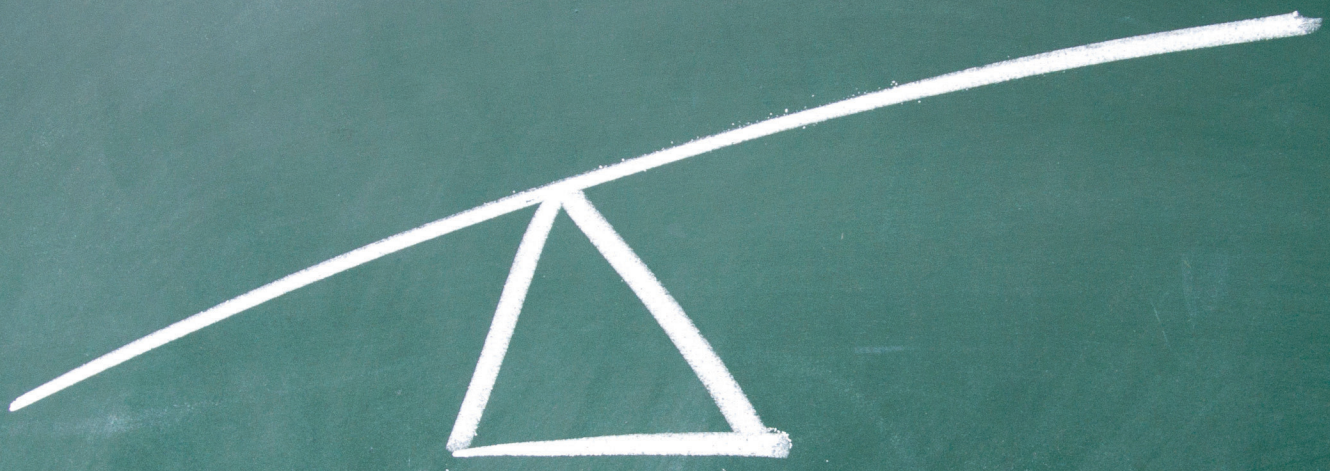
August 2014

Unequal access, unequal results:

Equitable teacher distribution in Miami–Dade County Public Schools



National Council on Teacher Quality

ABOUT NCTQ

The National Council on Teacher Quality (NCTQ) is a non-partisan research and policy organization committed to restructuring the teaching profession, led by our vision that every child deserves effective teachers.

THE NCTQ TEAM FOR THIS PROJECT

Sudipti Kumar and Nancy Waymack authored this study.

Unequal access, unequal results:

Equitable teacher distribution in Miami–Dade County Public Schools

Overview

At the request of the Urban League of Miami, NCTQ analyzed the distribution of teachers in Miami-Dade County Public Schools. In this paper we examine teacher-level data to determine whether indicators correlated with teacher quality vary across the district based on socioeconomic differences, and we recommend ways the district can distribute teachers in a more equitable way.

While the paper is specific to Miami-Dade County, it examines an issue with which school districts across the country struggle. To that end, the U.S. Department of Education Office for Civil Rights has begun collecting data on student enrollment by race and ethnicity and teacher characteristics. The first summary of these data indicates that 1) black students are more likely to be taught by a first-year teacher than white students, 2) their teachers are more likely to be paid less and 3) they are more likely to have an uncertified or unlicensed teacher.[1]

For more than a decade, teacher quality has received much attention by policymakers and district leaders trying to improve the outcomes of students in their communities. Subsequent policy reforms at the federal, state and school-district levels have attempted to improve the performance of teachers. Examples of such reforms include changes to teacher evaluation systems to incorporate objective measures of student performance as well as district-level changes to the length and structure of the teacher work day to allow teachers time to plan collaboratively.

Students who have effective teachers can gain an additional year of learning over peers who have less effective teachers.

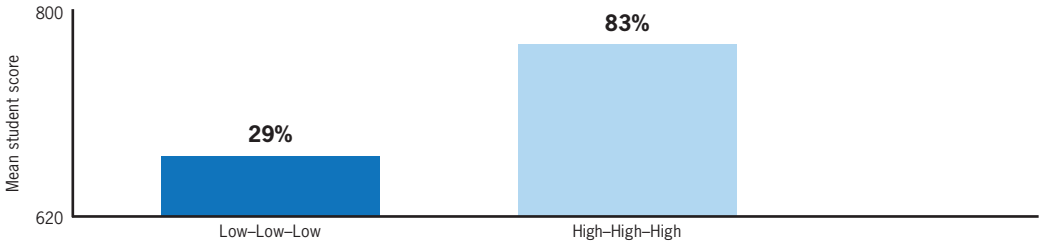
This focus on teacher quality as a key lever for student outcomes is supported by a large body of research identifying teachers as the most important school-based factor in improving student achievement.[2] Numerous studies have confirmed that students who have effective teachers can gain an additional year of learning over peers who have less effective teachers.[3] The differences are even more apparent when a student has highly effective teachers for several years in a row.

1 Civil Rights Data Collection Data Snapshot: Teacher Equity, Issue Brief Number 4, March 2014. http://ocrdata.ed.gov

2 Hanushek, E. A. (2002). Teacher quality. In L. T. Izumi, & W. M. Evers (Eds.), Teacher quality (pp. 1–12). Stanford, CA: Hoover Press.
Kane, T. J., Rockoff, J. E., & Staiger, D. O. (2006). *What does certification tell us about teacher effectiveness?* Evidence from New York City (NBER Working Paper 12155). Cambridge, MA: National Bureau of Economic Research.
Nye, B., Konstantopoulos, S., & Hedges, L. V. (2004). How large are teacher effects? Educational Evaluation and Policy Analysis, 26(3), 237–257.
Hanushek, E. A., Kain, J. F., O'Brien, D. M., & Rivkin, S. G. (2005). *The market for teacher quality* (NBER Working Paper 11154). Cambridge, MA: The National Bureau of Economic Research.
Rockoff, J. E. (2004). *The impact of individual teachers on student achievement: Evidence from panel data.* American Economic Review, 94(2), 247-252.

3 Hanushek, E. A. (2002). Teacher quality. In L. T. Izumi, & W. M. Evers (Eds.), Teacher quality (pp. 1–12). Stanford, CA: Hoover Press.

Student outcome differences based on teacher effectiveness three years in a row



A study by the University of Tennessee Value-Added Research and Assessment Center *found that students who had three highly effective teachers in a row attained mathematics scores that were 50 percentile points higher than students with comparable beginning mathematics scores but who were assigned to three highly ineffective teachers in a row.*[4]

Equitable distribution of teachers is a concern in school districts across the country, with lower-performing schools often experiencing greater difficulty in recruiting and retaining high-quality teachers.

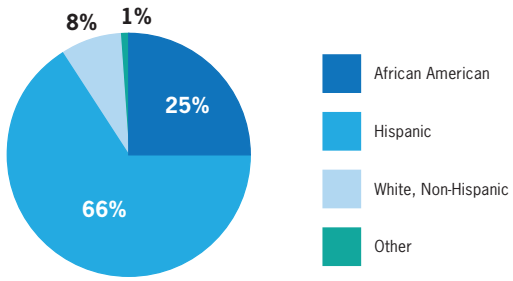
In recent years, research has shown that the equitable distribution of teachers is a concern in school districts across the country, with lower-performing schools often experiencing greater difficulty in recruiting and retaining high-quality teachers than more effective schools in the same district.[5] Compounding this issue is the fact that lower-performing schools tend to be those with a high percentage of minority and/or low-income students, resulting in the oft-discussed achievement gap between wealthier white students and poorer minority students.[6] While all schools reap rewards from high-quality teaching, these schools would most benefit even more than most from a higher-quality teaching force comprised of teachers who can move the needle on student achievement quickly and effectively to get students up to grade level.

But it's a hard job. The many pressures on impoverished schools introduce additional challenges for teachers. Some students come to school months or even years academically behind their peers. Violence in low-income communities takes its toll, and some students may be hungry or may not have a guiding hand at home to help with homework or read them a book. Add to that geographic locations that are often far from teachers' homes in neighborhoods that can feel unsafe and that lack basic amenities as simple as a coffee shop. In Miami and elsewhere, teacher and administrator turnover in high-poverty schools is 50 percent greater than in more affluent schools, making it hard to establish stable learning environments in which both teachers and students can thrive.[7]

Miami-Dade: Demographics and Student Outcomes

Overall demographic data show a high prevalence of Hispanic students in Miami-Dade, comprising almost 70 percent of the student population. African American students make up about 25 percent of student enrollment, with white students represented at less than 10 percent.

2012-2013 Student enrollment demographic data, Miami-Dade



Demographic data for the district show that the majority of students attending Miami-Dade County Public Schools are Hispanic.

4 Sanders, W. L., & Rivers, J. C. (1996). *Cumulative and residual effects of teachers on future students' academic achievement.* Knoxville, TN: University of Tennessee Value-Added Research and Assessment Center.

