	16.1%	29.1%	33.6%	97.0%	1.7%
<b>8th</b>	13.0	15.5	12.7%	29.8%	38.4%	97.5%	2.0%
<b>9th</b>	11.8	14.2	19.9%	23.8%	38.4%	93.7%	2.7%
<b>10th (Highest Poverty)</b>	11.3	13.0	24.2%	19.0%	48.4%	83.5%	0.8%

## Teachers by School Reading Achievement Level and Grade Span

**Table B-4. Teacher Characteristics by School Percent Attaining Proficiency - Reading**

<i>Elementary – 4th Grade Wisconsin Knowledge and Concepts</i>							
	Average Experience in District	Average Total Experience	% “New” Teachers (< 3 Years Experience)	% Teachers with 3 or more Years Experience Outside District	% with Masters Degree or Better	Percent Licensed for Current Assignment	Percent with Emergency License
<b>1st (Highest Achievement)</b>	12.7	15.6	12.0%	33.7%	44.2%	97.5%	0.6%
<b>2nd</b>	12.7	15.5	11.9%	32.8%	42.8%	98.7%	1.2%
<b>3rd</b>	12.4	15.2	10.7%	33.5%	43.5%	97.7%	0.5%
<b>4th</b>	12.4	15.0	12.5%	31.4%	42.5%	97.7%	0.8%
<b>5th</b>	12.8	15.4	11.3%	33.0%	42.7%	98.3%	1.0%
<b>6th</b>	12.9	15.6	10.7%	32.4%	45.7%	97.9%	0.9%
<b>7th</b>	12.7	15.2	11.9%	31.4%	42.0%	97.8%	0.9%
<b>8th</b>	12.3	14.7	13.3%	28.6%	41.0%	97.5%	0.8%
<b>9th</b>	11.9	14.1	16.2%	26.4%	39.9%	95.3%	1.1%
<b>10th (Lowest Achievement)</b>	10.4	11.8	24.1%	15.2%	39.4%	87.1%	0.7%

<i>Middle – 8th Grade Wisconsin Knowledge and Concepts</i>							
	Average Experience in District	Average Total Experience	% “New” Teachers (< 3 Years Experience)	% Teachers with 3 or more Years Experience Outside District	% with Masters Degree or Better	Percent Licensed for Current Assignment	Percent with Emergency License
<b>1st (Highest Achievement)</b>	12.3	15.2	11.4%	34.0%	41.0%	97.5%	0.8%
<b>2nd</b>	12.4	15.3	12.5%	36.2%	43.2%	97.4%	1.2%
<b>3rd</b>	12.4	15.3	12.8%	34.5%	35.6%	97.6%	0.9%
<b>4th</b>	11.9	14.7	14.2%	32.9%	38.3%	97.6%	0.9%
<b>5th</b>	12.3	14.9	12.9%	32.6%	37.7%	97.7%	1.1%
<b>6th</b>	12.5	15.1	11.2%	31.8%	38.4%	97.7%	0.8%
<b>7th</b>	12.0	14.5	14.1%	29.5%	40.6%	97.4%	1.8%
<b>8th</b>	11.1	13.6	19.0%	27.0%	40.9%	95.0%	0.9%
<b>9th</b>	11.3	13.4	18.8%	24.3%	36.4%	93.2%	1.0%
<b>10th (Lowest Achievement)</b>	9.9	11.0	25.6%	12.6%	41.6%	86.1%	1.1%

## Teachers by School Reading Achievement Level and Grade Span

*Table B-4. Teacher Characteristics by School Percent Attaining Proficiency - Reading (continued)*

<i>High – 10th Grade Wisconsin Knowledge and Concepts</i>							
	Average Experience in District	Average Total Experience	% “New” Teachers (< 3 Years Experience)	% Teachers with 3 or more Years Experience Outside District	% with Masters Degree or Better	Percent Licensed for Current Assignment	Percent with Emergency License
1st (Highest Achievement)	12.7	15.8	13.5%	34.0%	40.7%	97.8%	1.0%
2nd	12.3	15.0	15.8%	31.6%	37.8%	97.8%	1.4%
3rd	12.5	15.3	14.0%	34.6%	42.4%	97.7%	1.5%
4th	12.6	15.1	14.6%	29.9%	39.1%	97.1%	1.4%
5th	12.5	15.3	15.4%	32.2%	44.1%	96.6%	1.5%
6th	12.7	15.5	12.8%	32.3%	44.7%	97.0%	0.9%
7th	12.7	15.5	12.3%	34.2%	39.6%	99.4%	1.6%
8th	12.6	15.1	15.0%	30.2%	40.4%	97.3%	1.2%
9th	11.8	15.0	12.6%	34.5%	50.3%	95.2%	3.6%
10th (Lowest Achievement)	11.4	14.0	15.0%	27.9%	37.9%	96.0%	1.6%

## Teachers by School Math Achievement Level and Grade Span

*Table B-5. Teacher Characteristics by School Percent Attaining Proficiency - Math*

