Acknowledgements

First and foremost, we are indebted to the superintendents, administrators and teachers in the 11 case study districts who generously shared their time and perspectives. Without their cooperation, this report would not exist.

Second, we appreciate the support and assistance we received from the Connecticut State Department of Education, especially from Associate Commissioner Fran Rabinowitz. Department staff were partners throughout the process, from concept development, to selection of the researchers, to access to data files. We thank Barbara Canzonetti, Catherine Fisk Natale, Peter Prowda, and Sarah Ellsworth for their contributions.

Other members of the RFP Selection Committee, Paula Colen and Sharon Rallis, deserve credit for selecting our distinguished researchers, Robert Reichardt and Michael Arnold.

This report benefited from the wise counsel and advice provided by the Study Advisory Committee.

Our administrative manager, John “Jack” Botelho, made our researchers’ cross-country trips as smooth as possible.

The two outside reviewers, Mary Brownell and Eric Hirsh, provided valuable insights and comments.

Finally, this report exists because of the perspective, knowledge, skill, and oversight of Jane Tedder, the Center’s education program officer. It is a fitting capstone to her five years of dedicated service to the Center for School Change.

Authors:

Robert Reichardt, Ph.D, chief investigator, is principal of R-Squared Research and Associates. He holds a Master’s in Public Policy from the University of Maryland and a Ph.D. from the RAND Graduate School. He worked as a researcher at Mid-continent Research for Learning (McREL) and as Executive Director of the Alliance for Quality Teaching. Author of numerous research reports, he has experience in describing district procedures for new teacher support, costing out district activities, and measuring human resource processes.

Michael Arnold, Ed.D, is a director with Education Strategy Group, Inc. Dr. Arnold has worked with educators and policymakers at the local, state, and federal levels for over 20 years. His work has included developing a micro-level financial reporting model for resource allocation decisions in school districts. He has authored numerous journal articles and serves on the editorial review boards of two research journals.

Funding:

This research and policy report was made possible with support from the Connecticut State Department of Education using Title II funds from the U.S. Department of Education. Additional funding was provided by the William Caspar Graustein Memorial Fund, the Jessie B. Cox Charitable Trust, and the Prudential Foundation.

Connecticut Center for School Change

The Connecticut Center for School Change is a not-for-profit school reform organization that partners with school districts to improve student achievement. The Center uses a systemwide, integrated approach focused on improving instructional practice and building leadership skills at all levels. The Center supports comprehensive educational reform through a combination of grants, technical assistance, leadership development programs, conferences, policy research and application of best practices. For more information, visit www.ctschoolchange.org.

Additional copies of this Executive Summary and the complete Technical Report are available online at the Connecticut Center for School Change website: www.ctschoolchange.org

© 2006, Connecticut Center for School Change
Much has been written, both by academic researchers and by the press, about the looming teacher shortage.

**Introduction**

Much has been written, both by academic researchers and by the press, about the looming teacher shortage. Most of this material focuses on the need to train and hire replacements for the thousands of teachers retiring from the workforce over the next decade.

This study looks at the teacher shortage issue from a different perspective. The Center for School Change believes that it takes strong leadership, a systems approach, a commitment to continuous improvement, an understanding about change, and a singular focus on instruction in order for districts to produce improved student achievement. Given this bias, therefore, we asked the researchers to focus not on the supply side of the labor market, but on the demand side. We asked them to study what districts – as organizations – did or did not do to attract and retain a sufficient number of high-quality teachers in their classrooms.

This study is best understood as a snapshot in time of current public school system practices of teacher recruitment, hiring, and retention. While we knew about the relationship of quality teachers to student learning, we learned through this study that not all Connecticut students have equal access to high-quality teachers. While we knew that the failure to retain first-year teachers incurs huge costs both in terms of student learning and lost recruitment and training expenses, we learned through this study that nearly one-third of the teachers surveyed intend to leave their current school or district. While we knew from the research literature that mentoring makes a difference in teachers’ skills and improves retention rates, we learned through this study that principals received little training or guidance in how to foster that support. While we determined that at least $40 million is spent each year in the state to recruit, hire, and retain new teachers, we learned through this study that neither the data nor the systems exist to track the results of those expenditures, identify the most effective practices, and embed them in district operations.