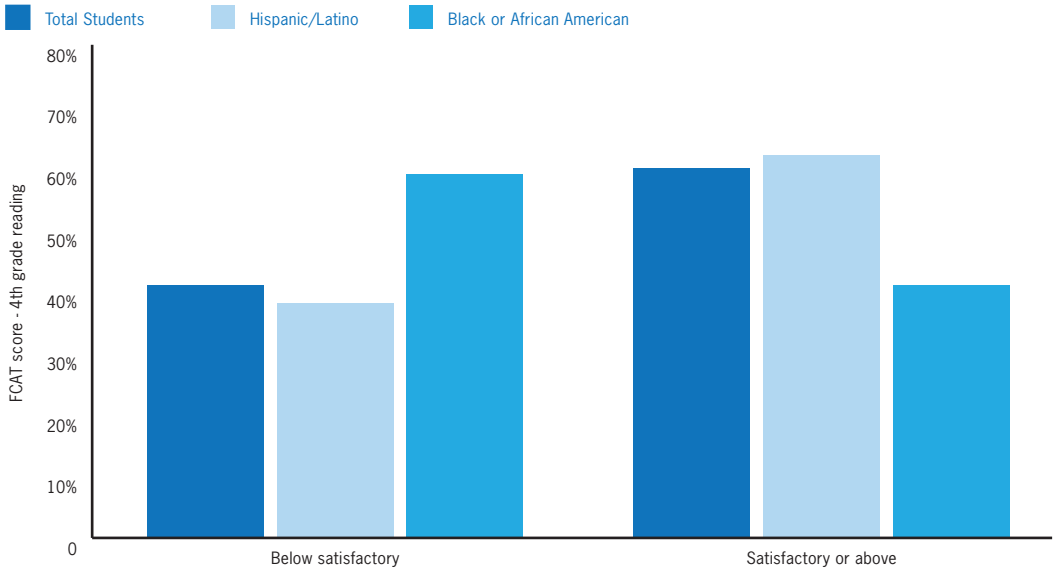
5 Loeb, S., Kalogrides, D., & Beteille, T. (2011). *Effective schools: Teacher hiring, assignment, development and retention.* Cambridge, MA: The National Bureau of Economic Research.
Lankford, H., Loeb, S., & Wyckoff, J. (2002). Teacher sorting and the plight of urban schools: A descriptive analysis. *Educational Evaluation and Policy Analysis.* Vol. 24, No., 1, pp 37-62.

6 Clotfelder, C., Ladd, H., & Vigdor, J. (2009). The academic achievement gap in grades 3-8. *The Review of Economics and Statistics.* Vol. 91, No., 2, pp 398-419.

7 Ingersoll, R. (2001). *Teacher turnover, teacher shortages and the organization of schools.* Center for the Study of Teaching and Policy.

Student achievement in Miami-Dade has notably improved, with all student groups showing gains on the statewide performance exam known as the Florida Comprehensive Assessment Test (FCAT). In 2012, the mathematics scores of students improved across all grade levels tested, and in 2013, scores increased significantly in writing across all grades.[8] In addition, the district has been appropriately lauded in its efforts to improve outcomes for African American and Hispanic students. Between 2006 and 2009, the graduation rate for both of these groups rose by 14 percent.[9] However, data from the 2012-2013 school year indicate that significant performance differences still exist across ethnicities (particularly African American students and the rest of the student body) and poverty levels as measured by students who qualify for free and reduced price lunch.

2012-2013 FCAT scores 4th grade reading results, by race



Approximately 60 percent of students overall in Miami-Dade scored satisfactory or above on the FCAT; however, only 41 percent of African American students did.

2012-2013 FCAT scores 4th grade math results, by poverty level

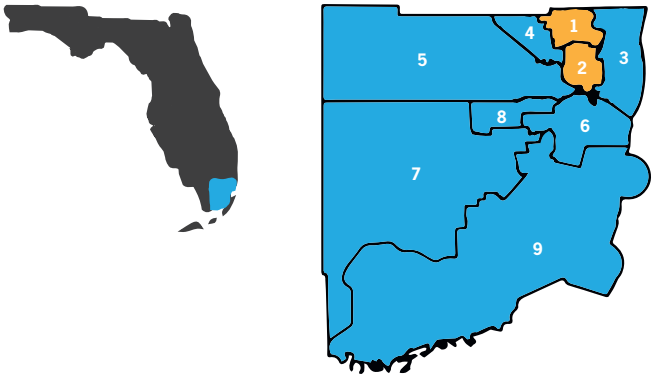
Approximately 81 percent of students who were not eligible for free or reduced price lunch scored satisfactory or above on the FCAT; however, only 53 percent of students who were eligible for free or reduced price lunch did.

8 http://news.dadeschools.net/releases/rls12/407_fcat.html; http://oada.dadeschools.net/fcat/2013SpringWritingResults.pdf
9 Isen, L. (2012, October). Miami-Dade School District wins broad prize – top education award. *Miami Herald.*

Methodology

NCTQ used teacher-level data provided by the school district for the 2012-2013 school year to compare geographic electoral districts.[10] The analysis was conducted this way because of the significant differences between schools in each of the voting districts, especially with respect to the demographic composition of schools and the schools' performance outcomes.

Voting Districts for Miami-Dade County Public Schools

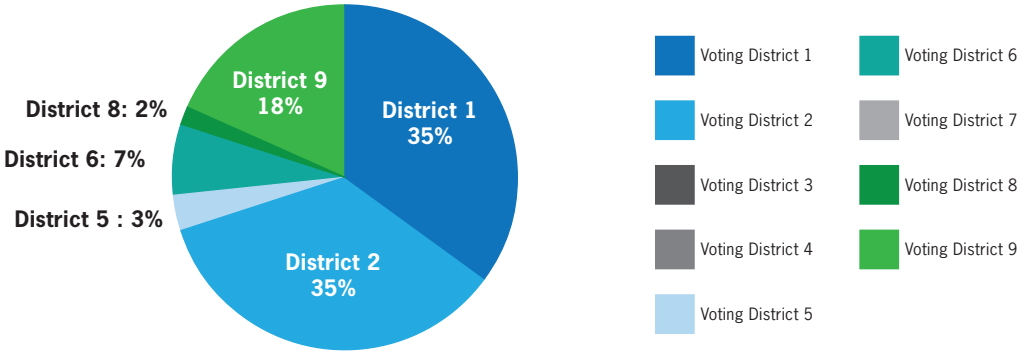


There are nine voting districts in Miami-Dade County. Each district is represented by an elected Board of Education member.

School accountability grades issued by the state for the 2012-2013 school year indicate that, out of a total of 60 Miami schools that received a D or an F on the Florida School Accountability Report, 70 percent were in voting districts 1 and 2.[11] On the other hand, some voting districts, such as 3, 4, and 7, had no schools with a grade less than a C.

In 2010, Miami-Dade County Public Schools developed the Education Transformation Office (ETO), designed to serve schools that are "persistently low achieving."[12] Schools in this group either received federal School Improvement Grant (SIG) funds or received a D or an F in the previous year on Florida's state accountability system. Some fragile "C" schools are also included.[13] Sixty-six schools in Miami-Dade County receive support from this office, and 73 percent of those schools are in voting districts 1 and 2.

Percentage of Miami-Dade schools with grades D and F in the state accountability system, by voting district

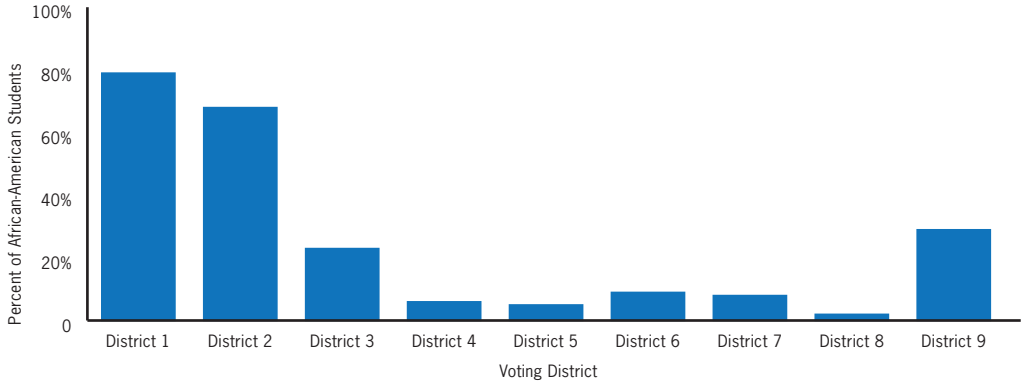


Seventy percent of schools that received a D or an F on the Florida School Accountability Report are in voting districts 1 and 2. Districts 3, 4 & 7 had zero schools with a D or an F on the Florida School Accountability Report.

10 The School Board of Miami-Dade County is comprised of nine members elected by the people. These board members serve four-year terms and are elected from individual single member districts on a staggered basis.
11 Florida's School Accountability Report provides a school grade based on percentage of students meeting reading, writing and math standards as well as learning gains that the school has made.
12 Education Transformation Office website: http://eto.dadeschools.net/aboutus.htm
13 Fragile "C" schools are defined as schools that earned a D in at least one of the previous three years.