<i>Elementary – 4th Grade Wisconsin Knowledge and Concepts</i>							
	Average Experience in District	Average Total Experience	% “New” Teachers (< 3 Years Experience)	% Teachers with 3 or more Years Experience Outside District	% with Masters Degree or Better	Percent Licensed for Current Assignment	Percent with Emergency License
1st (Highest Achievement)	12.6	15.6	12.7%	35.1%	43.1%	98.9%	0.8%
2nd	12.8	15.7	10.8%	35.4%	44.0%	98.6%	0.5%
3rd	12.8	15.5	10.6%	32.1%	44.5%	98.0%	0.9%
4th	12.3	15.0	11.8%	31.7%	43.8%	97.4%	1.1%
5th	12.4	15.1	12.1%	32.0%	43.5%	97.7%	0.8%
6th	12.9	15.7	9.9%	33.6%	41.2%	98.5%	1.0%
7th	12.6	15.0	12.7%	29.2%	39.9%	96.7%	0.8%
8th	12.0	14.6	13.4%	30.9%	44.0%	97.8%	0.7%
9th	11.9	14.0	16.6%	24.3%	38.9%	93.8%	0.9%
10th (Lowest Achievement)	10.7	11.9	24.4%	13.8%	40.6%	87.8%	1.0%

<i>Middle – 8th Grade Wisconsin Knowledge and Concepts</i>							
	Average Experience in District	Average Total Experience	% “New” Teachers (< 3 Years Experience)	% Teachers with 3 or more Years Experience Outside District	% with Masters Degree or Better	Percent Licensed for Current Assignment	Percent with Emergency License
1st (Highest Achievement)	12.0	15.3	11.9%	37.9%	38.1%	97.2%	1.0%
2nd	12.7	15.7	11.2%	33.0%	41.0%	98.4%	0.6%
3rd	12.2	15.0	13.9%	32.8%	40.7%	96.1%	0.9%
4th	12.1	14.7	12.5%	32.8%	36.6%	98.0%	0.9%
5th	12.2	14.7	13.7%	31.6%	38.8%	98.4%	1.7%
6th	11.8	14.4	15.1%	31.9%	40.6%	96.9%	0.9%
7th	11.9	14.6	15.0%	31.1%	38.2%	97.9%	1.1%
8th	12.1	14.4	15.8%	27.2%	38.9%	94.4%	1.2%
9th	11.1	13.3	17.9%	26.3%	39.8%	93.2%	1.3%
10th (Lowest Achievement)	9.9	11.0	25.4%	10.9%	40.7%	86.5%	0.8%

## Teachers by School Math Achievement Level and Grade Span

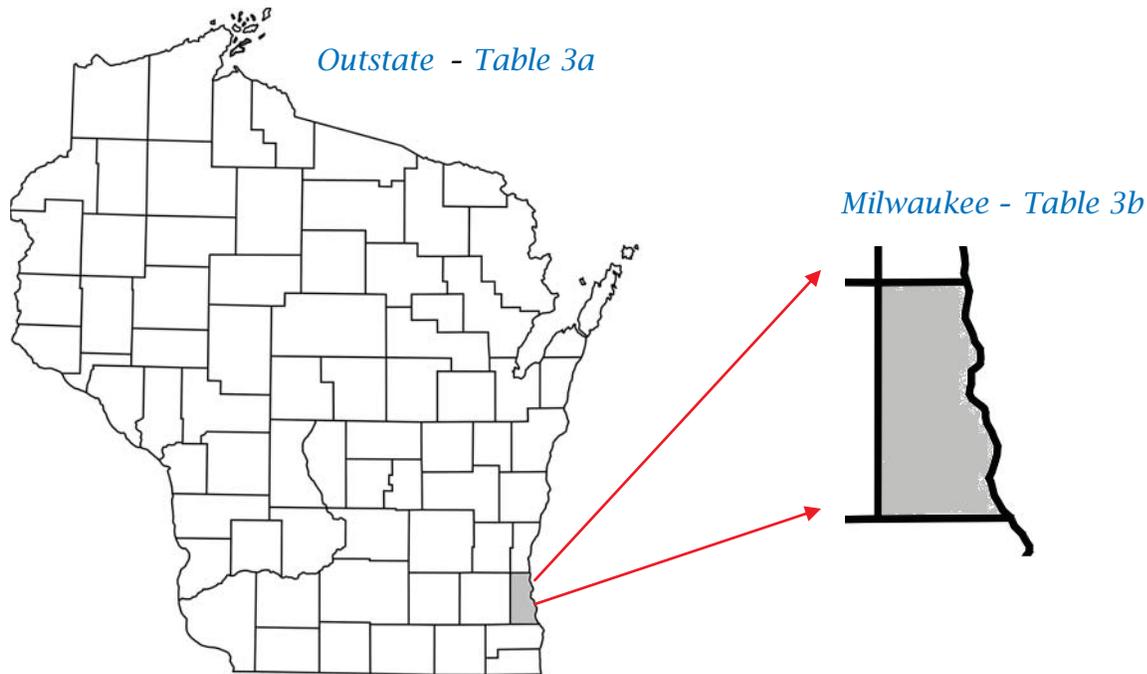
*Table B-5. Teacher Characteristics by School Percent Attaining Proficiency - Math (continued)*

