Illinois Education Research Council
Bringing Research to Policy and Practice
POLICY RESEARCH REPORT: IERC 2005-2

Examining the Distribution and Impact of Teacher Quality in Illinois

Jennifer B. Presley, Bradford R. White and Yuqin Gong

Executive Summary

In a previous Illinois Education Research Council (IERC) policy research report, *The Distribution of Teacher Quality in Illinois* (IERC 2005-1), we introduced the Illinois Teacher Quality Index (TQI). The TQI is a school-level indicator of teacher quality that describes a school's concentration of certain teacher attributes that research suggests are associated with student performance. In this report, we continue our exploration of the TQI, its distribution, and its relationship to student performance outcomes.

Our analysis found a very strong negative relationship (r=-.63) between TQI and the percent of students with free/reduced lunches (FRL), our measure of schools' poverty. The relationship between TQI and poverty continues across all poverty levels. The correlation between TQI and school percent minority (-.58) is not quite as high, but still substantial. However, the relationship is not evident once percent minority falls below about 50%. The teacher-sorting process seems to be related consistently to school poverty, but is dramatically apparent as well in schools that are more than 90% minority.

The teacher-sorting process seems to be related consistently to school poverty, but is dramatically apparent as well in schools that are more than 90% minority.

TQI and School Performance

We were interested in knowing whether schools with higher TQIs had better performance outcomes. We examined the relationship between TQI and school poverty and minority status separately, and found that TQI made a difference in school achievement—especially for high-poverty and high-minority schools. In order to look further into this poverty/minority/TQI interrelationship, we examined TQI and the performance of high minority/high poverty (HH) schools and low poverty/low minority (LL) schools directly. We found that both HH and LL schools continue to exhibit stronger school performance when they have higher school TQIs. Importantly, the strongest relationship between TQI and the performance continues to be demonstrated in the most disadvantaged schools—those that are both high poverty and high minority. The average percentage of elementary/middle school students in HH schools meeting or exceeding state standards went up seven percentage points (for a 23% improvement) when TQIs moved from the lowest to the next TQI quartile. For HH high schools, the increase was 14 percentage points from the lowest to the middle-high quartile—more than doubling the success rates for these schools. In short, TQI matters, and matters most for the most disadvantaged schools.

TQI matters, and matters most for the most disadvantaged schools.

Because we have several variables that are interrelated, we also did a regression analysis to measure the independent effects of school poverty status, minority status and TQI on performance outcomes. We confirmed that TQI has an independent relationship to school performance, even after taking into account the minority and poverty level of the school. Its influence is most important at the high school level, where an increase of one unit (1.0) in TQI (in this case that is one standard deviation) is related to an increase of 5.9 percentage points in the percent of students meeting or exceeding the Prairie State

Achievement Examination (PSAE) benchmark, on the average. For middle schools this improvement is about 2.9 percentage points, and for elementary schools 1.3 percentage points.

A one-unit (1.0) increase in TQI is related to an increase in high school performance of about 6 percentage points.

Regions of the State

The common assumption is that high-poverty schools are in urban or rural areas, but this does not hold completely in Illinois. While 80% of schools in the top 10% based on poverty are in Chicago, and another 8% are in other urban areas, about 10% are in what the Census classifies as suburban areas. Schools in the 50–89% poverty category are quite broadly distributed among Chicago, other urban areas and suburban areas. Looking at the least-poor schools, those with less than 10% poverty, almost none are located in Chicago (0.2%) or other urban areas (3%), while 72% are in suburban areas, and 24% are in rural areas. Most of the highest minority schools (99-100%) are in Chicago (80%), but 14% are in suburban areas. Like poverty, school minority concentration is not strictly an urban phenomenon in Illinois.

Schools with at least 90% poverty or minority status have much lower TQIs, on the average, whether they are located in Chicago, other urban areas, or a suburban area. But in addition, Chicago schools' TQIs, on average, are lower than schools with similar percent poverty or percent minority in other locales. In contrast, the least-poor schools have the highest school TQIs, on the average, independent of locale. High poverty and high minority schools are much more likely to have lower TQIs, no matter where they are located in the state.