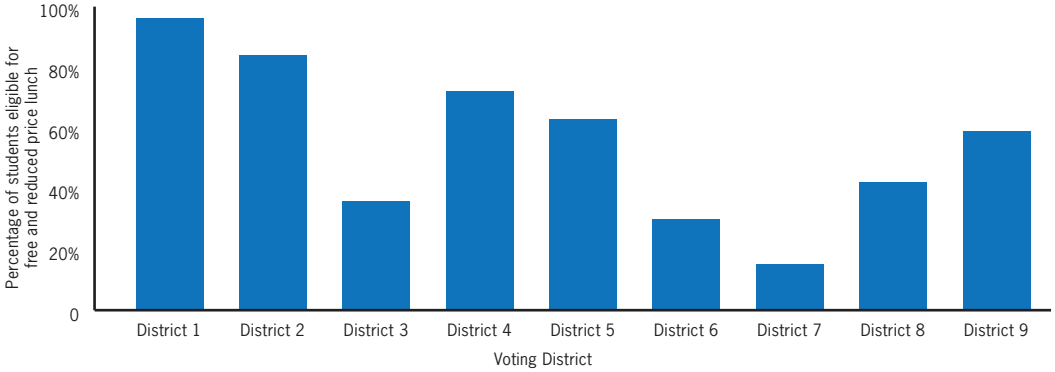
Demographic data broken down by voting districts also show that districts 1 and 2 have the highest percentage of schools where almost all students qualify for free and reduced price lunch. In addition, students in schools in voting districts 1 and 2 are largely African American, the lowest-performing group on the FCAT.

Percentage of African American students, by voting district



The highest percentage of African American students go to schools in districts 1 and 2. Notably, districts 4, 5 and 8 have very few African American students.

Percentage of schools in Miami-Dade where at least 80 pecent of students qualify for free and reduced price lunch



Over 80 percent of the schools in districts 1 and 2 have greater than 80 percent poverty as measured by eligibility for free or reduced price lunch.

Indicators

In the following analysis, NCTQ sought to examine whether voting districts with poorer performance outcomes (namely 1 and 2) had a different composition of teachers based on certain characteristics than schools located in other geographic areas of Miami-Dade County.

NCTQ framed this analysis around five indicators that research and best practices have found to be instrumental in improving teacher quality. (The body of research that supports these indicators is provided in Appendix A).

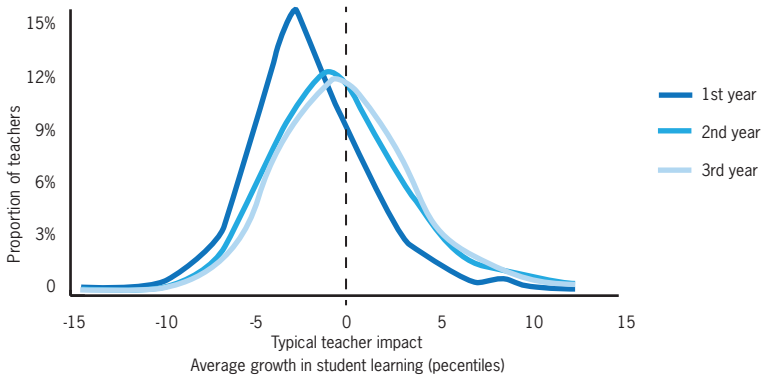
1. **Teacher experience** Teacher experience is balanced so that novice, mid-career and veteran teachers are well distributed across the district. Novice teachers are not automatically placed in the most difficult assignments.
2. **Teacher retention** Effective teachers who enter a school stay there, and policies are in place at the district level that encourage high-performing teachers to move to hard- to-staff schools and stay.
3. **Teacher attendance** Teacher attendance is high, thereby maximizing student time with their instructors.
4. **Teacher Performance** Teacher evaluation ratings reflect differences in teacher performance, and similar distributions of teachers at different performance bands are found across the school district.
5. **Teacher preparation** The quality of a teacher's preparation program is taken into account when hiring and placing teachers in the district.

Indicator 1: Teacher experience

Are first-year teachers concentrated in particular schools?

Almost all new teachers experience a significant learning curve in their first year in the classroom.[14] There are many reasons for this, including a lack of adequate preparation prior to entering the classroom and insufficient knowledge necessary for a new job as intensive as teaching. Given the challenges first-year teachers face, concentrating new teachers in schools that struggle the most with student performance is generally counterproductive to improving student outcomes.[15]

Learning shortfall under first-year teachers

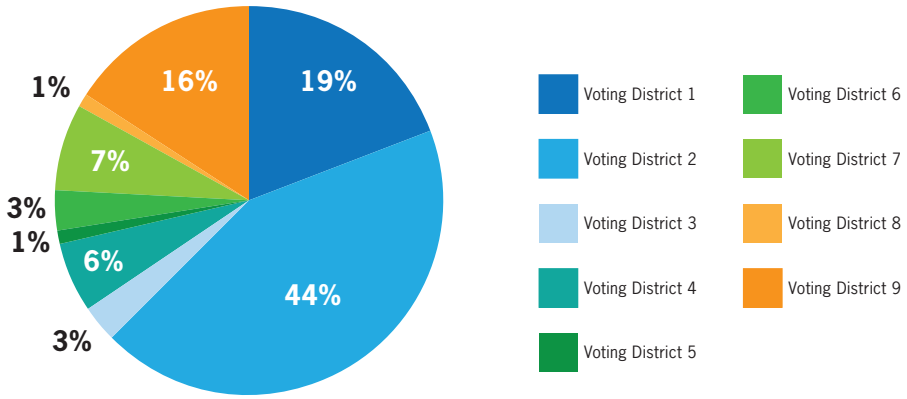


A study of teachers in Los Angeles finds that a majority of first-year teachers are unable to exceed the performance of teachers with more experience.[16]

14 Hanushek, E., Kain, J., & Rivkin, S. (1998). *Teachers, schools, and academic achievement.* Cambridge, MA: The National Bureau of Economic Research.
15 Gordon, R., Kane, T.J., & Staiger, D.O. (2006, April). *Identifying effective teachers using performance on the job* (Hamilton Project Discussion Paper). Washington, DC: Brookings Institution.
16 Ibid.

A significantly higher proportion of first-year teachers hired last year in Miami-Dade County Public Schools taught in classrooms in voting districts 1 and 2, more so than in any other geographic area of the school district. Out of 307 first-year teachers hired in Miami-Dade in the 2012-2013 school year, over 60 percent taught in voting districts 1 and 2, whereas very few new teachers filled vacancies in other geographic areas of the school district, at least in part because the majority of the open positions were in districts 1 and 2.

Number of teachers with less than 1 year of experience 2012-2013



Almost two-thirds of the first-year teachers in Miami-Dade were either hired or placed in voting districts 1 and 2.

Within schools, principal-determined assignments may further disadvantage high-need students. The prevalence of within-school sorting of teachers so that less experienced teachers get lower-performing students is confirmed by multiple studies, including data from Miami-Dade itself.[17]

These within-school assignment patterns compound the pressure on the district's novice teachers who are placed in lower-achieving voting districts. In early 2013, researchers Demetra Kalogrides, Susanna Loeb and Tara Beteille released a report that used data from Miami-Dade County Public Schools to understand within-school sorting of teachers. They found that teachers with certain characteristics – e.g., those with less experience and from less-competitive colleges – were more likely to work with lower-achieving students than were other teachers in the same school.[18] This research suggested that dynamics are at play within schools where certain teachers, such as those with seniority, have more choice over which classes they teach. The Miami-Dade teachers' contract specifies that principals are to schedule teachers' assignments, and when doing so the principal should take into account seniority and teacher preferences.[19]

Are teachers of various levels of experience well represented in schools across voting districts?

Prior research has shown that beyond the first year in the classroom teacher experience matters the most in the first few years of teaching, with the greatest yearly improvement in a teacher's effectiveness taking place from the first through the fourth years.[20] After this, there are incremental increases to student achievement as teacher experience grows, but those effects plateau with time. While this does not take into account the many other benefits that veteran teachers provide to the school community, it does highlight the growth in teachers' effectiveness in the first few years of teaching.