<i>High – 10th Grade Wisconsin Knowledge and Concepts</i>							
	Average Experience in District	Average Total Experience	% “New” Teachers (< 3 Years Experience)	% Teachers with 3 or more Years Experience Outside District	% with Masters Degree or Better	Percent Licensed for Current Assignment	Percent with Emergency License
1st (Highest Achievement)	12.3	15.8	13.0%	35.0%	42.3%	98.4%	1.4%
2nd	12.5	15.6	14.2%	35.8%	43.4%	98.3%	1.2%
3rd	12.2	15.2	14.3%	34.2%	38.4%	97.5%	2.0%
4th	12.6	15.3	14.1%	30.4%	36.5%	97.1%	0.9%
5th	12.3	15.0	13.6%	32.7%	44.9%	97.6%	1.2%
6th	12.6	15.4	12.3%	30.7%	44.7%	96.5%	1.4%
7th	12.9	15.3	15.6%	27.4%	39.1%	96.0%	1.0%
8th	12.3	15.0	15.0%	31.8%	37.9%	97.2%	2.0%
9th	10.8	13.9	15.7%	33.6%	47.8%	95.3%	3.4%
10th (Lowest Achievement)	12.9	15.3	13.8%	30.1%	42.0%	98.1%	1.1%

# DATA APPENDIX C

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## *Separating Wisconsin and Milwaukee Student/School/Teacher for Analysis*



Tables C1, C2, and C3 here in Data Appendix C illustrate the differences between Wisconsin student, school, and teacher characteristics. Tables C4 – C15 convey the differences in distribution of teacher characteristics by student/school demographics. In the additional analysis, Wisconsin and Milwaukee are considered, for analysis purposes, “different states.” Distribution within Milwaukee and within the rest of the State of Wisconsin are analyzed separately.

### **Policy Recommendations**

Policy Recommendations were formulated by Katie Stout, and discussed in the working group on April 12, 2006.

**Table C-1. Analysis Variables - Complete Descriptive Statistics**

Variable	Valid	Mean	Standard Deviation	Percentile										
				10	20	25	30	40	50	60	70	75	80	90
School Minority Percentage	2058	18.8%	25.9	1.5%	2.9%	3.4%	3.9%	5.3%	7.3%	10.8%	16.5%	20.8%	27.6%	61.5%
School Percentage Free and Reduced Lunch	2001	29.8%	22.6	6.9%	10.8%	13.3%	15.3%	19.7%	24.4%	29.1%	35.7%	39.6%	44.6%	63.0%
Grade 4 Reading WKCE Percent Proficient	1075	84.9%	10.9	70.2%	77.9%	80.0%	81.8%	84.6%	86.9%	89.2%	91.5%	92.5%	93.6%	96.2%
Grade 4 Math WKCE Percent Proficient	1075	76.7%	14.9	57.0%	66.7%	69.6%	72.0%	75.8%	79.6%	82.6%	85.7%	87.2%	89.2%	92.9%
Grade 8 Reading WKCE Percent Proficient	533	82.0%	13.7	68.3%	76.9%	79.2%	80.7%	83.0%	85.1%	87.2%	88.9%	89.6%	90.9%	94.2%
Grade 8 Math WKCE Percent Proficient	533	68.0%	18.5	46.5%	58.5%	62.1%	64.7%	68.6%	72.0%	74.8%	77.5%	79.2%	81.5%	86.3%
Grade 10 Reading WKCE Percent Proficient	469	63.3%	15.9	45.3%	50.0%	51.2%	55.0%	58.8%	62.5%	66.7%	71.2%	74.9%	77.4%	84.9%
Grade 10 Math WKCE Percent Proficient	469	64.7%	16.9	47.7%	50.0%	52.8%	55.4%	60.4%	64.8%	68.9%	73.5%	76.6%	80.5%	87.4%
Years of Teacher Experience in District	2058	12.1	3.3	8.4	9.8	10.3	10.7	11.4	12.1	12.8	13.6	14.1	14.5	16.0
Years of Teacher Experience Total	2058	14.7	3.5	10.5	12.2	12.8	13.2	14.0	14.8	15.6	16.4	16.8	17.3	18.7
Percent of Teachers at School with 3 Years of Experience or Less	2058	14.1%	12.4	0.0%	5.0%	6.5%	7.6%	9.8%	12.0%	14.3%	16.7%	18.5%	20.8%	27.8%
Percent of Teachers at School with 3 or more Years of Experience Outside of the District	2058	30.7%	16.0	6.7%	18.8%	21.6%	24.2%	28.3%	31.7%	34.8%	38.1%	40.0%	42.1%	50.0%
Percent of Teachers at School with Masters Degree or Higher	2058	42.1%	18.4	20.0%	27.5%	30.3%	32.9%	37.1%	41.7%	46.2%	50.0%	53.5%	56.6%	64.5%
Percent Licensed Teachers at School	2058	96.6%	8.5	90.0%	96.0%	97.0%	98.1%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Percent Teachers at School with Emergency License	2058	1.2%	4.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.7%	2.1%	3.7%