As best we could, we have attempted to convert what we learned into some practical actions for positive change at the state- and district-level. These are policy and practice changes that school districts can make that would improve the likelihood that every student in Connecticut has access to high-quality teachers. The recommendations focus on building capacity and changing systems in order to ensure that people have the skill and knowledge they need, and the organizational support that is required, to ensure that the changes are sustained and institutionalized. Only then will these best practices become the norm in school systems and only then will school systems be able to deliver the results our students need and deserve.

There is much more we need to study about teaching and learning. We must investigate the best (and worst) practices currently used by Connecticut districts to recruit, hire, retain, and improve quality teachers. We must investigate the relationship of leadership, school culture, and working conditions to teacher retention. Most important, and sooner rather than later, our state must create a common measure to quantify the value added by teachers and schools to student achievement.

In the interim, we must do more to recruit, hire, and keep the best teachers in our classrooms since that is the most direct and high-value route to improved student achievement. We hope and trust that this study and its recommendations are a good first step in that direction.

Andrew Lachman
Executive Director
Connecticut Center for School Change
**Executive Summary**

Teachers hold the key to student achievement. Research shows clearly that teachers are the biggest single factor in student learning. Consistent exposure to high-quality teachers can reduce or eliminate the achievement gap between white and minority students (Rice 2003; Hanushek et al 1998).

This study, commissioned by the Connecticut Center for School Change with the support and assistance of the Connecticut State Department of Education, is an initial effort to investigate how state and district teacher recruitment, hiring, and support policies and practices affect the ability to hire and retain high-quality teachers.

Connecticut, like other states, faces the challenge of ensuring that all public schools have high-quality teachers. It has been a recognized national leader in crafting state-level policy initiatives to increase the number and quality of teachers. Now, however, with many baby-boomers retiring, state data suggest that the demand for teachers is increasing and that the competition for newly trained teachers is becoming fiercer. The result is that differences in teacher qualifications between schools serving different populations of students appear to be widening. With one of the largest achievement gaps in the country, Connecticut must pay attention to this pressing issue.

**Study Framework and Findings**

**Framework**

Using statewide data collected by the State Department of Education and evidence from interviews and surveys in 11 representative school districts, this study provides information about three points:

- characteristics and distribution of teachers in Connecticut
- the Connecticut teacher labor market
- state and local policies concerning teacher recruitment, hiring, and support.

Surveys of newly hired teachers in the 11 case study districts provide evidence of teacher preferences and perceptions concerning their hiring and support. The aggregated data from state and local sources are used to estimate the total statewide costs of teacher recruitment, hiring, and support. Drawing upon the collected evidence, the researchers offer recommendations for state- and district-level policy changes targeted at more uniform and effective teacher recruitment, hiring, and support. Topics for future research are identified that will allow state and local educational leaders to understand how their policies and practices are linked to quality teaching and student achievement.

**What is a DRG and an ERG?**

District Reference Groups (DRG) were created by the Connecticut State Department of Education to group districts that serve similar populations of students. DRG replaced the older classification of Education Reference Groups (ERG) in June 2006. In both systems, Group A districts have fewer students from single parent households and higher than average household incomes. Group I districts have higher proportions of students from low income households and include the state’s major urban centers. For more information see: [http://www.csde.state.ct.us/public/cedar/databulletins/db_drg_06_2006.pdf](http://www.csde.state.ct.us/public/cedar/databulletins/db_drg_06_2006.pdf)
Findings

Not all Connecticut students have equal access to high-quality teachers

This study used teacher experience (one year and above) and education level (master's degree or above) as proxies for teacher quality. (This differs from the definition of teacher quality used by the federal No Child Left Behind legislation.) As Figure 1 shows, using those criteria the data indicate that as poverty levels increase in districts the level of teacher qualifications generally declines. Another indicator related to this finding is that in 2005, 37 percent of newly hired teachers in DRG A districts had a master's degree plus experience compared with only 21 percent in the DRG I districts.

In addition to having generally less-qualified staff, Connecticut's poorest districts have lower retention rates for first-year teachers and greater difficulty filling vacant positions. Districts in DRGs A through H were unable to fill between 0.7 percent and 4.3 percent of their 2005 teacher vacancies. Districts in DRG I, serving the poorest children in the state, were unable to fill 15.3 percent of their vacancies with qualified applicants (Prowda and Ellsworth 2006). Furthermore, a review of teacher transfer data reveals that the poorest districts have more teachers transfer out than transfer into them. In contrast, the wealthier districts have a positive net flow of teachers.