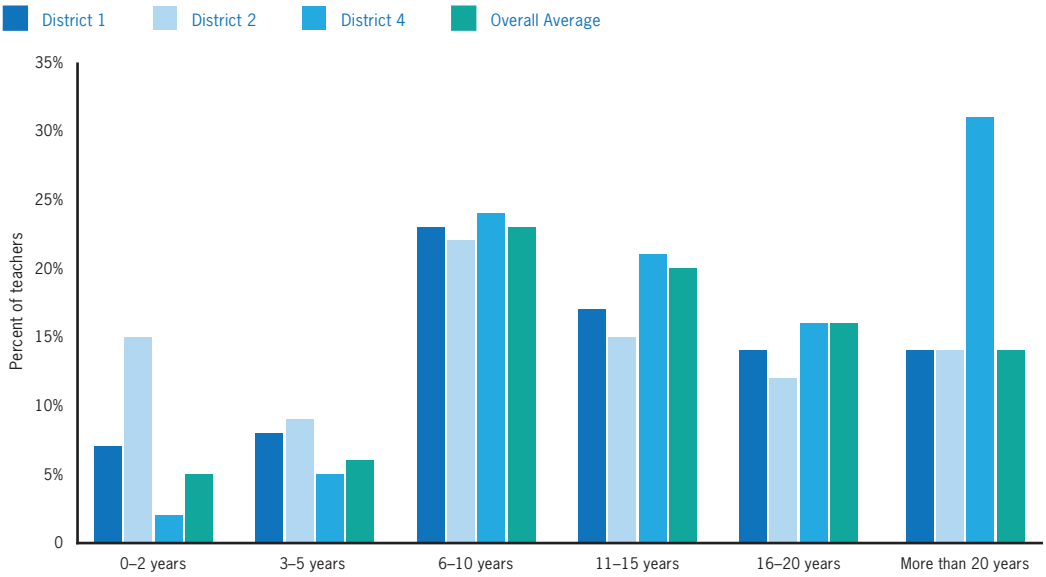
Across all voting districts in Miami-Dade, the average years of teacher experience is fairly high, ranging from an average of 13.5 years (voting district 2) to 17 years (voting district 8) in the classroom.

17 Kalogrides, D., Loeb, S., & Beteille, T. (2013). *Systematic sorting: Teacher characteristics and class assignments.* Sociology of Education Vol. 86, pp 103-123.
18 Ibid.
19 M-DCPS and UTD collective bargaining agreement, Article IX, Section 2
20 Hanushek, E., Kain, J., & Rivkin, S. (1998). *Teachers, schools, and academic achievement.* Cambridge, MA: The National Bureau of Economic Research.

Experience distributions for voting district 2 show a far higher occurrence of teachers with 0-2 years of experience and fewer teachers with 11 to 15 and 16 to 20 years of experience as compared to the overall average and other districts (voting district 4 is shown as an example in the graph). In fact, 15 percent of the teachers in voting district 2 have two or fewer years of experience, as compared to only 5 percent of the teachers overall in Miami-Dade. Interestingly, across all voting districts there are a significant number of teachers who have greater than 20 years of experience.

One out of every seven teachers in voting district 2 has two or fewer years of experience. In voting district 4, only one out of every 50 teachers is in their first two years.

Teacher experience by voting district



A quarter of the teachers in district 2 have fewer than 5 years of experience, as compared to only a tenth of the teachers overall in Miami-Dade.

A significant discrepancy exists between the overall experience distribution for Miami-Dade as a whole and voting districts 1 and 2. Voting district 2, in particular, has fewer mid-career teachers (11 to 20 years of experience) and far more novice teachers.

One factor that may affect this distribution is schools' designation as School Improvement Grant (SIG) schools. Depending on the reform model chosen, staffing changes may be required. Of the schools in voting district 2, 63 percent are SIG schools (30 out of 48 schools).

In addition, Miami-Dade places a number of Teach For America (TFA) teachers in voting districts 1 and 2.[21] The district notes that placement of TFA teachers is intentional; they initiated a clustering strategy to place a high number of Teach For America teachers in low-performing schools to maximize their impact.

It is commendable that the district is proactively working with organizations that provide sources of high-quality novice teachers.[22] However, teachers with only one or two years of experience, no matter what their route to teaching is, are still going to have a greater challenge than teachers with a few years in the classroom. Additionally, because TFA teachers are generally expected to complete two-year commitments (although some will stay longer), the cycle of continuously hiring for new positions in particular voting districts could contribute to the high level of turnover in voting districts 1 and 2.

21 Teach For America is a highly competitive, alternative route to teaching that asks its corps members to commit to teaching for two years.

22 Recent research examined whether the density of TFA-affiliated teachers in Miami-Dade affected performance of other teachers in placement schools. Results showed that students taught by a TFA teacher had higher math scores than students in the same school who were not taught by a TFA teacher.

Indicator 2: Teacher retention

How does teacher turnover differ across voting districts?

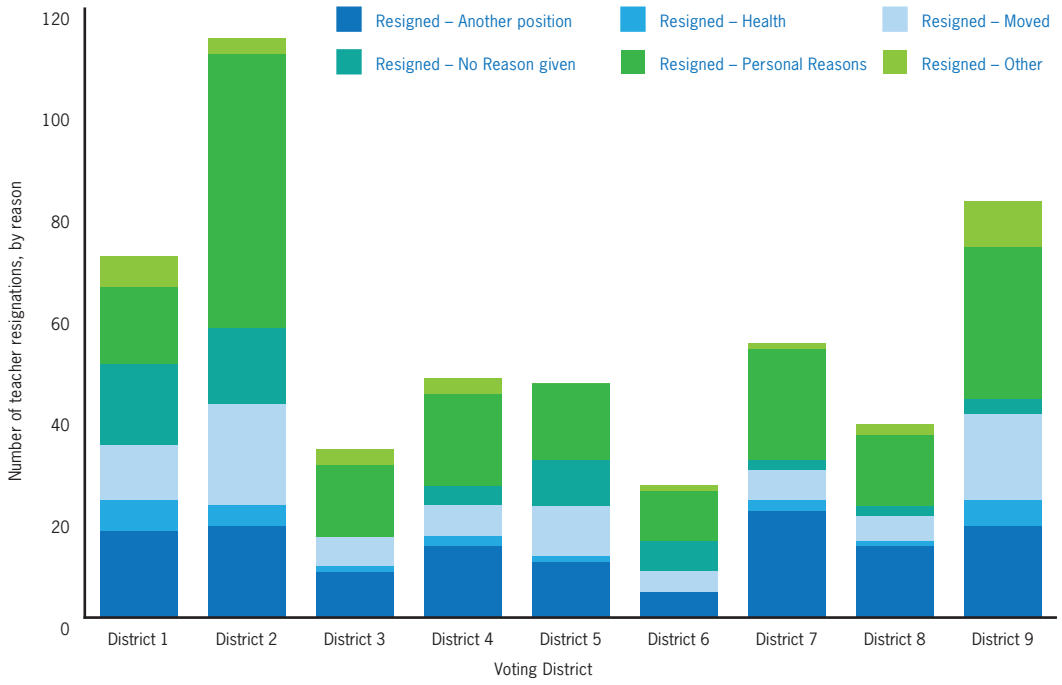
When discussing teacher turnover, one must acknowledge the fact that teaching, while incredibly rewarding, is also very demanding. In particular, teachers who opt to teach in high-need schools often deal with expectations and pressure to improve student outcomes at a pace that far exceeds the norm in order to make up for lost years of learning in the past.

A study using data from 4th and 5th grade New York City students found that students in grade levels with higher teacher turnover have lower scores in both English/Language Arts and math, and that this effect is particularly strong in schools with more low-performing and black students.[23] Prior research has also shown that new teachers are more likely to leave their schools when they are assigned lower-achieving students with discipline issues, whereas the same is not true for more experienced teachers working with similar students.[24]

Of the approximately 500 Miami-Dade teachers who resigned from their schools in 2012-2013, 22 percent were from schools in voting district 2, followed by 14 percent from voting district 1.[25] In voting district 2, the number of resignations represents 5 percent of the entire teaching force in those schools as opposed to an overall district average of resignations of 2.6 percent. From an analysis of the data, it appears that some teachers who resigned took other positions in the district in other schools or the central office and others left the district all together.

The resignation rate in voting district 2 was 2.5 times greater than in voting districts 4 or 5 and over four times greater than in voting district 6.

Teacher resignations, by reason and voting district



The greatest number of teachers resigned from voting district 2, followed by districts 1 and 9.

While teacher attrition is often higher in urban districts than in neighboring suburban areas, a high num-

23 Ronfeldt, M., Loeb, S., & Wyckoff, J. (2013). *How teacher turnover harms student achievement.* American Education Research Journal. Vol. 50, pp 4-36.

24 Donaldson & Johnson, 2010. (2010). The price of misassignment: The role of teaching assignments in Teach for America teachers' exit from low-income schools and the teaching profession. *Education Evaluation and Policy Analysis.* Vol. 32, No., 2, pp 299-323.