**Table C-2. Analysis Variables - Outstate**

Variable	Valid	Mean	Standard Deviation	Percentiles										
				10	20	25	30	40	50	60	70	75	80	90
School Minority Percentage	1868	12.2%	15.5	1.4%	2.7%	3.1%	3.6%	4.7%	6.3%	8.6%	12.5%	15.3%	18.6%	30.7%
School Percentage Free and Reduced Lunch	1836	25.5%	17.5	6.5%	10.1%	12.2%	14.3%	18.1%	22.4%	26.2%	31.7%	34.9%	38.5%	49.2%
Grade 4 Reading WKCE Percent Proficient	961	86.7%	8.7	75.4%	80.4%	81.8%	83.3%	85.7%	87.6%	89.9%	92.0%	93.0%	93.8%	96.4%
Grade 4 Math WKCE Percent Proficient	961	79.1%	12.2	62.6%	69.7%	72.2%	74.2%	77.4%	80.8%	83.8%	86.4%	88.1%	89.6%	93.1%
Grade 8 Reading WKCE Percent Proficient	478	85.3%	7.8	75.7%	79.7%	81.0%	82.4%	84.4%	86.2%	87.9%	89.4%	90.1%	91.7%	94.6%
Grade 8 Math WKCE Percent Proficient	478	72.5%	11.8	57.3%	63.2%	65.4%	67.0%	70.8%	73.6%	76.0%	78.6%	80.0%	81.9%	86.8%
Grade 10 Reading WKCE Percent Proficient	432	64.3%	15.3	47.1%	50.3%	54.1%	56.1%	59.9%	63.1%	67.3%	72.5%	75.6%	78.0%	85.1%
Grade 10 Math WKCE Percent Proficient	432	66.0%	15.6	48.5%	51.1%	54.0%	56.8%	61.1%	65.6%	70.0%	74.7%	77.9%	81.2%	87.8%
Years of Teacher Experience in District	1868	12.3	3.1	8.7	10.1	10.6	10.9	11.7	12.3	12.9	13.7	14.2	14.7	16.1
Years of Teacher Experience Total	1868	15.1	3.1	11.5	12.8	13.3	13.6	14.4	15.1	15.8	16.6	17.0	17.5	18.8
Percent of Teachers at School with 2 Years of Experience or Less	1868	8.2%	8.7	0.0%	0.0%	2.9%	3.4%	5.1%	6.9%	8.3%	10.3%	11.7%	13.0%	16.7%
Percent of Teachers at School with between 3 and 5 Years of Experience	1868	13.6%	9.1	3.0%	6.1%	7.4%	8.3%	10.5%	12.5%	14.7%	16.7%	18.5%	20.0%	25.9%
Percent of Teachers at School with between 6 and 7 Years of Experience	1868	8.7%	7.9	0.0%	2.9%	3.8%	4.5%	6.1%	7.7%	9.1%	11.0%	12.2%	13.3%	16.7%
Percent of Teachers at School with 8 Years of Experience or More	1868	70.4%	14.0	54.5%	60.0%	63.0%	64.6%	67.9%	71.0%	74.3%	77.3%	79.3%	81.5%	86.4%
Percent of Teachers at School with 3 or more Years of Experience Outside of the District	1868	33.4%	14.2	16.7%	22.7%	25.0%	26.9%	30.0%	33.3%	36.0%	39.1%	40.8%	43.2%	50.0%
Percent of Teachers at School with Masters Degree or Higher	1868	41.9%	18.0	20.0%	27.3%	30.0%	32.4%	36.7%	41.4%	45.8%	50.0%	53.3%	56.3%	64.1%
Percent Licensed Teachers at School	1868	98.4%	4.6	95.0%	97.2%	98.3%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Percent Teachers at School with Emergency License	1868	1.1%	4.0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.0%	2.3%	3.8%