Earlier recruitment yields better response and higher quality teachers

School districts report that when they begin the hiring process earlier in the year, the quality of the applicant pool is higher. Figure 2 shows district ratings of the quality of applicant pools (5 is best, 1 is the worst) by the month that the search began for several different types of vacancies.

At the district and school level most vacancies are due to teachers who have left or changes in enrollment. Since poorer districts generally have the greatest outflow of teachers, their hiring burden is intensified. The general trend in the data indicates that poorer or urban districts tend to hire later in the year and that the majority of their hires occur in the summer. This practice can have negative consequences.

The timing of hiring is often driven by when state and municipal budgets are approved. Districts hesitate to hire before the budget passes because of uncertainty around funding. This postpones the start of the hiring season and leads to a poorer quality applicant pool. One DRG I district addressed this issue and improved its hiring prospects by working with the city council to move the budget process up earlier in the year.

In addition to budget timing, other issues impede hiring. In the case study districts the responsibility for winnowing the applications down to one or two top choices resides at the school level. Paper applications are the norm. As districts increase in size, managing that paper becomes more complex and labor intensive. This complexity can slow the hiring process and create competition between schools for teachers.

**Figure 1 Teacher Qualifications by DRG**

**Figure 2 Quality of Applicant Pool by Month of Vacancy Announcement**
How teachers are treated affects whether they take and remain in a job

How newly hired teachers feel they are treated in the hiring process and while they are working influences whether they will stay in a district. Personal connections are important to teachers seeking new positions. Many educators use those links as the start of their own research to find the best teaching opportunity. Friends and colleagues, together with personal contacts by district officials, were the primary sources of information about jobs for new teachers in the 11 case study districts.

Support has been linked with higher teacher retention (Ingersoll and Smith 2004) and improved instruction (Kelly 2004; Wong 2004). Once hired, personal connections remain important for teachers; they report that colleagues are the main source of support as they transition into their new jobs. As direct supervisor of a new teacher and often the person that assigns the mentor to that teacher, the school principal plays a key role. Yet principals were rarely provided with guidance on how to organize and deliver new teacher support.

The consequences of good hiring and retention practices become evident in teacher satisfaction data. About a third of the new teachers surveyed in the 11 case study districts said they intended to leave their current school or district. On average, those who were leaving were more likely to say they were poorly informed during the hiring process, had more issues with their workload, were unhappy with their classroom space, and were also more likely to feel isolated and unsupported.

Substantial resources are used to recruit, hire and support new teachers despite little information on what works

The resources – cash, donated time, etc. – used to recruit, hire, and support new teachers are substantial: a minimum estimate is an average of $10,000 per hire, or a total of $40 million every year across the state. Regardless of the level of resource use, districts often lacked the tools to learn if their recruiting, hiring, and support processes were effective. When asked, most district leaders (superintendents and school board chairs) had vague goals for the processes; they looked for a “good fit” or teachers that “get it.” Few districts collected information from teachers through surveys and exit interviews on whether their human resource activities worked well. The state does not provide information that would allow districts to compare their teacher retention rates. More importantly, there is no way to analyze the relationship of teachers hired and retained with their ability to improve student learning through value-added data.
Leadership priorities drive what gets done

The processes used to recruit, hire, and support new teachers varied greatly among and often within districts. The average number of district interviews reported by new hires ranged from 1.2 to 3. Some districts required the use of interview committees with parent representatives, while in other districts the process was at the sole discretion of the principal. This variation in processes among districts often reflected the importance placed on these activities by superintendents. Districts that spent more time and effort on recruitment, hiring, and support are those whose leaders have made those activities a priority. However, many of the districts visited for this study had recent changes in leadership – most hired a new superintendent within the last three years – so leadership emphasis was missing or unstable.

Districts can improve their hiring practices.

One high-poverty district moved hires from September to earlier in the year by:

• creatively working with transfer rules
• analyzing past patterns of hires and resignations to support a staffing plan
• getting the school board’s permission to hire early
• actively maintaining a large hiring pool.

The result was a reduction in unfilled positions from 20 in 2004 to four in 2005.

State policies have had both intended and unintended effects

Over the last several years, Connecticut has responded to concerns about teacher shortages by changes in regulations and incentives to increase the production of new teachers. The number of newly certified teachers graduated by Connecticut colleges and universities increased by 10 percent from 2000 to 2004.