25 An additional 171 teachers could not be matched.

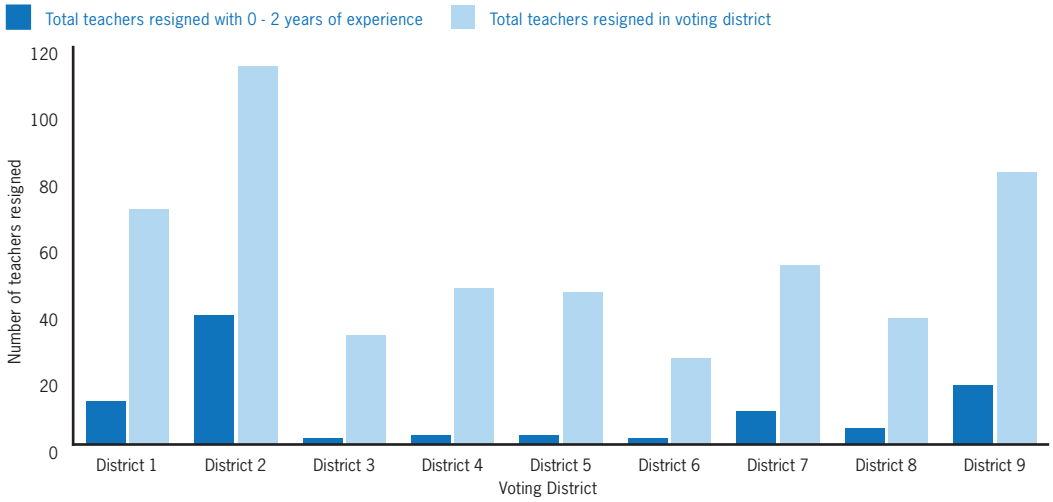
ber of teacher resignations in particular schools or communities within the district can often indicate a challenging school culture. Studies have found that contextual factors such as lack of administrative support, poor staff relationships in terms of collaboration and collegiality and challenges with student behaviors correlate highly with teacher turnover.[26] Other research has shown that most schools make little effort to keep high-performing teachers, or "Irreplaceables," as the study called them.[27]

Is there a churn of teachers (novice teachers continually resigning)? Who's leaving?

Thirty-five percent of the teachers who resigned from schools in voting district 2 had two or fewer years of experience, and over half had fewer than five years.

The high percentage of novice resignations in district 2 schools is likely due at least in part to the higher number of first-year teachers placed there, as highlighted in the previous section. The challenge this data highlights is the danger of constant churn, where novice teachers are being placed and then leaving at high rates, creating a cycle of instability at these schools.

Novice teacher resignations and overall teacher resignations, by voting district



In voting district 2, 35 percent of the teachers who resigned had fewer than two years of experience. The percentage of novice teachers resigning from other voting districts is not nearly as high.

Indicator 3: Teacher attendance

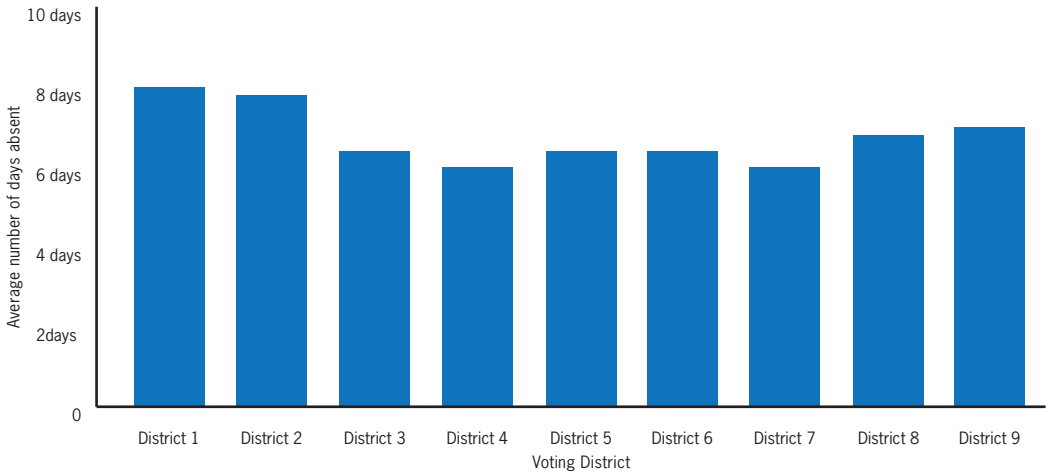
Does teacher attendance differ across districts?

Teacher absences, at an average of about seven days per school year across the district, are low overall in Miami-Dade, particularly in comparison to 11 days in comparable districts[28] and the 10 days teachers are allotted.[29] In NCTQ's 2012 analysis, we commended Miami-Dade for having high attendance compared to other districts we have studied.[30]

26 Boyd, D., Grossman, P., Ing, M., Lankford, H., Loeb, S., & Wyckoff, J. (2010, October). The influence of school administrators on teacher retention decisions. *American Educational Research Journal*. Vol. 48, pp 303-333.
27 TNTP. (2012, July). *Irreplaceables: Understanding the real retention crisis in America's urban schools.*
28 *Roll call: The importance of teacher attendance.* National Council on Teacher Quality. June 2014. http://www.nctq.org/dmsStage/RollCall_TeacherAttendance.
29 M-DCPS and UTD Collective Bargaining Agreement. Article XIV, Section 8
30 *Teacher quality roadmap: improving policies and practices in the Miami-Dade County Public Schools.* National Council on Teacher Quality. January 2012. http://www.nctq.org/dmsStage/Teacher_Quality_Roadmap_Improving_Policies_and_Practices_in_Miami_NCTQ_Report

While overall absences are low, teachers in voting districts 1 and 2 were out of the classroom approximately two more days in 2012-2013 than those in voting district 4, the voting district with the lowest number of absences.[31]

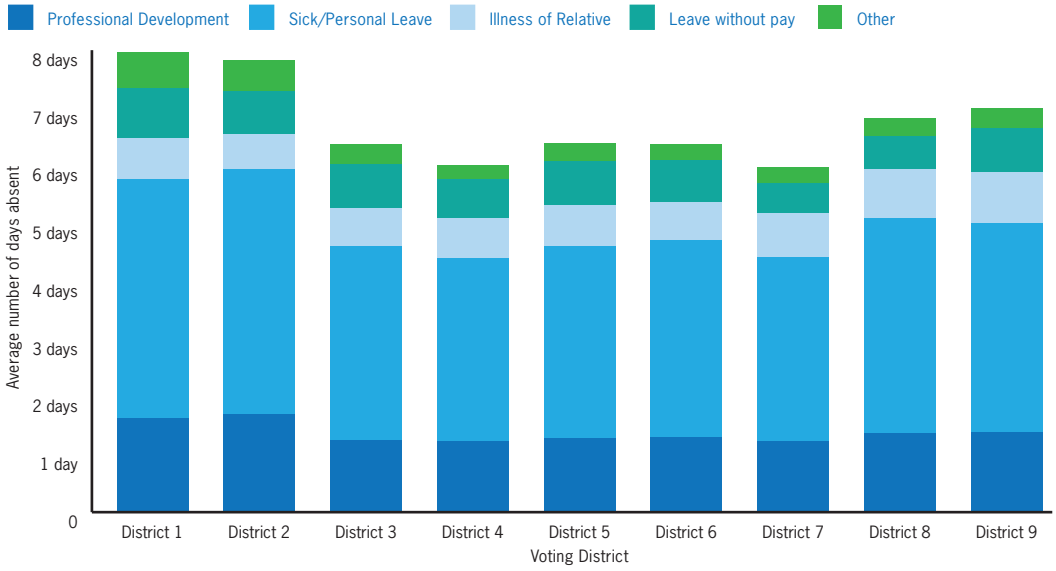
Average number of absences per teacher, 2012-2013



Teachers in voting districts 1 and 2 are absent a full two days more, on average, than teachers in voting districts 4 and 7.

The increase in teacher days out of the classroom in voting districts 1 and 2 seems to come mostly from a greater number of absences for sick and personal leave. For example, teachers in voting district 4 took an average of 3.17 days for sick and personal leave, while teachers in voting district 2 took an average of 4.24 days. Teachers in voting districts 1 and 2 took a slightly higher amount of leave for training and conferences. This may be attributable to the high prevalence of schools in these districts that receive support from the Educational Transformation Office (ETO). One of the goals of ETO is to provide ongoing, job-embedded professional development to the schools they support.[32]

Amount of leave taken by type



Teachers in voting districts 1 and 2 take more sick/personal leave and slightly more professional development leave.

31 Leave is based on the number of days teachers are out for sick, personal, professional development or other reasons. Teachers with long-term absences are not included.

32 http://eto.dadeschools.net/initiative.htm

While the average number of absences varies from one school to another, teachers in about a quarter of schools in voting districts 1 and 2 have an average of more than 10 absences, considerably more than any other district.

For schools with average absence rates higher than 10 days, approximately six days are taken for sick or personal leave and slightly fewer than three days are taken for professional development.

While there are a variety of legitimate reasons for a teacher to be out of the classroom from time to time, it is important to note that the impact of a teacher's absence is just as detrimental regardless of the explanation. One study found that a teacher who is absent 10 days dramatically lowers mathematics achievement by a margin equivalent to the learning loss experienced by students who are assigned a novice teacher as opposed to an experienced teacher.[33]

Indicator 4: Teacher Performance

How are teachers performing (based on evaluation results) across voting districts?