**Table C-3. Analysis Variables - Complete Descriptive Statistics - Milwaukee**

Variable	Valid	Mean	Standard Deviation	Percentile										
				10	20	25	30	40	50	60	70	75	80	90
School Minority Percentage	190	83.0%	19.0	50.9%	69.6%	75.5%	80.6%	86.1%	91.6%	94.2%	95.8%	96.9%	97.4%	98.3%
School Percentage Free and Reduced Lunch	165	77.4%	18.2	47.6%	61.0%	64.0%	70.9%	76.6%	82.9%	86.8%	90.8%	92.5%	94.3%	97.0%
Grade 4 Reading WKCE Percent Proficient	114	70.4%	15.4	49.2%	56.5%	61.2%	63.0%	66.7%	70.0%	74.5%	79.8%	83.3%	85.3%	90.7%
Grade 4 Math WKCE Percent Proficient	114	56.3%	19.6	31.9%	37.8%	39.4%	44.4%	51.6%	56.6%	61.1%	65.5%	71.5%	75.6%	84.3%
Grade 8 Reading WKCE Percent Proficient	55	53.3%	19.2	28.3%	35.2%	38.3%	42.7%	48.2%	52.5%	57.8%	64.7%	69.0%	71.3%	80.0%
Grade 8 Math WKCE Percent Proficient	55	29.0%	20.4	5.9%	10.0%	11.0%	13.9%	16.9%	23.7%	33.7%	43.3%	46.0%	47.4%	58.2%
Grade 10 Reading WKCE Percent Proficient	37	51.0%	18.3	25.3%	36.0%	41.8%	44.1%	46.2%	50.0%	51.0%	62.3%	65.7%	68.8%	74.2%
Grade 10 Math WKCE Percent Proficient	37	49.3%	23.2	6.1%	27.3%	43.8%	50.0%	50.0%	52.9%	57.7%	61.8%	66.3%	69.7%	71.7%
Years of Teacher Experience in District	190	10.3	4.5	5.9	7.6	8.1	8.6	9.1	9.8	10.7	11.3	11.9	12.5	14.4
Years of Teacher Experience Total	190	10.8	4.7	6.0	8.0	8.4	8.8	9.5	10.2	11.1	11.9	12.6	13.1	15.4
Percent of Teachers at School with 2 Years of Experience or Less	190	22.6%	19.8	0.0%	8.5%	11.8%	13.5%	16.7%	19.2%	22.9%	27.0%	29.5%	32.3%	39.1%
Percent of Teachers at School with between 3 and 5 Years of Experience	190	27.6%	19.0	0.0%	14.0%	17.6%	19.0%	22.8%	25.5%	28.4%	34.1%	35.4%	38.7%	48.8%
Percent of Teachers at School with between 6 and 7 Years of Experience	190	14.5%	12.9	0.0%	6.8%	7.9%	9.1%	11.1%	13.6%	15.8%	17.8%	19.6%	21.1%	25.0%
Percent of Teachers at School with 8 Years of Experience or More	190	53.0%	23.0	26.3%	37.1%	40.9%	43.3%	48.9%	52.8%	58.3%	62.1%	64.3%	67.3%	85.0%
Percent of Teachers at School with 3 or more Years of Experience Outside of the District	190	4.8%	7.4	0.0%	0.0%	0.0%	0.0%	2.4%	3.1%	4.3%	5.1%	6.2%	7.1%	11.1%
Percent of Teachers at School with Masters Degree or Higher	190	44.9%	21.3	21.2%	30.6%	32.5%	35.3%	40.2%	44.1%	47.8%	50.0%	55.6%	60.4%	68.1%
Percent Licensed Teachers at School	190	79.6%	16.1	65.0%	70.4%	73.2%	75.6%	78.3%	80.7%	84.1%	88.2%	89.8%	91.6%	100.0%
Percent Teachers at School with Emergency License	190	1.2%	7.9	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.3%

**Additional Analysis – Milwaukee vs. Outstate Disparities**

*Tables C-4 and C-5. Teacher Characteristics by School Minority Percentage*

<i>All Levels - Outstate</i>							
	Average Experience in District	Average Total Experience	% “New” Teachers (< 3 Years Experience)	% Teachers with 3 or more Years Experience Outside District	% with Masters Degree or Better	Percent Licensed for Current Assignment	Percent with Emergency License
<b>1st (Lowest Minority Percentage)</b>	12.5	15.6	7.9%	33.6%	35.4%	98.8%	1.2%
<b>2nd</b>	13.0	15.8	7.3%	32.8%	38.0%	98.0%	1.2%
<b>3rd</b>	13.0	15.9	6.9%	34.2%	41.0%	98.8%	1.1%
<b>4th</b>	12.7	15.5	7.2%	34.2%	39.8%	98.8%	1.1%
<b>5th</b>	12.5	15.6	7.9%	35.3%	41.6%	98.3%	1.1%
<b>6th</b>	12.3	15.1	7.8%	34.1%	42.4%	98.9%	0.9%
<b>7th</b>	12.1	14.9	8.5%	34.4%	42.8%	98.8%	1.1%
<b>8th</b>	11.9	14.7	8.2%	34.7%	45.9%	98.7%	1.9%
<b>9th</b>	11.9	14.5	9.0%	32.3%	46.5%	97.8%	0.6%
<b>10th (Highest Minority Percentage)</b>	11.1	13.5	11.0%	28.1%	45.2%	97.0%	1.1%

<i>All Levels - Milwaukee</i>							
	Average Experience in District	Average Total Experience	% “New” Teachers (< 3 Years Experience)	% Teachers with 3 or more Years Experience Outside District	% with Masters Degree or Better	Percent Licensed for Current Assignment	Percent with Emergency License
1st (Lowest Minority Percentage)	11.2	11.8	13.3%	5.0%	47.5%	81.2%	1.4%
2nd	12.0	12.4	17.6%	4.3%	55.5%	81.0%	0.0%
3rd	11.1	11.8	20.5%	7.3%	49.4%	82.1%	2.4%
4th	10.8	11.2	17.1%	5.0%	55.3%	78.9%	0.8%
5th	11.6	12.1	16.2%	4.4%	51.2%	83.5%	0.1%
6th	8.6	8.9	30.4%	3.1%	42.3%	81.0%	5.6%
7th	9.1	9.6	22.3%	4.9%	39.9%	81.6%	0.1%
8th	8.0	8.3	28.8%	3.5%	37.5%	79.1%	0.8%
9th	12.0	12.4	26.2%	3.0%	34.9%	73.4%	0.2%
10th (Highest Minority Percentage)	8.9	9.5	33.9%	7.4%	35.0%	74.4%	0.7%