The state’s regulations have created some consistency in practice across districts. Connecticut regulates who can be hired (people must be certified) and has mandated a rigorous supervision and evaluation system that teachers reported to be helpful. Connecticut’s statewide Beginning Educator Support and Training (BEST) program provides newly credentialed teachers with mentors. It requires new teachers to demonstrate their teaching competencies via portfolios (videotapes, written reflections, examples of student work) before becoming eligible for the next tier of teacher certification. Newly certified teachers generally found their BEST mentors to be helpful. However, some new teachers in high-poverty districts reported that they did not receive mentors and some districts reported that they experienced shortages of experienced teachers willing to be mentors. There was also an overall dread of the portfolio process. Furthermore, in many districts the required support processes did not appear to be well-integrated into school or district efforts to improve instruction and learning. Often the required activities were add-ons to other efforts within districts.
Improving student achievement is the top goal of the State Board of Education (http://www.state.ct.us/sde/board/index.htm). The state’s largest achievement challenge is the performance of its low-income students. This study has clearly shown that students in high-poverty districts do not have equal access to qualified teachers and that the process by which teachers are recruited, hired, and supported affects who works in which schools. **Teachers are the most important resource in improving student learning. This study affirms the notion that districts can leverage that resource by improving their recruitment, hiring, and support processes.** The question for Connecticut’s policymakers at the state and local level is how best to integrate the recruitment, hiring, and support of newly hired teachers into ongoing efforts to improve instruction and student learning.

One way of looking at this challenge is to use a policy template designed by professors Lorraine McDonnell and Richard Elmore to frame the discussion (McDonnell and Elmore 1987). According to their framework a state has four main tools to affect education policy: regulation, funding and incentives, capacity building, and system change (Table 1). Regulations and incentives are the tools that have been most often used in education; however, the system changes required by new standards-based accountability models such as the federal No Child Left Behind law (NCLB) have been dominating current education policymaking.

While the current study is simply a first step in investigating how recruiting, hiring, and support affect the availability of quality teachers to all students, several recommendations have emerged and can be considered using this framework.

The recommendations focus primarily on system change and capacity building for two reasons. First, using regulations and incentives in a way that directly affects student learning is a complex enterprise. Second, Connecticut already has certain research-based regulatory structures that, if well-implemented, could be very useful. Our study, for example, shows that compliance with the regulatory components of the BEST program was rarely integrated into district instructional improvement efforts. The best approach may be effectively using existing regulatory tools, rather than adding regulations or changing them.

### Table 1 Education Policy Tools

<table>
<thead>
<tr>
<th>Tool</th>
<th>Outcome</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regulation</td>
<td>Compliance with minimum standards</td>
<td>Teacher certification</td>
</tr>
<tr>
<td>Funding/incentives</td>
<td>Activities where capacity exists but is not used without an inducement</td>
<td>Minority teacher incentives</td>
</tr>
<tr>
<td>Capacity building</td>
<td>Long-term changes with few immediate or tangible indicators of change</td>
<td>Training programs</td>
</tr>
<tr>
<td>System change</td>
<td>Change authority for an activity or outcome</td>
<td>NCLB</td>
</tr>
</tbody>
</table>

Sources: McDonnell and Elmore 1987, McDonnell 1989
**Recommendations for State Action**

**Incentives**

1. To enable school districts to activate recruitment efforts earlier, the state should offer systemwide incentives for teachers to give early notification of retirement, resignation, or return from maternity leave.

**Capacity building**

2. To build capacity at both the state and local level for evaluating the effectiveness of processes for recruiting, hiring, and supporting teachers, the State Department of Education should undertake the following:
   a. Produce teacher value-added data based on state assessments.
   b. Develop a statewide system for exit interviews or surveys of teachers who leave teaching and switch districts.
   c. Train school district leadership (superintendents and school boards) on how to use data to evaluate and improve recruiting, hiring, and support processes.

3. To help districts reduce overlaps and delay at the local level, the state should work with districts to implement paperless processes for new teacher hiring.

**System change**

4. To assure that local districts can begin staff recruitment, especially for shortage areas, in a timely fashion, the General Assembly should act to shift some of the risk for early hires to the state.

5. The state should financially support the development of district standards for human resources practices to ensure continuity through leadership changes.