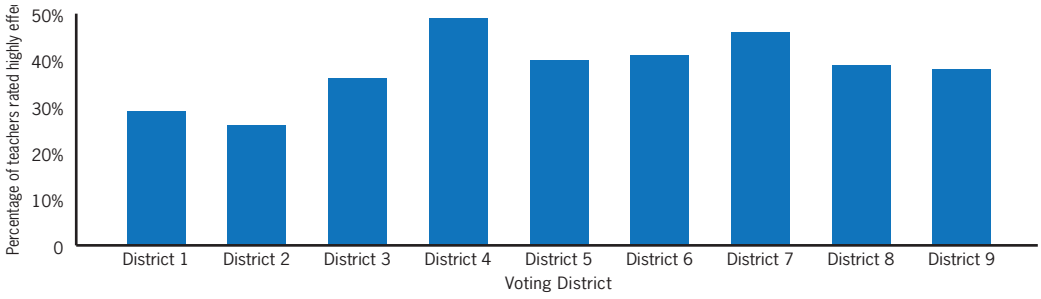
In 2011, Florida passed sweeping legislation that requires teachers to be evaluated on the following components: student performance, instructional practice and professional responsibilities. The law requires that 50 percent of the evaluation be based on a value-added score, which in Miami is derived from three years of student performance growth on state tests. The evaluation system has four summative ratings: highly effective, effective, needs improvement (or for new teachers who need improvement, developing), or unsatisfactory.

In 2012-2013, the majority of Miami-Dade County Public Schools teachers were rated as either effective or highly effective. Only 79 teachers across Miami-Dade were rated anything less than effective, which represents 0.4 percent of all teachers in the district. For all intents and purposes, the implementation of the system has resulted in a two-tiered evaluation system dividing teachers into the highly effective and effective categories, given that so few teachers are identified for the other categories.

Because the overall teacher evaluation ratings are so lopsided, with most teachers receiving one of the two highest ratings, it is difficult to discern whether evaluation ratings are providing a true picture of teacher performance in the district. Miami-Dade is not alone: This issue is something that many districts with new evaluation systems are struggling with. Statewide, in the 2012-2013 school year, 98 percent of Florida teachers were rated highly effective or effective, and last year other states such as Tennessee showed similar results.[34]

Yet differences across voting districts do emerge. When comparing across voting districts, voting districts 1 and 2 have the lowest percentage of teachers rated highly effective by far, particularly in comparison to voting district 4 where almost 50 percent of teachers were rated highly effective.

Percentage of teachers rated highly effective, by district



The percentage of teachers rated highly effective is far lower in voting districts 1 and 2 than in all other voting districts in Miami-Dade.

33 Marcotte, D. E., & Hemelt, S. W. (2007). *Unscheduled school closings and student performance.* Bonn, Germany: Institute for the Study of Labor.

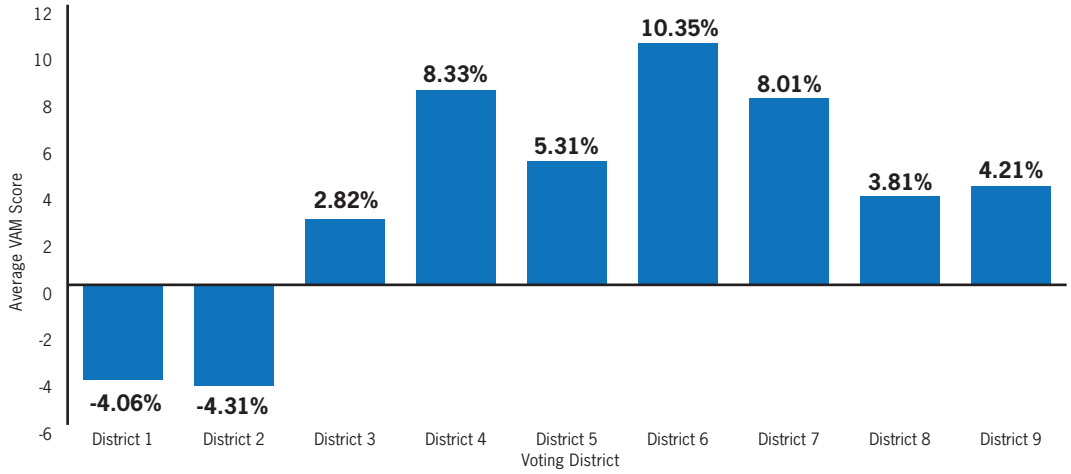
34 Anderson, J. (2013, March 30). Curious grade for teachers: Nearly all pass. *New York Times*. http://www.nytimes.com/2013/03/31/education/curious-grade-for-teachers-nearly-all-pass.html?pagewanted=all&_r=0

Looking only at teacher ratings does not provide as accurate a picture as one would hope. The reasons for the disparity between the number of highly effective teachers in voting districts 1 and 2 versus the rest of the voting districts could be based on accurate reflections of lower teacher performance, or they could be because of a lack of inter-rater reliability among principals or problems with the evaluation model itself. Looking at the components that feed into the overall evaluation rating can help to further explain the discrepancies.

The value-added measure that feeds into the overall teacher evaluation rating in Florida has been controversial, in part because the state gave all teachers a value-added score regardless of whether they teach in a tested grade or subject. This has resulted in many teachers receiving a score based on building-level results on math and reading tests rather than outcomes tied to their particular students.[35] This could have resulted in either over-inflated VAM scores for teachers or depressed VAM scores, depending on the teacher's performance relative to the building.

Regardless, comparing average value-added scores across voting districts shows stark differences that cannot be overlooked. Teachers' value-added scores in voting districts 1 and 2 were negative, on average, while average valued-added scores for teachers from schools in all other voting districts across Miami-Dade were positive. This means that, taken as a group, teachers in voting districts 1 and 2 generated less progress in their students' scores than the statewide average for their peers on the FCAT, while teachers as a group in all the other voting districts generated progress that was greater than the state average.[36] This data provides further evidence that while there may be issues with the evaluation model itself, as well as the reliability of raters, there are actual differences in teacher performance that negatively affect students in voting districts 1 and 2.

Average teacher-level value-added scores, by voting district



This graph shows the disparities between average value-added scores by voting district. Students of teachers in voting districts 1 and 2 grew 4 percent less than the statewide average, while students in other voting districts grew more than the state average. [37]

35 Legislation was passed recently that requires test score data to come from a teacher's students. "Student performance data must reflect actual contribution of the teacher to the performance of the students assigned to that teacher and in the teacher's subject matter." SB 736 (2011), amending Florida Statute 1012.34; SB 1664 (2013)

36 The aggregate VAM score is the proportion of learning gains students made above or below an average year's growth. For example, an aggregate VAM score of 5 percent means that on average the teacher's students grew 5 percent above the state average for growth. The closer a teacher's score is to zero percent, the closer that teacher's students grew at the state's average rate.

37 NCTQ conducted this analysis using recently released data at the school level. We do not endorse data released at the individual teacher level, and it was not necessary to review that data to produce this table.

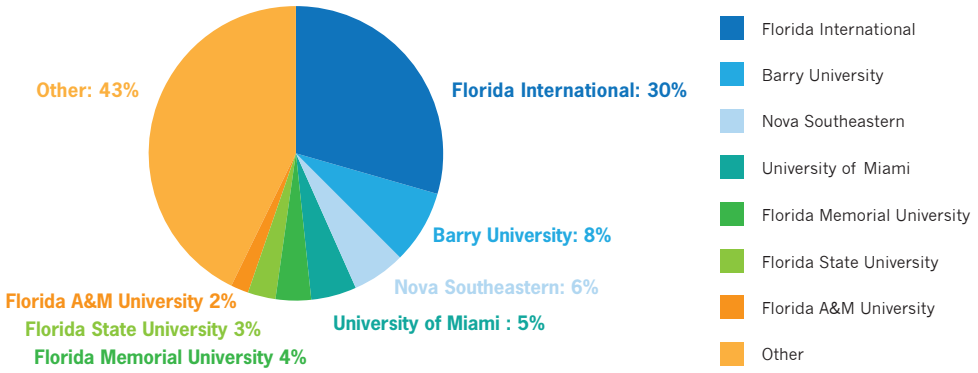
Indicator 5: Teacher preparation

Which teacher preparation programs are new teachers coming from?

Teacher preparation is a critical and often overlooked lever in improving student outcomes. In one study out of Washington State, teachers prepared by stronger programs were found to contribute at least two more months of student learning than a graduate of a weaker program.[38] Preparing new teachers should be of the utmost importance to school districts so that their teachers are better able to handle the job from the very beginning. Given the high number of novice teachers in high-need schools, particularly concentrated in certain voting districts, Miami-Dade should pay close attention to the skill level of incoming teachers.

Of the approximately 20,000 teachers in Miami-Dade, more than 30 percent obtained their bachelor's degree from Florida International University.[39] The total number of teachers who attended this institution is greater than the next six largest suppliers of teachers combined.