## Teachers by School Math Achievement Level and Grade Span

*Tables C-6 and C-7. Teacher Characteristics by School Poverty Percentage*

<i>All Levels - Outstate</i>							
	Average Experience in District	Average Total Experience	% "New" Teachers (< 3 Years Experience)	% Teachers with 3 or more Years Experience Outside District	% with Masters Degree or Better	Percent Licensed for Current Assignment	Percent with Emergency License
1st (Lowest Poverty)	11.7	14.9	7.9%	36.7%	43.7%	98.7%	0.7%
2nd	12.1	15.1	8.1%	36.2%	42.7%	98.7%	0.7%
3rd	11.9	14.9	8.6%	35.4%	41.7%	98.4%	1.7%
4th	12.3	15.1	9.1%	33.6%	43.5%	98.7%	1.2%
5th	12.9	15.6	7.9%	32.9%	40.7%	98.7%	1.1%
6th	12.9	15.7	8.2%	33.3%	42.5%	98.3%	1.0%
7th	12.7	15.5	6.9%	33.4%	40.7%	98.3%	1.0%
8th	12.6	15.3	7.7%	31.3%	42.0%	98.4%	1.1%
9th	12.6	15.0	7.0%	29.4%	39.7%	98.6%	1.2%
10th (Highest Poverty)	11.5	14.0	9.9%	30.3%	40.0%	97.0%	1.9%

<i>All Levels - Milwaukee</i>							
	Average Experience in District	Average Total Experience	% "New" Teachers (< 3 Years Experience)	% Teachers with 3 or more Years Experience Outside District	% with Masters Degree or Better	Percent Licensed for Current Assignment	Percent with Emergency License
1st (Lowest Poverty)	12.0	12.5	13.1%	5.5%	63.8%	86.3%	1.1%
2nd	11.3	11.7	20.0%	5.0%	49.3%	80.0%	3.2%
3rd	11.8	12.5	17.5%	6.9%	54.0%	80.2%	0.2%
4th	10.0	10.3	25.2%	3.3%	42.6%	79.3%	0.2%
5th	10.2	10.7	18.6%	4.7%	45.1%	78.2%	0.2%
6th	8.5	8.9	25.0%	4.6%	35.7%	82.1%	0.1%
7th	9.5	10.0	23.2%	5.0%	41.6%	78.2%	0.4%
8th	9.6	10.1	24.7%	5.1%	43.5%	77.0%	1.7%
9th	9.0	9.3	25.1%	3.7%	39.3%	76.3%	0.4%
10th (Highest Poverty)	8.5	8.7	29.2%	2.3%	34.9%	76.2%	0.5%

## Teachers by School Math Achievement Level and Grade Span

*Tables C-8 and C-9. Teacher Characteristics by School Percent Attaining Proficiency - Reading*

<i>All Levels - Outstate</i>							
	Average Experience in District	Average Total Experience	% "New" Teachers (< 3 Years Experience)	% Teachers with 3 or more Years Experience Outside District	% with Masters Degree or Better	Percent Licensed for Current Assignment	Percent with Emergency License
1st (Lowest Achievement)	11.9	14.4	11.4%	29.9%	38.8%	97.6%	5.1%
2nd	11.7	14.6	10.9%	34.2%	44.0%	98.4%	5.3%
3rd	12.3	14.9	10.6%	32.2%	42.3%	98.3%	3.7%
4th	12.8	15.6	8.6%	32.4%	41.9%	98.7%	3.2%
5th	12.6	15.3	9.5%	33.9%	42.1%	98.6%	3.4%
6th	12.5	15.2	8.6%	33.3%	42.3%	98.8%	3.8%
7th	12.6	15.4	10.0%	32.6%	40.3%	98.6%	3.1%
8th	12.5	15.4	9.2%	35.6%	41.4%	98.2%	4.2%
9th	12.7	15.5	9.8%	33.5%	43.0%	98.4%	3.9%
10th (Highest Achievement)	12.7	15.7	9.9%	35.4%	43.7%	98.7%	3.5%

<i>All Levels - Milwaukee</i>							
	Average Experience in District	Average Total Experience	% "New" Teachers (< 3 Years Experience)	% Teachers with 3 or more Years Experience Outside District	% with Masters Degree or Better	Percent Licensed for Current Assignment	Percent with Emergency License
1st (Lowest Achievement)	9.4	10.3	25.9%	20.4%	37.7%	78.0%	5.6%
2nd	9.1	9.5	25.0%	5.8%	43.2%	78.8%	3.5%
3rd	9.9	10.3	21.0%	6.2%	43.3%	79.7%	N/A
4th	10.1	10.4	28.2%	5.0%	42.4%	80.5%	2.8%
5th	10.9	11.2	22.5%	5.7%	45.2%	84.4%	3.0%
6th	11.3	12.1	30.0%	11.9%	54.3%	83.5%	51.1%
7th	10.2	10.6	23.4%	6.5%	46.9%	84.2%	2.5%
8th	11.7	12.1	23.6%	4.8%	47.5%	80.4%	2.2%
9th	11.2	11.5	20.9%	5.7%	51.5%	80.9%	3.8%
10th (Highest Achievement)	11.5	12.2	18.2%	6.9%	53.6%	74.8%	6.9%

## Teachers by School Math Achievement Level and Grade Span

*Tables C-10 and C-11. Teacher Characteristics by School Percent Attaining Proficiency - Math*