High poverty and high minority schools are much more likely to have lower TQIs, no matter where they are located in the state.

The Role of the District in the Distribution of School TQI

Districts play an important intermediary role in the recruitment of teachers and the allocation of resources, and most districts do not consist of a homogeneous array of schools. We looked at larger districts (those with at least 10,000 elementary/middle school students) and found that in districts with large proportions of very-high poverty and very-high minority schools, there are larger percentages of schools with very low TQIs, resulting not only in lower average teacher quality in the district, but also in a larger span between the schools with the most-qualified and least-qualified teachers, as measured by the TQI. The gap between the highest TQI schools and the lowest TQI schools within these large districts widens as the percentage of high-minority or high-poverty schools rises. Districts with larger proportions of high-poverty or high-minority schools generally have a broader range of school TQIs. But there are some exceptions that may provide insight about how to organize the teacher-sorting process so that it leads to more equitable distribution. We hope to continue the analysis of within-district distribution differences as the next phase of our research.

Strategies for Change

We have shown that schools that serve large proportions of poor and minority students are likely to demonstrate stronger school academic performance outcomes when their cadre of teachers, on the average, have more of the positive attributes and fewer of the negative attributes that are measured by the TQI. And TQI is related to school performance even after taking account of school demographics. This finding does not lead to a simple solution to closing the achievement gap, because we know that teachers usually take advantage of a competitive labor market to seek out what they perceive to be supportive teaching opportunities—and this often means that less-poor, less-intensely minority schools can attract better teachers. This sorting process takes place even within districts, and leaves the most disadvantaged schools with the fewest opportunities to select the most capable teachers—and yet the data provided in this report show that this is exactly where the effects of a stronger cadre of teachers manifest themselves most strongly. What strategies might contribute to improving teacher quality in high poverty/high minority schools?

➢ ***Every school should be a place where high quality teachers want to teach.***

- **Community and state support.** Communities and the state need to ensure that every school building is safe, clean and fully equipped for 21st century learning. Illinois has the second largest funding gap among the states between its highest-funded districts and its lowest-funded districts. Not only is the funding gap large, but Illinois ranks in the bottom third of states in funding to its high-poverty schools. The state needs to address this funding challenge if it wants to provide the opportunity for all of its children to reach their fullest potential.

- **District and school leadership.** District leaders need to ensure that school leadership is conducive to high expectations for teaching and learning. Teachers who are competitive in the teacher labor market are not going to stay at schools where they are not treated with the professional regard they deserve or where their high expectations are undermined by a less-demanding learning culture.

➢ ***Every teacher should be a person that a school wants to hire and retain, and a parent wants in their child's classroom.***

- **Rigorous training.** Teacher education programs need to set high expectations for the academic achievement of all of their students. Content expertise, particularly for middle and high schools grades, needs to be rigorously developed and maintained.

- **In-service support.** Schools and districts need to strengthen in-service content and pedagogical support to teachers in key disciplines.

➢ ***Human resources policies should place a priority on getting and keeping high quality teachers in the most needy schools.***

- **Hiring and retention.** Schools and districts should consider teachers' own academic success as one of the essential criteria for recruitment. We acknowledge that the TQI does not capture all (or perhaps much) of what distinguished a good teacher from a mediocre teacher, or an excellent teacher from a good teacher, but research does suggest that teacher academic preparation matters. Schools need a critical mass of teachers with strong content and pedagogical expertise to build the disciplinary teams that all schools need.

- **Placement and transfer practices.** Districts and teacher unions have a responsibility to examine hiring and seniority rules, and budget allocations, that may hinder some schools from building the cadre of talented teachers that they especially need to meet the special needs of high-poverty, high minority schools within districts. This may include providing financial incentives for high quality teachers to teach in disadvantaged schools.

The solutions are not easy, but our students deserve nothing less than our all-out effort to improve the quality of their schools. This report sheds some new light on the challenges and potential solutions.

The full report is available at http://ierc.siue.edu/iercpublication.asp

For further information, contact the IERC toll-free at 1-866-799-IERC (4372)
or by email at ierc@siue.edu.