Largest suppliers of teachers in Miami-Dade



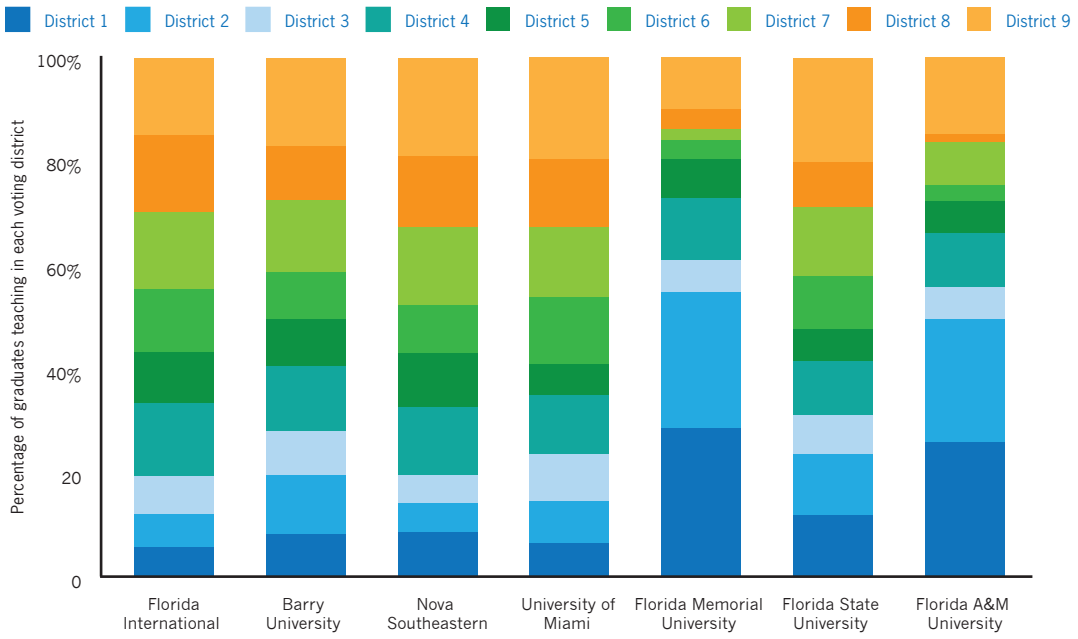
Florida International is the largest supplier of teachers in Miami-Dade, preparing 30 percent of the teachers in the district for which data was available.

While most of the top supplying institutions of teachers place teachers across all nine voting districts in roughly proportionate amounts, over 50 percent of Miami teachers who went to Florida Memorial University and 50 percent who went to Florida A&M University, both historically black colleges, are currently teaching in voting districts 1 and 2. However, given the small number of Miami teachers these programs prepare, teachers from these two institutions still represent less than 10 percent of the entire teaching force in these two voting districts.

Florida Memorial and Florida A&M are leaders in the Miami-Dade area in the production of African American teachers.[40] While research on the impact of a teacher's race on student achievement (i.e., African American teachers teaching African American students) has been mixed, researchers observe a number of benefits, including the experience of having positive role models, which can affect factors such as student attendance and socio-emotional development.[41] Given the higher number of African American students in voting districts 1 and 2, a sustained placement of high-performing African American teachers in these districts has the potential for long-term, positive benefits. Further analysis is needed, however, including research on the sufficiency of training provided by the institutions, as well as other top suppliers of Miami-Dade teachers, to ensure that new teachers enter the district with both sufficient content knowledge and appropriate knowledge of pedagogy.

38 Goldhaber, D., et al. (2012). Assessing teacher preparation in Washington State based on student achievement. National Center for Analysis of Longitudinal Data in Education Research. Working Paper 65.
39 NCTQ had data on bachelor's institutions for 95 percent of the teachers in Miami-Dade.
40 Florida Memorial University website: http://www.fmuniv.edu/school-of-education/
41 Villegas, A. M., & Irvine, J. J. (2010). Diversifying the teaching force: An examination of major arguments. *Urban Review, 42,* 175–192.

Undergraduate institutions of Miami-Dade teachers and the voting districts in which they teach 2012-2013



Of the top suppliers of teachers in Miami-Dade, alumni from most institutions teach in all geographic areas of the district, with the exception of Florida Memorial, which is highly concentrated in voting districts 1 and 2.

How well are teachers being prepared for the job in Florida?

In 2014, NCTQ produced a national review of teacher preparation programs across the country.[42] The *Review* studies how well institutions are preparing teachers across a variety of standards necessary to effectively prepare students for academic success. An analysis of the top suppliers of teacher preparation in the Miami-Dade area on elementary preparation indicates that while some institutions are strong in some components of teacher training, such as preparing teachers in early reading (Florida State, Florida A&M and Florida International), none of the programs in the geographic area is strong in multiple components. In fact, almost all of the top suppliers to Miami-Dade received very low scores in training teachers on math content and elementary content, subject matter essential to meeting the state's college and career readiness standards for students.[43]

Given the fact that a large number of new teachers are beginning their careers in voting districts 1 and 2 schools and then resigning after just a few years in the classroom, the lack of adequate teacher preparation continues to disproportionately affect these parts of Miami-Dade more than others. Our recommendations section provides examples of how to work with teacher preparation institutions in the area to help the district deal specifically with the retention issue.

Using the *Review* data: Special Education

The University of Central Florida has a strong preparation program for special education teachers. While the university is not very close to Miami geographically, the city's status as a cosmopolitan center can serve as a potential draw for new teachers and should make recruitment easier than in some other places. While the university is not very close to Miami geographically, that cosmopolitan city's as a potential draw for new teachers should make recruitment easier than some other places. Hiring well-prepared special education teachers will particularly benefit voting districts with a higher percentage of special education students – specifically voting districts 1 and 2, which hire the most teachers on an annual basis.

42 *2014 Teacher Prep Review.* National Council on Teacher Quality. June 2014. http://www.nctq.org/dmsStage/Teacher_Prep_Review_2014_Report

43 Common core elementary content includes history, literacy and science.

Summary of findings

1. **Experience |** There are far more novice teachers in voting districts 1 and 2 than in other voting districts. In fact, over 60 percent of all first-year teachers end up in one of these two districts. Almost a quarter of the teachers in voting district 2 have fewer than five years of experience compared to a tenth of the teachers in Miami-Dade overall.
2. **Retention |** Teachers are resigning at higher rates from voting districts 1 and 2, particularly voting district 2. Of the total resignations in Miami-Dade in 2012-2013, 22 percent came from voting district 2. Thirty-five percent of the resigning teachers in voting district 2 have fewer than two years of experience, indicating a possible churn whereby new teachers are hired and continually replaced year after year.
3. **Attendance |** Teacher attendance is high overall in Miami-Dade. However, there are still differences in terms of attendance rates by voting district. Teachers in voting districts 1 and 2 are out of the classroom, on average, two more days a year than those is district 4, the voting district with the lowest number of absences.
4. **Teacher Performance |** Because almost all teachers in Miami-Dade were rated effective or highly effective in their 2012-2013 ratings, there are questions about the validity of the Miami-Dade teacher evaluation outcomes overall. Regardless, the disparity between the number of teachers in the highly effective category in voting district 2 versus those in other voting districts is alarming. This concern is exacerbated by value-added data showing that teachers in voting districts 1 and 2 had, on average, negative value-added scores while the rest of the city did not.
5. **Teacher Preparation |** Data on the quality of nearby teacher preparation institutions indicate that none of the programs that routinely supply teachers to Miami-Dade County Public Schools are strong overall in teacher preparation. However, there is a strong supplier of special education candidates in the state, the University of Central Florida, and Miami has a cosmopolitan environment to offer teachers recruited from other geographic areas.

Recommendations

It is clear that there are differences in teacher characteristics across voting districts in Miami-Dade County Public Schools. Below are NCTQ's recommendations for a path toward a more equitable distribution of Miami-Dade teachers.

Existing efforts

The district has made various attempts to increase the equitable distribution of teachers. One particular effort was the introduction of a "strategic involuntary transfer" process in 2008. This process took advantage of a clause in the teachers' contract that allows principals to select which teachers they would like to transfer out of their school at the end of the school year.[44] A study of this process found that teachers with lower performance were moved to higher-performing schools and replaced with higher-performing teachers at their sending school.[45] At the new school, transferred teachers had fewer absences than in their previous school. This program ran until the 2011-2012 school year but has now been scaled back because, according to the district, the need to move teachers has been greatly reduced.[46]

The district has also spent considerable time designing supports for new teachers. These have included a five-day teacher academy that all new teachers must participate in prior to the beginning of the school year as well as ongoing support by instructional coaches. While professional development was not studied in this analysis, a new-teacher induction program that includes mentoring and professional development for novice teachers provides an often much-needed helping hand during their first

44 M-DCPS and UTD Collective Bargaining Agreement. Article VII, Section 8. The Superintendent or his or her designee may, when deemed in the best interest of the school system, involuntarily transfer unit members.

45 Grissom, J. A., Loeb, S., & Nakashima, N. (in press). Strategic involuntary teacher transfers and teacher performance: Examining equity and efficiency. *Journal of Policy Analysis and Management.* See more at: http://cepa.stanford.edu/content/strategic-involuntary-teacher-transfers-and-teacher-performance-examining-equity-and-efficiency#sthash.mtNsGGZK.dpuf

46 http://www.miamiherald.com/2013/11/11/3746849/study-struggling-miami-dade-schools.html

years on the job.