<i>All Levels - Outstate</i>							
	Average Experience in District	Average Total Experience	% "New" Teachers (< 3 Years Experience)	% Teachers with 3 or more Years Experience Outside District	% with Masters Degree or Better	Percent Licensed for Current Assignment	Percent with Emergency License
1st (Lowest Achievement)	12.1	14.4	11.3%	29.1%	41.2%	97.8%	3.9%
2nd	11.7	14.6	11.0%	34.8%	44.4%	98.2%	4.6%
3rd	12.4	14.9	10.6%	30.0%	39.2%	98.3%	3.8%
4th	12.8	15.4	9.7%	31.9%	40.0%	98.8%	4.1%
5th	12.5	15.2	9.2%	33.3%	42.0%	98.6%	3.9%
6th	12.4	15.2	9.2%	32.9%	43.1%	98.2%	3.7%
7th	12.4	15.2	9.6%	34.0%	40.9%	98.4%	3.7%
8th	12.4	15.4	9.8%	34.9%	42.3%	98.4%	3.7%
9th	12.8	15.8	8.5%	36.0%	43.5%	98.9%	3.5%
10th (Highest Achievement)	12.7	15.8	10.0%	36.4%	43.5%	98.9%	3.9%

<i>All Levels - Milwaukee</i>							
	Average Experience in District	Average Total Experience	% "New" Teachers (< 3 Years Experience)	% Teachers with 3 or more Years Experience Outside District	% with Masters Degree or Better	Percent Licensed for Current Assignment	Percent with Emergency License
1st (Lowest Achievement)	11.9	12.5	25.4%	13.1%	45.5%	80.2%	3.4%
2nd	9.8	10.2	27.6%	6.0%	37.8%	82.4%	7.0%
3rd	10.0	10.5	25.5%	5.8%	45.9%	79.5%	2.3%
4th	11.4	12.1	24.9%	10.7%	55.3%	83.4%	19.3%
5th	9.2	9.8	24.8%	6.6%	41.5%	82.2%	2.3%
6th	9.8	10.2	22.7%	5.9%	40.4%	80.5%	2.3%
7th	10.3	10.7	22.0%	5.6%	46.6%	81.8%	2.5%
8th	10.1	10.6	21.3%	7.2%	51.1%	78.4%	5.4%
9th	11.0	11.4	27.1%	5.0%	45.9%	76.5%	1.8%
10th (Highest Achievement)	11.6	12.2	18.2%	6.7%	55.0%	82.2%	6.9%

## Teacher Experience Bands and Education (Percent Minority/Poverty)

**Table C-12. Teacher Characteristics by Education and Experience - Minority Deciles**

	<i>All Education Levels</i>				<i>Masters or Higher</i>				<i>Bachelors</i>			
	2 Years or Fewer	3 to 5 Years	6 to 7 Years	8 Years or More	2 Years or Fewer	3 to 5 Years	6 to 7 Years	8 Years or More	2 Years or Fewer	3 to 5 Years	6 to 7 Years	8 Years or More
1st (Lowest Minority)	8.0%	10.9%	9.0%	72.3%	0.4%	1.2%	2.1%	32.0%	7.6%	9.7%	6.9%	40.4%
2nd	6.6%	12.6%	8.2%	73.2%	0.4%	1.4%	1.8%	35.1%	6.2%	11.2%	6.3%	38.1%
3rd	7.5%	13.5%	7.9%	71.6%	0.3%	1.9%	2.2%	36.2%	7.3%	11.6%	5.7%	35.4%
4th	7.8%	12.8%	8.5%	71.4%	0.4%	1.6%	2.4%	35.9%	7.4%	11.2%	6.2%	35.4%
5th	8.0%	13.9%	8.1%	70.4%	0.6%	2.0%	2.4%	36.9%	7.4%	11.9%	5.7%	33.5%
6th	7.6%	13.9%	9.6%	69.8%	0.6%	2.1%	2.8%	37.2%	7.0%	11.7%	6.7%	32.5%
7th	8.4%	12.9%	8.3%	71.4%	0.9%	2.0%	2.8%	41.2%	7.5%	10.9%	5.5%	30.2%
8th	8.0%	14.5%	9.0%	69.7%	0.9%	2.6%	2.3%	40.5%	7.1%	11.9%	6.8%	29.2%
9th	11.4%	18.1%	9.8%	64.7%	1.0%	3.3%	3.2%	40.0%	10.4%	14.8%	6.6%	24.7%
10th (Highest Minority)	21.8%	26.0%	13.7%	53.3%	1.0%	5.1%	4.8%	35.9%	20.8%	20.9%	8.9%	17.3%