**Recommendations for District Action**

**Capacity building**

1. To assure that districts are using resources effectively, district leaders should systematically examine whether their own recruiting, hiring, and support processes are effective by answering the following questions:
   a. What does the existing data say about recruiting and retaining high-quality teachers in their district?
   b. How can we use value-added data about teacher effectiveness to evaluate internal programs and processes?
   c. What can principals learn from each other about recruiting, hiring, and supporting high-quality teachers?
   d. What can human resources professionals across districts learn from each other about effective processes?

2. To reduce costly internal duplication, each district should use active staffing plans that:
   a. Forecast the number of new hires needed each year
   b. Present weekly updates about teacher departures and returns from leave
   c. Signal to principals when they should hire for each position.

3. To leverage current information gathering processes for increased accuracy and efficiency, school district administrative leaders must work together with the state to develop and use a paperless hiring process.
Unanswered Questions

While this research regarding teacher recruiting, hiring, and support has generated some initial findings and recommendations, it also has prompted as many questions as it has proposed answers. Two of the most pressing research questions arising from this initial investigation are:

1. What are the best (and worst) practices that Connecticut districts use to improve the quality of teachers who are recruited and hired in districts?
2. What are the best (and worst) practices that Connecticut districts use to create working conditions that attract and retain teachers?

Further study on these two queries is necessary because the teacher shortage situation in Connecticut will persist.

Conclusion

The Connecticut education system has much to be proud of. Average student achievement rates are among the highest in the nation. The state has been a national leader in creating standards that describe what teachers and students should know and be able to do. That said, overall student achievement is generally flat, and gaps between poor and non-poor students (as well as between white and minority students) are among the largest in the nation. In order to raise student learning and close achievement gaps, Connecticut educators and policymakers must pay attention to the processes and practices that identify, hire, and support the most important component in student achievement: quality teachers.

This study is a first step in the process. It has shown that teacher recruitment, hiring, and support practices differ across districts and these differences do not serve all of the state’s children well.

References


Prowda, P., and S. Ellsworth. 2006. Teacher Supply and Demand, Presentation to the Educator Continuum Steering Committee. Hartford, CT: CSDE.


Connecticut Center for School Change

Board of Directors
Richard Sugarman, Chair
David E. Carson
Mally Cox-Chapman
Rev. Bonita Grubbs
James P. Horan
David M. Nee
Sheila Perrin
John Rathgeber
Mary Grace Reed

Study Advisory Committee
Mary Broderick, Past President
CT Association of Boards of Education
Joel Cogen, Executive Director and General Counsel
CT Conference of Municipalities
Rosemary Coyle, Past President
CT Education Association
Rep. Andrew Fleischmann, Co-Chair, Education Committee
CT General Assembly
Michael Galluzzo, Chair, Critical Issues Committee
CT Association of Schools
Mary Ann Hanley, Director
Governor’s Office for Workforce Competitiveness
John Madigan, Vice-President Corporate Staffing
The Hartford Financial Services Group, Inc.
John Motley, Former Executive Director for External Affairs
Hartford Public Schools
Otherine Neisler, Chair, Education Department
St. Joseph College
Frances Rabinowitz, Associate Commissioner
Division of Teaching, Learning & Assessment
CT State Department of Education
Allan B. Taylor, Chair
State Board of Education

Staff
Andrew Lachman
Executive Director
Jane Tedder
Education Program Officer
(through October 2006)
Steve Wlodarczyk
Education Program Officer
(effective October 2006)
Patrice Nelson
Program Coordinator
John Botelho
Administrative Manager

Study Advisory Committee
Mary Broderick, Past President
CT Association of Boards of Education
Joel Cogen, Executive Director and General Counsel
CT Conference of Municipalities
Rosemary Coyle, Past President
CT Education Association
Rep. Andrew Fleischmann, Co-Chair, Education Committee
CT General Assembly
Michael Galluzzo, Chair, Critical Issues Committee
CT Association of Schools
Mary Ann Hanley, Director
Governor’s Office for Workforce Competitiveness
John Madigan, Vice-President Corporate Staffing
The Hartford Financial Services Group, Inc.
John Motley, Former Executive Director for External Affairs
Hartford Public Schools
Otherine Neisler, Chair, Education Department
St. Joseph College
Frances Rabinowitz, Associate Commissioner
Division of Teaching, Learning & Assessment
CT State Department of Education
Allan B. Taylor, Chair
State Board of Education