The data presented here indicates that the need for a more equitable teacher distribution still exists. The recommendations below lay out some ways in which the district could tackle this problem.

In Boston Public Schools, a cohort approach to working with low-performing schools in need of significant achievement gains was introduced in 2009. In this model, called Turnaround Teacher Teams, or T3, 25 percent of the faculty is comprised of teacher leaders who have responsibility for instructional leadership (in exchange for higher pay and extensive training). These teams have accelerated student achievement across grade levels in both English Language Arts and Math in comparison to other public schools in Boston. The results provide a strong indication of the success of this cohort strategy when it is included as part of school turnaround work.[47]

Teacher Experience

1. Develop incentives for teams of high-performing teachers to move together to higher-need schools such as those in voting districts 1 and 2. Provide specific incentives for teachers with some experience and a proven track record for improving student outcomes. These incentives should include monetary rewards as well as specific titles that recognize the teachers' skills and strengths.
2. Develop a different job description with specific requirements for teaching in low-performing schools, accompanied by a higher salary and more support. This will require a more nuanced teacher screening/recruitment model. Incorporating a different job description would also make it difficult for first-year teachers to qualify for such positions, thereby reducing the number of novice teachers that go to these voting districts.
3. Give principals the flexibility to assign classes to teachers they believe are best equipped to fulfill students' needs and to train them to make good decisions. Currently, the teachers' contract specifies that seniority should be taken into account along with employee preferences when assigning teachers to classes.[48] This does not allow principals to develop and maintain a school-staffing model whereby novice teachers are not placed in the highest-need classes, which is very often the case not only in Miami-Dade but also nationally. Language in the collective bargaining agreement should include teacher characteristics as a component that principals can look at when deciding how to assign teachers.

   In addition to changing the contract to include teacher characteristics when making assignments, principals should also consider in-school incentives that they can provide to more experienced teachers so that these teachers would opt into working with high-need students. Incentives could include things such as additional prep time, extra support from coaches or school leadership and regular public recognition of teachers when their students make gains.

Teacher Retention

1. Train principals on strategies that support the retention of top performers and the dismissal of lower performers. This can include reminders by the district in e-newsletters on quick ways to boost teacher morale, including public recognition and collaboration on school-wide initiatives. It can also include professional development on retention targeted to principals specifically, where they can work together in professional learning communities to share best-practices or district-wide to learn from leaders in the field about strategies that work.
2. Explore the school climate in schools with significant retention issues. This can be done through a survey of teachers (either as part of exit interviews or of all teachers in Miami-Dade) to understand the differences between school climate and what factors may be influencing a teacher's desire to stay or leave.
3. Link professional development to evaluation outcomes. Work with principals and teachers to understand the professional development needs and differentiate offerings based on needs identified through the evaluation process. Teachers should also have access to professional development they identify as areas of need.

47 Closing the gap: Progress over two years at T3 Schools. December, 2012. Teach Plus. http://www.teachplus.org/uploads/Documents/1355156579_T3Closingthegap.pdf

48 Miami-Dade and UTD Teacher's Contract. Article IX, Section 2. The scheduling of employees shall be the responsibility of the principal or supervising administrator. Such scheduling shall be accomplished in a fair, equitable and impartial fashion, taking into account seniority and employee preferences.

4. Look for high-impact ways to reward high-performing teachers. Miami-Dade could consider offering higher salaries to the top teachers (teacher "chairs") who consistently produce the greatest learning gains. Recognized "chairs" could be located in high-need schools, which could benefit greatly from the expertise these teachers bring with them. In addition to formal recognition, districts have benefited from simple acknowledgement of high-performing teachers, such as principal conversations with the teachers conveying appreciation and recognition of their value to the school and the district to end-of-the year award ceremonies.[49]

Teacher Attendance

1. Review the professional development calendar. While teacher attendance isn't a significant problem for the district overall, there are certain schools, concentrated in voting districts 1 and 2, where attendance may be more of an issue for Miami-Dade. Consider how altering the professional development calendar may be helpful in alleviating some of the days teachers are out of the classroom. For example, the district could consider adjusting the calendar to allow for more professional development outside of school time.
2. Have schools with high teacher attendance share strategies. There are clearly many schools in Miami-Dade that have kept teacher absences to a minimum, which is commendable. These schools should share their strategies with the rest of the district, both to promote a culture of recognizing the successes of particular schools as well as to allow for schools to learn from one another's best practices.

Teacher Performance

1. Consider reinstating or scaling up the involuntary teacher transfer policy. A study of this policy found that it increased equity by distributing poorly performing teachers to higher-performing schools and giving higher-need schools better quality teachers. It also improved attendance, in the sense that lower-performing teachers were absent less in their new school. Teacher performance data indicate that there could still be a need for the teacher transfer policy. As long as transferring is not in lieu of dismissing ineffective teachers, it can be helpful in balancing the distribution of teachers across the district.
2. Conduct a deeper analysis of teacher evaluation ratings. The district should initiate a discovery process to understand why so few teachers across the county receive less than an effective rating. Based on similar analyses in other states and districts, close attention should be paid to the levels of differentiation shown in observation scores. Once a clearer picture emerges, it would be important to revisit the performance of teachers by voting district to understand what discrepancies still exist.
3. Consider incorporating more training on evaluations for school leadership. Given the high prevalence of teachers in the effective and highly effective ratings group, additional training for school leaders on the evaluation process could be of use to the district. This training would help school leaders achieve stronger observations that are better aligned with the objective measures of student performance that Florida already uses.
4. Incorporate additional peer review and third-party evaluators from the central office to validate principal evaluations and provide content-specific feedback. Peer review does exist at nine high-need schools (one school in each voting district) through a specific initiative called iHeat (Incentives for Highly Effective Administrators and Teachers).[50] Incorporating additional evaluators who are content experts at all schools would serve the dual purpose of validating principal evaluations and assessing content-relevant instruction.

49 TNTP. (2012, July 30). *The Irreplaceables: Understanding the Real Retention Crisis in America's Urban Schools.*
50 Miami-Dade County Public Schools Incentives for Highly Effective Administrators and Teachers (iHEAT); http://prodev.dadeschools.net/iH13.asp

5. Consider adding additional sources of data such as student surveys to the evaluation system. Feedback from students can help teachers improve and can give evaluators a better sense of teacher instructional practices. Carefully crafted student surveys have been found to correlate strongly with student outcomes and can be used as another measure of teacher effectiveness.

Teacher Preparation

1. Focus on working with teacher prep programs in improving teacher retention through student teaching placements in high-need schools. Teachers who have had student-teaching experiences in highly functioning, high-poverty schools are less likely to resign from high-need schools when placed there full time.[51] Given this, the district can team up with specific teacher preparation institutions in the area that commit to placing student teachers in high-performing, high-need schools and work on structuring the student-teaching experience to be most beneficial to Miami-Dade's needs. Those teachers would then be strong candidates for placement in high-need schools in voting districts 1 and 2, where retention is an issue, and have a better chance of being successful there.
2. Recruit teachers from highly rated programs, no matter what the distance. Recruiting special education teachers from University of Central Florida is one example of how Miami-Dade can pursue this. Miami is a booming urban center that is attractive to many young college graduates. The district should use the city's status as a cosmopolitan center to its advantage and widen the circle of recruiting to pursue programs that are strong in multiple areas of teacher training.

In 2013, New York City introduced a report card that evaluated teacher preparation programs at 12 institutions. The reports provided data on the license area in which teachers were hired, the percentage of graduates that were hired into high-need schools, retention rates and program effectiveness.

3. Develop a district report card of outcomes by teacher preparation institutions. Use data from these report cards to inform the recruiting process. The report card could incorporate the following data on overall teacher outcomes, by institution:
   - Student achievement, measured through objective criteria such as test scores
   - Placement of teachers in particular voting districts/high-need schools
   - Placement of teachers in high-need subject areas
   - Summative evaluation rating distribution
   - Teacher retention
4. Target professional development to address weak preparation areas. An example of this could be training in elementary math content, which NCTQ's *Review* has shown is not strong across the board for suppliers to Miami-Dade. Requiring an intensive course for all new teachers entering the district can help to give them some of the skills they may be lacking. Given the disproportionate number of new teachers going to voting districts 1 and 2, this would be particularly beneficial.
5. Train principals to use data on teacher preparation programs. This includes both outcome-based data points (if available) and other pertinent data (e.g., from sources such as the *Review* about how successful institutions are in preparing teachers for what they need to know, in screening and recruitment. For example, if a principal knows that he or she is interviewing a teacher from a program that is not highly rated in elementary mathematics instruction, questions should be asked relevant to the prospect's skill set in that area to make sure that they match the school's needs.

51 Boyd, D. J., Grossman, P. L., Lankford, H., Loeb, S., & Wyckoff, J. (2009). Teacher preparation and student achievement. *Educational Evaluation and Policy Analysis, 31*(4), 416–440.

Appendix A:

Research base that supports the five indicators used in the report:

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