**Table C-13. Teacher Characteristics by Education and Experience - Poverty Deciles**

	<i>All Education Levels</i>				<i>Masters or Higher</i>				<i>Bachelors</i>			
	2 Years or Fewer	3 to 5 Years	6 to 7 Years	8 Years or More	2 Years or Fewer	3 to 5 Years	6 to 7 Years	8 Years or More	2 Years or Fewer	3 to 5 Years	6 to 7 Years	8 Years or More
1st (Lowest Poverty)	7.8%	14.4%	9.6%	68.7%	0.5%	2.2%	3.2%	38.3%	7.3%	12.3%	6.4%	30.4%
2nd	8.2%	14.8%	9.0%	68.5%	0.6%	2.1%	2.7%	37.6%	7.7%	12.7%	6.4%	30.9%
3rd	8.8%	12.3%	9.1%	70.4%	0.6%	2.0%	2.5%	36.8%	8.2%	10.3%	6.7%	33.5%
4th	8.5%	13.0%	8.7%	70.7%	0.6%	1.8%	2.5%	37.9%	7.8%	11.2%	6.2%	32.8%
5th	8.0%	12.5%	8.3%	72.2%	0.8%	2.0%	2.0%	36.7%	7.2%	10.5%	6.3%	35.5%
6th	7.6%	12.7%	7.3%	73.0%	0.5%	2.3%	2.0%	37.9%	7.2%	10.4%	5.3%	35.1%
7th	7.5%	14.1%	8.5%	70.9%	0.5%	1.8%	2.7%	38.1%	6.9%	12.3%	5.8%	32.8%
8th	7.7%	14.8%	8.9%	70.6%	0.6%	2.6%	2.7%	35.3%	7.1%	12.2%	6.1%	35.3%
9th	9.0%	15.6%	9.9%	68.5%	0.6%	2.5%	2.2%	36.5%	8.4%	13.1%	7.6%	32.0%
10th (Highest Poverty)	19.8%	25.4%	13.7%	54.7%	1.4%	4.2%	4.0%	33.9%	18.4%	21.2%	9.7%	20.8%

## Teacher Experience Bands and Education (Reading/Math Achievement)

**Table C-14. Teacher Characteristics by Education and Experience – Reading Achievement Deciles**

	<i>All Education Levels</i>				<i>Masters or Higher</i>				<i>Bachelors</i>			
	2 Years or Fewer	3 to 5 Years	6 to 7 Years	8 Years or More	2 Years or Fewer	3 to 5 Years	6 to 7 Years	8 Years or More	2 Years or Fewer	3 to 5 Years	6 to 7 Years	8 Years or More
1st (Lowest Achievement)	16.3%	24.6%	12.7%	57.1%	1.1%	3.8%	3.8%	34.8%	15.2%	20.9%	8.9%	22.3%
2nd	10.8%	15.4%	9.7%	67.6%	1.0%	2.3%	2.9%	36.2%	9.8%	13.1%	6.8%	31.4%
3rd	8.6%	15.1%	9.0%	69.3%	0.6%	2.2%	2.6%	37.6%	8.0%	12.9%	6.5%	31.7%
4th	9.0%	14.3%	8.4%	69.7%	0.7%	1.8%	2.1%	36.3%	8.3%	12.5%	6.3%	33.4%
5th	7.7%	13.7%	8.9%	71.2%	0.6%	2.0%	2.7%	38.3%	7.1%	11.7%	6.2%	32.9%
6th	7.7%	14.3%	9.7%	69.7%	0.7%	2.7%	2.9%	37.2%	7.1%	11.6%	6.8%	32.5%
7th	9.2%	14.2%	8.5%	69.7%	0.6%	1.9%	2.5%	35.6%	8.6%	12.3%	6.1%	34.1%
8th	7.1%	12.9%	8.5%	72.7%	0.4%	1.7%	2.2%	38.4%	6.7%	11.2%	6.3%	34.3%
9th	8.0%	13.1%	8.5%	71.1%	0.6%	1.8%	2.4%	37.6%	7.5%	11.3%	6.1%	33.5%
10th (Highest Achievement)	8.0%	13.6%	7.8%	71.4%	0.4%	1.9%	2.5%	39.2%	7.6%	11.7%	5.3%	32.2%

**Table C-15. Teacher Characteristics by Education and Experience – Math Achievement Deciles**

	<i>All Education Levels</i>				<i>Masters or Higher</i>				<i>Bachelors</i>			
	2 Years or Fewer	3 to 5 Years	6 to 7 Years	8 Years or More	2 Years or Fewer	3 to 5 Years	6 to 7 Years	8 Years or More	2 Years or Fewer	3 to 5 Years	6 to 7 Years	8 Years or More
1st (Lowest Achievement)	16.3%	24.2%	12.8%	57.2%	1.2%	4.3%	3.6%	35.5%	15.1%	19.9%	9.2%	21.7%
2nd	10.8%	16.3%	9.2%	67.8%	1.1%	2.5%	2.9%	37.0%	9.7%	13.8%	6.3%	30.7%
3rd	9.3%	14.5%	9.8%	68.6%	0.7%	2.2%	2.8%	37.3%	8.6%	12.3%	7.0%	31.3%
4th	8.4%	15.1%	8.8%	69.5%	0.7%	1.9%	2.4%	35.0%	7.7%	13.2%	6.4%	34.5%
5th	8.1%	14.2%	7.8%	71.1%	0.5%	1.9%	1.9%	37.0%	7.6%	12.4%	5.9%	34.0%
6th	8.0%	13.6%	9.0%	71.0%	0.5%	2.2%	2.6%	38.5%	7.5%	11.4%	6.4%	32.5%
7th	8.8%	14.4%	8.9%	69.2%	0.5%	2.0%	2.9%	36.0%	8.3%	12.3%	6.0%	33.2%
8th	8.3%	13.2%	8.5%	70.8%	0.6%	1.9%	2.6%	36.8%	7.7%	11.3%	5.9%	34.1%
9th	6.5%	13.0%	8.7%	72.4%	0.5%	1.5%	2.4%	39.5%	6.0%	11.5%	6.3%	32.9%
10th (Highest Achievement)	8.2%	12.6%	8.6%	71.4%	0.5%	1.8%	2.7%	38.2%	7.7%	10.8%	5.9%	33.3%